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Ph.D. Thesis

Monitoring, Cash Holdings and Earnings Management: Evidence from U.S. Local Newspaper Closures

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Abstract:

This thesis, through its three essays, investigates the impacts of local newspaper closures on corporate behaviour, specifically focusing on corporate cash holdings and earnings management in the United States. Employing a difference-in-differences approach, the study analyses hand-collected data on the staggered closures of 44 local newspapers from 1986 to 2021 across 43 counties. The research reveals that these closures act as exogenous shocks, undermining the corporate monitoring function and exacerbating information asymmetry and agency conflicts, which lead firms to increase cash holdings and engage in earnings management.

The first essay highlights that reduced media scrutiny prompts firms to hoard cash, with corporate governance scores and institutional shareholders mitigating these effects, while CEO pay gaps exacerbate them. The findings indicate that without the oversight of local newspapers, managers are more likely to prioritise personal gains over shareholders' interests, leading to an increase in cash reserves. This behaviour underscores the importance of robust corporate governance mechanisms in maintaining financial discipline.

The second essay demonstrates that the absence of local newspapers worsens information asymmetry, causing firms to hold more cash as a defensive measure. The study finds a significant positive correlation between local media closures and increased cash holdings, particularly in firms with higher bid-ask spreads, indicating heightened information asymmetry. Financial analysts and short-term borrowing moderate these consequences by promoting cash distribution and dividend payouts. The presence of analysts and strategic borrowing acts as a counterbalance to the negative effects of reduced media coverage, ensuring better financial management practices.

The third essay reveals a significant rise in accrual-based and real earnings management following newspaper closures, particularly in high-profile firms and those in financial distress. The absence of media oversight encourages managers to manipulate financial statements more frequently, leading to increased earnings management. The research utilises robust empirical methods, including placebo tests, propensity score matching, and instrumental variables like broadband and Craigslist entry, to address endogeneity concerns and validate the findings. By controlling for local economic conditions and employing a rigorous methodology, the study provides strong evidence of the causal relationship between newspaper closures and corporate financial practices.

Overall, the study underscores the irreplaceable role of local newspapers as external governance mechanisms, highlighting the need for policies that support sustainable local media to ensure corporate accountability and financial transparency. The findings provide critical insights for policymakers, corporate managers, and investors on the importance of preserving local journalism in maintaining effective corporate governance and mitigating agency conflicts. Additionally, the research highlights the rise of digital media and its inability to fully replace the comprehensive role of traditional local newspapers in promoting ethical business practices. The emergence of news deserts, areas lacking sufficient local news coverage, further underscores the necessity for continued support and innovation in media practices to uphold the principles of good governance in an evolving media landscape.

DECLARATION

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.
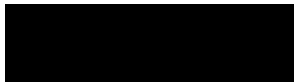
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Date: 03/07/2024

STATEMENT 1

This thesis is the result of my own investigations, except where otherwise stated. Where correction services have been used, the extent and nature of the correction is clearly marked in a footnote(s).

Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

Signed ████████████ IYAD ALMAMLOUK

Date: 03/07/2024

STATEMENT 2

I hereby give consent for my thesis, if accepted, to be available for electronic sharing **after expiry of a bar on access approved by the Swansea University.**

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Date: 03/07/2024

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شكر وتقدير

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Chapter One: Thesis Introduction

1.1 *Overview and Background*

Local newspapers have historically played a pivotal role in American communities, acting as crucial sources of information and serving as watchdogs to monitor the actions of powerful local entities (Hamilton, 2016). Known as the "*Fourth Estate*", local journalism aims to protect citizens from injustices, corruption, and harmful actions by providing comprehensive coverage of local news and events (Adserà et al., 2003; Brunetti & Weder, 2003). This includes not only investigative reporting that brings to light hidden cases but also the broader watchdog function that local journalists perform daily (Anderson et al., 2016). Through these efforts, local newspapers help ensure transparency and accountability in local governance and corporate behaviour.

However, the landscape of journalism has undergone a significant transformation in recent years. The rise of digital media and the widespread popularity of platforms like Facebook, Twitter, and LinkedIn have drastically altered media consumption patterns (Blankespoor et al., 2014; Meel & Vishwakarma, 2020). These digital platforms provide real-time access to information, surpassing the reach and immediacy of traditional print media (Bruhn et al., 2012; ShuKai et al., 2017). Consequently, newspapers are losing their significance in public life, primarily due to the high costs of publishing and circulation coupled with declining advertising revenues (Wahl-Jorgensen, 2018).

The decline of local newspapers is evident in numerous towns and cities across the United States, where many have shut down, leading to significant reductions in local news coverage (Meyer, 2009). According to a report by the Pew Research Centre (2021), local press circulation in the United States has decreased by nearly 50% over the past two decades. This reduction has created "*News Deserts*", areas where essential news coverage is unavailable, leaving residents uninformed about local events and issues (Abernathy, 2018; Mathews, 2020).

The decline of local newspapers has far-reaching implications for various aspects of community life and corporate behaviour. The reduction in local journalism diminishes the flow of information to the public, weakening external monitoring mechanisms that hold corporations and local governments accountable (Schulhofer-Wohl & Garrido, 2013; Hayes & Lawless, 2015). This lack of oversight can lead to decreased voter turnout and increased political polarization due to reduced access to reliable information sources (Starr, 2012; Gentzkow et al., 2011; Darr et al., 2018; Hayes & Lawless, 2018; Moskowitz, 2021).

The disappearance of local newspapers raises critical questions about the broader impacts on corporate behaviour, particularly in terms of corporate cash holdings and earnings management. This thesis aims to explore these impacts through two primary channels: monitoring and information asymmetry. Specifically, the objective is to investigate how local media closures affect corporate cash holdings and earnings management practices.

1.2 *Thesis Overview*

1.2.1 Essay One: The Impact of Local U.S. Newspaper Closures on Monitoring and Corporate Cash Holdings

The first essay analyses how the closure of local newspapers impacts corporate cash holdings through the monitoring channel. Local newspapers have traditionally served as essential watchdogs, scrutinising corporate activities and ensuring that firms maintain transparent and accountable practices (Bednar, 2012; Hamilton, 2016). With the decline of these newspapers, there is a significant reduction in external monitoring, allowing corporate managers more freedom to act without fear of public scrutiny. This reduced oversight can lead to increased agency problems, where managers hoard excess cash to shield themselves from scrutiny, resulting in less efficient use of corporate resources (Opler et al., 1999; Dittmar & Mahrt-Smith, 2007; Harford et al., 2008; Bates et al., 2009).

The potential consequences of diminished local news coverage include reduced accountability, limited investigative reporting, and an increase in local corruption and crime (Waldman, 2011). Areas with limited local press are less likely to have informed voters, higher instances of corruption among local politicians, and increased borrowing costs for municipalities (Gentzkow et al., 2011; Gao et al., 2020). Despite these findings, the specific impact of local newspaper closures on corporate cash holdings has been underexplored in existing literature.

Some studies have suggested that local newspapers are ineffective in monitoring corporate behaviour, with most research focusing on national or regional newspapers instead (Gurun & Butler, 2012). However, local newspapers play a unique role in providing targeted, in-depth coverage that larger outlets often overlook. The decline in newspaper readership and subsequent closures have significant implications for corporate governance and financial practices (Abernathy, 2020).

Theoretical frameworks such as agency theory suggest that managers with more discretion over corporate resources may hoard cash to secure their positions, especially when external

monitoring is weak (Jensen, 1986; Stulz, 1990). This behaviour can lead to suboptimal investment decisions and reduce overall firm value. By reducing the external scrutiny provided by local newspapers, closures may exacerbate these agency problems, leading to higher cash holdings among nearby firms.

Empirical studies have shown that increased media coverage can enhance corporate transparency and reduce the incidence of managerial misconduct (Miller, 2006; Dyck et al., 2008; Bednar, 2012). For instance, research on the role of media in exposing corporate fraud and misconduct highlights the importance of robust local journalism in maintaining ethical business practices (Tetlock, 2007; Bushee et al., 2010). These findings suggest that the absence of local newspapers can weaken corporate governance and lead to higher cash reserves as managers face less pressure to justify their financial decisions to the public.

The first essay aims to address the gap in the literature by empirically examining the impact of local newspaper closures on corporate cash holdings. By leveraging data on newspaper closures and corporate characteristics, the study investigates whether firms in areas that have lost local newspapers exhibit different cash holding behaviours compared to those in areas with sustained local journalism. The study employs three proxies for corporate monitoring: Corporate Governance Score, CEO Salary Gap, and Institutional Shareholders. The findings will enhance the understanding of the broader implications of media decline on corporate governance and financial management.

In conclusion, the closure of local newspapers represents a significant loss of external monitoring for local firms, potentially leading to increased agency problems and higher corporate cash holdings. This essay underscores the importance of local journalism in maintaining corporate accountability and highlights the need for continued support for local news outlets to ensure transparent and responsible corporate behaviour.

1.2.2 Essay Two: The Impact of Local U.S. Newspaper Closures on Information Asymmetry and Corporate Cash Holdings

The second essay examines the influence of local newspaper closures on corporate cash holdings through the lens of information asymmetry. Local newspapers play a crucial role in bridging the information gap between corporate insiders and external stakeholders, providing detailed and reliable information about corporate activities (Blankespoor et al., 2014; Meel & Vishwakarma, 2020). The disappearance of these newspapers exacerbates information asymmetry, making it

more challenging for investors and analysts to accurately assess a firm's financial health and governance practices (Chung et al., 2015). This increased information asymmetry can lead firms to retain higher levels of cash as a precautionary measure against uncertainty and to mitigate perceived risks by less informed investors (Opler et al., 1999; Han & Qiu, 2007).

Local newspapers play a critical role in reducing information asymmetry between corporate insiders and external stakeholders by providing timely and reliable information about corporate activities (Meel & Vishwakarma, 2020). This essay examines how the closure of local newspapers impacts corporate cash holdings through the information asymmetry channel.

Information asymmetry occurs when one party in a transaction has more or better information than the other, leading to an imbalance in decision-making power (Akerlof, 1970). In the context of corporate finance, information asymmetry between managers and investors can lead to adverse selection and moral hazard problems. Managers may take advantage of their superior information to make decisions that benefit themselves at the expense of shareholders (Myers & Majluf, 1984). Local newspapers help mitigate this issue by disseminating detailed and accurate information about corporate activities, thus levelling the playing field for investors and other stakeholders (Peress, 2014).

The closure of local newspapers exacerbates information asymmetry by reducing the flow of reliable information. Without local journalists to report on corporate behaviour, investors may find it more challenging to assess a firm's financial health and governance practices accurately (Chung et al., 2015). This increased uncertainty can lead firms to retain higher levels of cash as a precautionary measure, anticipating potential risks and uncertainties (Opler et al., 1999). By hoarding cash, firms can ensure they have the necessary liquidity to navigate unforeseen challenges, albeit at the cost of reduced investment in growth opportunities.

Research has shown that media coverage plays a vital role in shaping the corporate information environment. Studies indicate that greater media coverage is associated with lower information asymmetry, improved market liquidity, and reduced cost of capital (Fang & Peress, 2009; Bushee et al., 2010). Conversely, the absence of media coverage can increase the opacity of corporate activities, leading to higher information asymmetry and potential agency problems (Diamond & Verrecchia, 1991; Tetlock, 2010).

Empirical evidence suggests that the lack of local news coverage can have significant economic consequences. For instance, Schulhofer-Wohl and Garrido (2013) found that newspaper closures

lead to decreased civic engagement and reduced access to information about local businesses and events. This reduction in information flow can impact corporate cash holdings behaviour, as firms in areas without local newspapers may hoard more cash to hedge against the higher uncertainty (Kim et al., 2021).

Moreover, increased information asymmetry can also lead to higher costs of capital, as investors demand a risk premium for the additional uncertainty (Easley & O'Hara, 2004). This, in turn, can further incentivise firms to hold onto excess cash rather than invest in potentially risky projects. The absence of local newspapers thus not only affects corporate transparency but also has broader implications for financial markets and investment behaviour.

The theoretical underpinning of this essay is grounded in the principles of information economics and corporate finance. By reducing the availability of reliable information, the closure of local newspapers can exacerbate the adverse effects of information asymmetry, leading to suboptimal financial decisions by corporate managers. This essay aims to empirically investigate these dynamics by analysing the relationship between local newspaper closures and corporate cash holdings.

To achieve this, the second essay utilises data on newspaper closures and firm characteristics. By comparing firms in areas that have lost local newspapers to those with ongoing local journalism, the research seeks to identify differences in cash holding behaviour attributable to changes in the information environment. The study employs two different proxies for information asymmetry: Bid-Ask Spread and the Number of Analysts following the firm. The findings will shed light on the role of local media in promoting corporate transparency and influencing financial decision-making.

In conclusion, the closure of local newspapers exacerbates information asymmetry, leading to higher corporate cash holdings as firms seek to mitigate the increased uncertainty. This essay underscores the critical role of local journalism in providing reliable information, reducing information asymmetry, and supporting informed decision-making in financial markets.

1.2.3 Essay Three: The Impact of Local U.S. Newspaper Closures on Corporate Monitoring and Earnings Management

Earnings management involves the strategic manipulation of financial statements to meet specific objectives, such as hitting earnings targets or influencing stakeholder perceptions

(Dechow et al., 1995; Healy & Wahlen, 1999; Dechow & Skinner, 2000). This practice can undermine the integrity of financial reporting and mislead investors about a company's true performance (Bergstresser & Philippon, 2006; Bebchuk et al., 2009). Local newspapers play a crucial role in monitoring corporate behaviour and exposing such manipulations (Miller, 2006; Tetlock, 2007). This essay explores how the closure of local newspapers affects earnings management practices through the monitoring channel.

Local newspapers act as external monitors by scrutinising corporate activities and reporting any discrepancies or manipulations in financial statements (Miller, 2006; Dyck et al., 2008). Their investigative journalism can uncover fraudulent activities and hold corporate managers accountable for their actions (Zyglidopoulos et al., 2012). However, the decline of local newspapers, driven by factors such as the rise of digital media and shifting advertising revenues, has weakened this critical oversight function (Waldman, 2011).

The closure of local newspapers reduces the level of scrutiny on corporate financial practices, creating an environment where managers may feel emboldened to engage in more aggressive earnings management (Dechow et al., 1995; McNichols, 2000; Kothari et al., 2005). Without the fear of public exposure, managers may manipulate financial statements to meet earnings targets, secure bonuses, or improve stock performance (Jones, 1991; Healy & Wahlen, 1999; Leuz et al., 2003). This can lead to a deterioration in the quality of financial reporting, misleading investors and other stakeholders about the company's true financial health (Cohen et al., 2008).

Research has shown that media coverage significantly influences corporate behaviour. Studies demonstrate that increased media scrutiny is associated with lower levels of earnings management and higher financial reporting quality (Dyck & Zingales, 2002; Miller, 2006; Tetlock, 2011). Conversely, the absence of media coverage can reduce the perceived risk of detection, encouraging managers to manipulate earnings (Bushee et al., 2010). This suggests that local newspapers play a vital role in maintaining the integrity of financial reporting by deterring earnings management practices.

Empirical evidence supports the notion that local newspaper closures can have significant consequences for corporate governance. For instance, Heese et al. (2022) found that local newspaper closures lead to increased corporate wrongdoing, highlighting the importance of local journalism in promoting corporate accountability. Similarly, Kim et al. (2021) demonstrated that

firms in areas with reduced local news coverage exhibit higher levels of agency problems, including earnings management.

The theoretical framework for this essay is based on agency theory and the role of external monitoring in corporate governance. Agency theory posits that managers, as agents, may pursue their interests at the expense of shareholders, the principals (Jensen & Meckling, 1976; Hart, 1995). Effective external monitoring mechanisms, such as media coverage, can mitigate these agency problems by holding managers accountable for their actions (Fama & Jensen, 1983). The decline of local newspapers weakens this monitoring function, potentially leading to more frequent and severe instances of earnings management.

This essay aims to empirically investigate the impact of local newspaper closures on earnings management practices. By analysing data on newspaper closures and corporate characteristics, the study seeks to identify changes in earnings management behaviour following the loss of local media coverage. The study employs three proxies for corporate monitoring: Executive compensation, Analysts coverage, and Institutional ownership. The findings will elucidate the broader implications of media decline for corporate governance and financial transparency.

In conclusion, the closure of local newspapers reduces external monitoring, potentially leading to increased earnings management as managers exploit the lack of oversight. This essay underscores the critical role of local journalism in maintaining the integrity of financial reporting and promoting corporate accountability. By highlighting the consequences of diminished media coverage, the study emphasises the need for continued support for local news outlets to ensure transparent and responsible corporate behaviour.

1.3 *Research Problem and Objectives*

1.3.1   Research Problem

The closure of local newspapers is not just a journalistic concern but also a significant issue for corporate governance and financial practices. Local newspapers have traditionally played a crucial role in providing oversight and transparency within communities by holding businesses and public officials accountable. The loss of this critical watchdog function raises important questions about its broader implications for corporate behaviour, particularly in terms of corporate cash holdings and earnings management. As local newspapers disappear, there is a

growing need to understand how this reduction in media scrutiny impacts corporate governance and financial decision-making.

The central research problem addressed in this thesis is the impact of local newspaper closures on corporate cash holdings and earnings management. This problem is examined through two primary channels: monitoring and information asymmetry. The monitoring channel focuses on the role of local newspapers as external monitors that deter unethical behaviour and ensure transparency. The information asymmetry channel examines how the reduction in reliable information flow due to newspaper closures affects corporate financial decisions. The research aims to fill significant gaps in the existing literature by empirically investigating these relationships.

1.3.2 Research Objectives

To address the critical issue of local newspaper closures and their broader impacts on corporate behaviour, this thesis sets out to achieve three specific objectives. These objectives aim to elucidate the connections between media coverage, corporate governance, financial transparency, and managerial behaviour. Each objective is designed to explore a different aspect of the problem, employing various theoretical frameworks and empirical approaches.

Objective 1: To investigate the impact of local newspaper closures on corporate cash holdings through the monitoring channel.

This objective aims to explore how the loss of local newspapers, which traditionally provide oversight, affects the cash holding behaviours of firms. The study will employ proxies such as Corporate Governance Score, CEO Pay Gap, and Institutional Shareholders to assess the changes in corporate monitoring.

Objective 2: To examine the influence of local newspaper closures on corporate cash holdings through the information asymmetry channel.

This objective seeks to understand how the reduction in reliable information due to newspaper closures affects corporate cash holdings. The study will use proxies such as Bid-Ask Spread and the number of Analysts following the firm to measure the level of information asymmetry.

Objective 3: To explore the effect of local newspaper closures on earnings management practices using the monitoring channel.

This objective focuses on investigating how the absence of local newspapers impacts the practices of earnings management by corporate managers. Proxies such as Executive Compensation, Analysts Coverage, and Institutional Ownership will be used to assess the changes in corporate monitoring and behaviour.

1.4 *Contributions and Significance*

1.4.1   Contributions

This thesis contributes significantly to the fields of corporate governance and media economics by providing empirical evidence on the impact of local newspaper closures on corporate behaviour. It demonstrates how the absence of local newspapers affects corporate cash holdings and earnings management, underscoring the media's role as an external governance mechanism. By addressing gaps in existing literature, the study enhances the understanding of media influence on corporate transparency and decision-making. It advances theoretical frameworks in agency theory, corporate monitoring, and information asymmetry, showing how reduced media scrutiny exacerbates agency problems and information asymmetry, leading to suboptimal corporate decisions like increased cash holdings and earnings manipulation. The study employs the Difference-in-Differences (DID) methodology to ensure robustness and credibility in its findings. Additionally, the research has significant policy implications, suggesting that supporting local newspapers could enhance corporate accountability and financial transparency, which are crucial for efficient market functioning.

1.4.2   Significance

The significance of this research lies in its ability to reveal the broader impacts of media decline on corporate governance and financial practices. By demonstrating the critical role local newspapers play in maintaining corporate accountability, the study underscores the need for robust local journalism. It provides compelling evidence that the decline of local newspapers can lead to weakened corporate governance and reduced market efficiency. The research offers practical insights for investors and stakeholders, highlighting the importance of media coverage in reducing information asymmetry and promoting transparency. The findings suggest that alternative monitoring mechanisms may be necessary in areas losing local newspaper coverage. Furthermore, the thesis serves as a foundation for future research in corporate governance, media

economics, and financial transparency. Overall, the use of the DID methodology strengthens the study's conclusions, making a strong case for the economic and social relevance of maintaining strong local journalism to ensure ethical corporate practices and efficient market operations.

1.5 *Structure of the Thesis*

This thesis employs a well-structured approach to address the three primary research objectives concerning the impact of local newspaper closures on U.S. corporate behaviour, specifically focusing on cash holdings and earnings management. The introductory section sets the stage by providing a comprehensive overview, background, and the research problem underlying each essay, along with the contributions and significance of the study. Following this, a detailed account of data sources, sample selection, research design, and methodology is presented, outlining the robust analytical framework used to ensure the validity and reliability of the findings, including the implementation of the Difference-in-Differences (DID) methodology. Each of the three core essays is dedicated to a specific aspect of the research: the first explores the impact of newspaper closures on corporate monitoring and cash holdings, the second delves into the effects on information asymmetry and cash holdings, and the third examines earnings management practices. Each essay includes an introduction, research question and motivations, a thorough literature review, hypotheses development, and a presentation of variables, descriptive statistics, and pairwise correlations. This is followed by an empirical analysis of the hypotheses, enriched with methodological insights and a detailed discussion of the findings, their implications, and engagement with academic discourse. Robustness tests are performed to enhance identification and validate the results, with further analysis to strengthen the reliability of the research findings. Each essay concludes with a conceptual summary, and variable definitions are annexed. The thesis concludes with an overall summary that synthesises the key findings, offers practical recommendations, and identifies potential directions for future research. This structured approach ensures a comprehensive examination of the research questions, robust analysis, and a clear presentation of findings and their implications, making significant contributions to the fields of corporate governance, financial management, and media economics.

Chapter Two: Data, Sample Selection, Design and Methodology

2.1 *Introduction*

To ensure the accuracy and comprehensiveness of the research findings, multiple sources are employed for data collection and sample selection. Firstly, a hand-collected list of closed American daily local newspapers from 1991 to 2019 is compiled. Secondly, firm financial characteristics data from 1986 to 2021 are obtained through WRDS - Compustat Fundamentals Annual - North America, constructing a robust corporate dataset. Thirdly, supplementary data are downloaded and integrated from Refinitiv-Eikon (Screener) to refine and finalise the dataset. Additionally, five-digit American zip code data from the United States Census Bureau are incorporated, enabling the establishment of a spatial unit in the research design and the calculation of the geographic distances between the zip codes of the identified closed newspapers and those associated with the company sample. This comprehensive data collection approach aims to enhance the credibility, reliability, and validity of the research findings.

2.2 *Data Sources and Sample Selection*

2.2.1   **Local Newspaper Closure Sample**

To investigate the effects of local newspaper closures on firms' behaviour, specifically corporate cash holdings and earnings management, the approach of previous studies (Gao et al., 2020; Kim et al., 2021) is followed, and data spanning from 1991 to 2019 are manually collected. The impact of the loss of local newspapers and journalists has been highlighted by the Centre for Innovation and Sustainability in Local Media (UNC)[1] leaving numerous U.S. communities without adequate news coverage.

Using the UNC database, a list of closed daily newspapers in various states is identified and compiled, including their name, state, county, city, zip code, and year of closure. To ensure the accuracy of the list, it is cross-referenced with data from Chronicling America, the official U.S. Newspaper Directory by the Library of Congress, following the methodology of (Gentzkow et al., 2011). A detailed individual newspaper check is also performed on Chronicling America, and the results are consolidated with the list.

To enhance the credibility of the dataset, multiple resources that document the ceased publication of local print press are consulted, such as the Wikipedia list of U.S. defunct newspapers,

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[1] https://www.cislm.org/

Newspaper Death Watch, and other online media sources that track the disappearance of U.S. daily local newspapers.

Finally, the closed newspapers are matched to counties based on the cities in which they are located, using the 2010 American Census County definition, following the methodology of Gentzkow et al. (2011), Gao et al. (2020), Kim et al. (2021), and Heese et al. (2022). The online resources used to search, identify, and cross-reference the closed newspaper list are documented in Table (1).

Table (1) Online Resources Used to Identify the List of Closed U.S. Daily Local Newspapers 1991-2019

No.	Name	Online Address	Description
1	**Chronicling America**	https://chroniclingamerica.loc.gov/search/titles	The U.S. Newspaper Directory is a resource for locating and exploring newspapers across the United States.
2	**LOC**	https://www.loc.gov	The Library of Congress is another source used to study newspaper closures and related information.
3	**UNC**	https://www.usnewsdeserts.com	The Centre for Innovation and Sustainability in Local Media.
4	**Wikipedia**	https://en.wikipedia.org/wiki/List_of_defunct_newspapers_of_the_United_States	Provides limited information on defunct newspapers in the U.S.
5	**Newspaper Death Watch (NDW)**	http://newspaperdeathwatch.com/in-the-news/	Inactive since 2007, this website tracks the decline of newspapers in the U.S., with limited details available.
6	**Mondo**	https://www.mondotimes.com	Multiple sources were utilised to examine the closure of local newspapers in the U.S.

A final list of (44) closed U.S. daily local newspapers, affecting (43) American counties between 1991 and 2019, is manually identified and constructed, and all are published exclusively in English. The initial hand-collected list contained (94) closed newspapers. However, only those were considered where the daily newspaper closed without a successor. Events such as the merge of two or more local newspapers, the shift into any online media outlets, or the reduced frequency of publishing to become non-daily were excluded as they may not necessarily mean the loss of a local monitoring function. Newspapers lacking credible cross-reference or reliable second source of information confirming their closure status, were also excluded. Finally, a list of (48) defunct American local newspapers was refined to (44) events, with (4) nearby closed newspapers being dropped due to the absence of any matched treatment firms in the area.

This research examines the consequences of the closure of (44) U.S. daily local newspapers, which serve as treatment events, on (43) cities across (43) non geographically clustered counties. The study's primary aim is to investigate the potential adverse effects of losing these local press outlets on the efficiency of corporate monitoring. It explores whether the absence of these media

entities could escalate agency problems, particularly focusing on the likelihood of entrenched managers to engage in cash holdings and earnings management practices. By doing so, the study seeks to understand if the reduction in local media presence, which often acts as a watchdog, can influence managerial decisions in a way that may not align with shareholder interests.

There is some overlap between the list generated in this study and the list of (32) closed newspapers published by Kim et al. (2021); however, their list is limited to the period from 1991 to 2016. In contrast, the updated list in this study broadens the scope from 1986 to 2021 and includes (973) treatment firms and (739) control firms. The sample consists of 56.83% treatment firms and 43.17% control firms, representing the total local media closures observed between 1991 and 2019. Nonetheless, due to the closeness of local newspapers' closure periods, there are instances of overlaps between the affected firms. The final list of (44) closed U.S. local newspapers is presented in Table (2).

Table (2) The Final List of (44) U.S. Local Newspaper Closures

No.	Newspaper Name	State	County	City	Zip Code	Closed Year	No. of Treatment Firms	No. of Control Firms
1	Arkansas Gazette	AR	Pulaski	Little Rock	72201	1991	2	7
2	Dallas Times Herald	TX	Dallas	Dallas	75201	1991	70	1
3	Tulsa Tribune	OK	Tulsa	Tulsa	74103	1992	8	10
4	Richmond News Leader	VA	Richmond	Richmond	23219	1992	11	49
5	The Press-Courier	CA	Ventura	Oxnard	93030	1994	24	60
6	Sacramento Union	CA	Sacramento	Sacramento	95814	1994	3	62
7	Houston Post	TX	Harris	Houston	77027	1995	56	15
8	The Knox County Daily News	IN	Newton	Kentland	47951	1996	2	110
9	Phoenix Gazette	AZ	Maricopa	Phoenix	85004	1997	25	3
10	The North Hills News Record & Valley News Dispatch	PA	North Hills	Pittsburgh	15212	1997	27	50
11	The Banner	TN	Davidson	Nashville	37203	1998	15	15
12	Indianapolis News	IN	Marion	Indianapolis	46202	1999	14	38
13	Syracuse Herald-Journal	NY	Onondaga	Syracuse	13202	2001	8	39
14	Pittsburgh Press	PA	Allegheny	Pittsburgh	15219	2002	31	60
15	Birmingham Post-Herald	AL	Jefferson	Birmingham	35203	2005	15	73
16	Green Bay News-Chronicle	WI	Brown	Green Bay	54301	2005	7	47
17	Alabama Observer	AL	Montgomery	Pike Road	36064	2006	1	2
18	Pasco News	FL	Pasco	Dade	33542	2006	32	45
19	Union City Register-Tribune	MI	Branch	Union City	49094	2007	9	156
20	The Cincinnati Post	OH	Hamilton	Cincinnati	45202	2007	21	69
21	King County Journal	WA	King	Kent	98032	2007	40	24
22	Tracy Press	CA	San Joaquin	Tracy	95376	2008	128	35
23	The Ocean County Observer	NJ	Ocean	Toms River	08753	2008	135	331
24	The Capital Times	WI	Dane	Madison	53713	2008	11	138
25	Rocky Mountain News	CO	Denver	Denver	80202	2009	68	5
26	Boca Raton News	FL	Palm Beach	Boca Raton	33496	2009	65	19
27	Kansas City Kansan	KS	Wyandotte	Kansas City	66112	2009	29	4
28	Baltimore Examiner	MD	Baltimore	Baltimore	21202	2009	114	167
29	The Ann Arbor News	MI	Washtenaw	Ann Arbor	48104	2009	46	82
30	Salamanca Press	NY	Cattaraugus	Salamanca	14779	2009	8	91
31	News & Messenger	VA	Manassas	Manassas	20110	2013	112	155
32	St. Louis Beacon	MO	St. Louis	St. Louis	63101	2013	34	21
33	Hernando Today	FL	Hernando	Brooksville	34601	2014	26	60
34	The Portland Daily Sun	ME	Cumberland	Portland	04101	2014	10	160
35	Daily Southerner	NC	Edgecombe	Tarboro	27886	2014	1	73
36	The Journal-Register	NY	Orleans	Medina	14103	2014	30	19
37	Tonawanda News	NY	Niagara	North Tonawanda	14120	2015	19	31
38	The Citizen	NH	Belknap	Laconia	03246	2016	8	51
39	The Daily News	PA	Allegheny	McKeesport	15132	2016	41	80
40	Malden Evening News	MA	Malden	Middlesex	02148	2017	240	74
41	The Pryor Daily Times	OK	Mayes	Pryor	74361	2017	19	31
42	The Waynesville Daily Guide	MO	Pulaski	Saint Robert	65584	2018	2	43
43	Bastrop Daily Enterprise	LA	Morehouse Parish	Bastrop	71220	2019	4	15
44	The Carthage Press	MO	Jasper	Carthage	64836	2019	3	43

Figure (1) Geographic Distribution of 44 Daily Local Newspaper Closures in the United States (1991-2019)
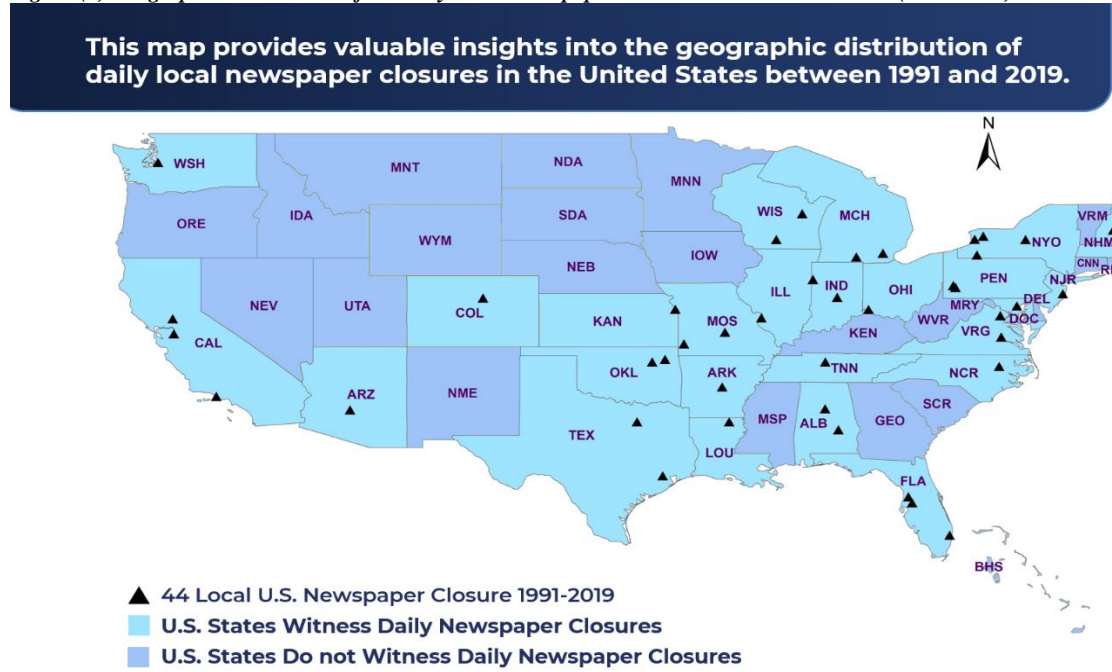
Figure (1) visually points out the geographical distribution of daily local newspaper closures in the U.S. between 1991 and 2019. This comprehensive visualisation highlights the scale and geographical patterns of newspaper closures, illuminating regions that have experienced notable reductions in local print media throughout the examined period.

Table (3) Summary Statistics U.S. Local Newspaper Closures

Year of Closure	No. of Closures	Percentage
1986	-	-
1987	-	-
1988	-	-
1989	-	-
1990	-	-
1991	2	4.55%
1992	2	4.55%
1994	2	4.55%
1995	1	2.27%
1996	1	2.27%
1997	2	4.55%
1998	1	2.27%
1999	1	2.27%
2001	1	2.27%
2002	1	2.27%
2005	2	4.55%
2006	2	4.55%
2007	3	6.82%
2008	3	6.82%
2009	6	13.64%
2013	2	4.55%
2014	4	9.09%
2015	1	2.27%
2016	2	4.55%
2017	2	4.55%
2018	1	2.27%
2019	2	4.55%
2020	-	-
2021	-	-
Total	**44**	**100%**

Table (3) presents the distribution of local newspaper closures in the sample from 1986 to 2021, summarising the instances of closures along with their corresponding annual percentages. Throughout this timeframe, a total of (44) local newspapers ceased operations. The year witnessing the highest number of closures was 2009, contributing to 13.64% of the total closures, succeeded by 2014 with a share of 9.09%. Both 2007 and 2008 experienced 6.82% of the closures, ranking them as the third-highest years for newspaper cessations.

In this study, the impact of local American newspaper closures on firms' behaviour, specifically corporate cash holdings and earnings management, is investigated over a ten-year period surrounding the year of closure. This analysis includes five years prior to the closure, the year of closure, and four years post-closure. Due to data limitations, it was not possible to observe the complete five-year window for treatment events that occurred between 2017 and 2019. Consequently, only four treatment years are considered for closures post-2017, three for those in 2018, and two for those in 2019. Newspaper closures before 1991 or after 2019 are excluded to maintain the accuracy and relevance of the analysis.

2.2.2 Corporate Cash Holdings and Earnings Management Financial Characteristics Data

This study investigates the impact of local newspaper closures on corporate cash holdings and earnings management by utilising data from *Wharton Research Data Services (WRDS)*[2] - *Compustat Fundamentals Annual - North America*, covering U.S. corporate financial characteristics for the period 1986-2021. In addition, *Refinitiv-Eikon*[3] is used as a supplementary database for data not available in *WRDS*. This comprehensive dataset aligns with methodologies used in prior studies on corporate cash holdings (e.g., Bates et al., 2009; Palazzo, 2012; He & Wintoki, 2016) and earnings management (e.g., Call et al., 2014; Glendening et al., 2019; Eugster & Wagner, 2021).

2.2.3 Exclusion Criteria

Consistent with previous research, the study excludes utilities firms (SIC codes 4900-4949) and financial institutions (SIC codes 6000-6999), including banks, insurance companies, and brokerage firms. These sectors are excluded due to their unique regulatory environments and specific accounting practices, which differ significantly from other industries. The special supervisory regulations and prudential rules governing cash management and reserves

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[2] https://wrds-www.wharton.upenn.edu
[3] workspace.refinitiv.com

requirements in these sectors could potentially skew the analysis (Dejong & Ling, 2013; Bliss et al., 2015; Fang et al., 2016; He & Wintoki, 2016; Chen et al., 2017; Tut, 2024).

2.2.4 **Data Cleaning and Preparation**

The dataset is further refined by removing firm-year observations with missing data on key financial variables, such as cash and cash equivalents, or those pertaining to firms inactive during the examined period. This rigorous data cleaning process ensures the integrity and reliability of the final dataset used for analysis. Table (4) provides a detailed account of the sample selection process, including the matching of treatment and control firms and the steps taken to clean the data.

Table (4) Sample Selection Criteria Local U.S. Newspapers Closure

Sample Selection, Matching Parameters and Cleaning Dataset Process – Local U.S. Newspapers Closure	*No. of Observations*
Total Compustat Fundamentals Annual - North America (Corporate Raw data) from 1986 to 2021	153,700
Less Non-U.S. observations and zip codes	(21,951)
Total U.S. Compustat observations before applying year and distance parameters to form the treatment and control groups	131,749
Less Data cleaning, out of sampling period, mismatching and missing observations	(94,398)
Less Utilities and Financial Institutions	(12,111)
Total sample used after matching (Firm-Year)	25,240
Firms affected by local U.S. newspaper closures - Treatment firms used for the analysis	973
Firms never affected by local U.S. newspaper closures - Control firms used for the analysis	739

2.3 *Research Design and Methodology*

Drawing from the research of Gentzkow et al. (2011), Gao et al. (2020), Kim et al. (2021), and Heese et al. (2022), this study posits that the closure of daily local newspapers represents a quasi-exogenous shock to the corporate monitoring environment of nearby firms. Such closures potentially weaken the effectiveness of monitoring local companies, thereby diminishing the strength of the corporate governance system and potentially paving the way for managerial malpractices. In the absence of local media scrutiny, there is a concern that opportunistic managers may engage in actions prioritising personal gains over maximising shareholder value. This study aims to empirically explore the relationships between media coverage, governance mechanisms, agency problems, cash holdings, and earnings management behaviours. By investigating these dynamics, the research seeks to shed light on the consequences of disruptions in media coverage as a form of corporate oversight and its broader implications for governance structures.

2.3.1 **Research Design and Period**

This research examines the effects of local American newspaper closures on nearby firms' cash holdings and earnings management behaviour over a ten-year period, centered around the closure year, following a methodology similar to Heese et al. (2022). This period includes five years preceding the closure, constituting the control group, and five years following the closure, forming the treatment group, with the closure year itself being central to the analysis. Adopting this balanced ten-year timeframe is critical for addressing concerns related to weighting and for reducing the influence of confounding factors[4]. This approach helps isolate the impact of newspaper closures from other external events, including both newspaper-related and unrelated influences, as emphasised by Baker et al. (2022). Such a methodical approach is vital for a clear and unbiased assessment of the relationship between media presence and corporate financial practices.

2.3.2 **Treatment and Control Groups**

In forming the treatment and control groups for this study, the methodology outlined by Kim et al. (2021) is employed. The treatment group includes firms headquartered within a 50-mile radius of a newspaper closure, covering the year of the closure and the four subsequent years. This selection is based on the proximity to the closed media outlet, under the assumption that the impact of the closure would be most pronounced in this vicinity. On the other hand, the control group is composed of firms located further away, specifically those headquartered beyond the 50-mile radius but within a 150-mile radius of the closed newspaper. These firms are observed during the five years prior to the newspaper closure. This distinction in geographical and temporal criteria between the treatment and control groups is critical for isolating the specific impact of local newspaper closures on corporate cash holdings and earnings management behaviours.

2.3.3 **Geographical Verification**

To verify the geographical locations of firms, five-digit American zip code data from the United States Census Bureau[5] is employed, and distances are manually calculated[6]. For the treatment

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[4] We elected a ten-year window (t_{-5}, t_0, t_{+4}) to extend methodologies from Kim et al. (2021) and Heese et al. (2022) and to allow corporate practices, such as cash holdings and earnings management, to be conducted and accurately measured. This approach captures pre- and post-event trends around the staggered monitoring and information shocks resulting from local newspaper closures, addressing endogeneity and confounding issues. It allows for a rigorous examination of the dynamic temporal effects on cash holdings and earnings management behaviour (parallel trends) before and after the closures.

[5] https://data.census.gov/

[6] https://www.freemaptools.com

group, the zip codes of closed newspapers are matched with those of nearby firms situated within a 50-mile radius. Conversely, the control group comprises firms located beyond the 50-mile radius but within a 150-mile radius of closed newspapers. A binary distance parameter is assigned, wherein a value of 1 indicates firms headquartered within the 50-mile radius during the treatment years (inner boundary), and a value of 0 denotes firms situated outside the 50-mile radius but within the 150-mile radius (outer boundary) of closed newspapers (control group). Through the consideration of both time and distance parameters, firms qualifying for the treatment group are determined.

2.3.4   Visualisation and Analysis

Figure (2) visualises the distance parameter, showing two distinct boundaries. The inner boundary includes firms headquartered within a 50-mile radius of closed newspapers, classified as the treatment group. The outer boundary, meanwhile, consists of firms located outside this 50-mile radius but within a 150-mile radius of the closed newspapers, forming the control group. This graphical representation is key to understanding the spatial demarcation between the groups for the study's analysis.

Figure (2) Illustration of Both Inbound and Outbound Distance Parameters
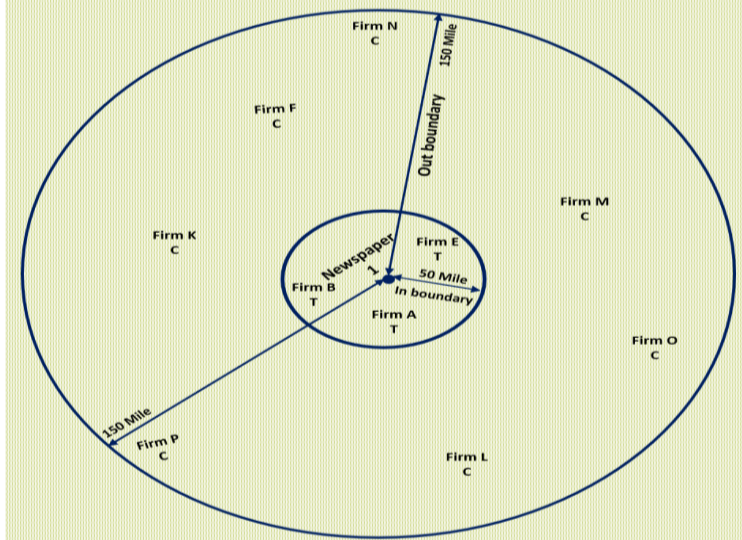
Figure (2) illustrates distance parameter, with the inner boundary denoting firms within a 50-mile radius of a closed newspaper (T: treatment group), and the outer boundary representing firms located outside this radius but within a 150-mile radius of closed newspapers (C: control group).

In the study, the treatment group is matched with the control group based on factors like year, size, industry, and location, ensuring their comparability. Figure (3) graphically represents the time/year parameter applied in the analysis, clearly displaying how both groups are aligned across the duration of the study period.

Figure (3) The Design of the Time/Year Parameter
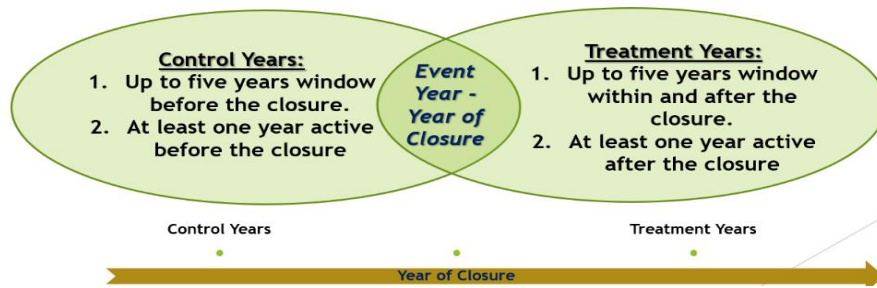
Figure (4) shows an example of coding the time/year binary variable which takes a value of 0 for the control group and 1 for the treatment group.

Figure (4) Example of Coding the Time/Year Binary Variable for the Control/Treatment Group

Example: Arkansas Gazette (AR) zip code 72201 closed in 1991

Year → Group ↓	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Treatment	0	0	0	0	0	1	1	1	1	1
Control	0	0	0	0	0	0	0	0	0	0

Figure (3) and (4) visually clarifies the coding of the time/year parameter as a binary variable, with values of either 0 or 1. This binary classification is determined using the following criteria: (a) a ten-year period centered on the year of the newspaper's closure, (b) up to five years before the closure with a minimum of one year (referred to as control years, assigned a value of 0), and (c) five years post-closure, centring on the event year (referred to as treatment years, assigned a value of 1).

Lastly, Figure (5) visually presents the dataset resources, research design, and boundaries for the treatment and control groups used in the examination of the potential impact of local American print media closures on corporate earnings management practices.

Figure (5) Summary of Dataset Resources, Research Design, and Parameters Utilised in This Study
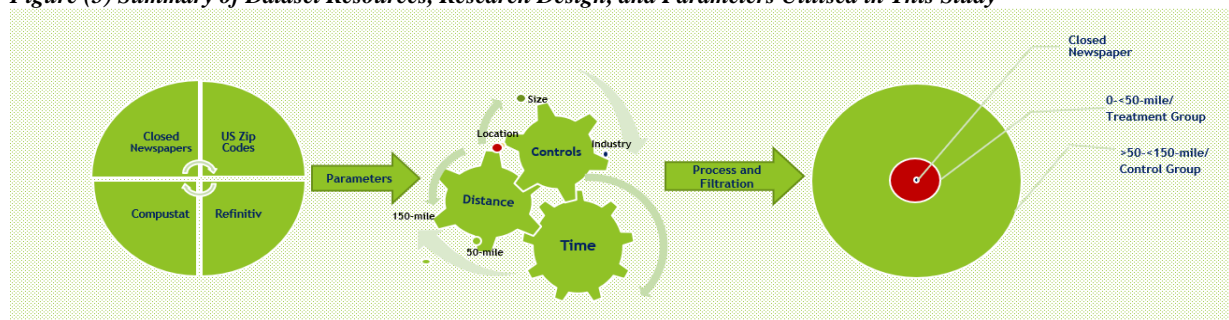
Figure (5) summarises the use of multiple datasets, including Corporate Data from WRDS-Compustat and Refinitiv-Eikon (1986-2021) and hand-collected Closed Newspaper Data (1991-2019).

2.3.5   Difference-in-Differences (DID) Methodology

This research adopts the widely recognised Difference-in-Differences (DID) empirical method, a statistical approach extensively used in econometrics for estimating the causal impact of a treatment on an outcome variable, as described by Abadie (2005) and Goodman-Bacon (2021). The DID methodology involves comparing the average changes over time in the outcome

variable between a treatment group and a control group. This technique aims to estimate the effect of the treatment by controlling for pre-treatment changes between these groups. It does so by conducting a before-and-after comparison within each group and then calculating the difference between these groups' changes, a concept elaborated by Callaway and Sant'Anna (2021).

In line with the methodologies of Kim et al. (2021) and Heese et al. (2022), this study employs the DID approach to investigate the impact of local American newspaper closures on corporate cash holdings and earnings management behaviour, offering a robust framework to identify the causal relationship between these variables. The analysis focuses on comparing shifts in these behaviours between firms within a 50-mile radius of a closed newspaper (the treatment group) and those situated outside this radius but within 150 miles (the control group) over a ten-year period. By using the control group as a reference, the study estimates the effect of newspaper closures by analysing the differences in cash holdings and earnings management measures for five years before and after the closure. This DID approach helps control for time-varying external factors, providing a more accurate assessment of the causal relationship between newspaper closures and changes in corporate financial practices. Ensuring at least one observation both before and after the local newspaper shutdown is crucial to validate the DID tests and the study's findings.

In sum, by adopting a rigorous research design and methodology, this study aims to provide empirical insights into the impact of local newspaper closures on corporate cash holdings and earnings management. The use of a comprehensive dataset, careful sample selection, and the Difference-in-Differences (DID) methodology ensures robustness and credibility in the findings. This approach enables a clear and unbiased assessment of the relationship between media presence and corporate financial practices, highlighting the critical role of local journalism in maintaining corporate accountability and financial transparency.

Chapter Three: The Impact of Local U.S. Daily Newspaper Closures on Corporate Monitoring and Cash Holdings

3.1 Introduction

3.1.1 Overview and Background

Local newspapers have played an indispensable and vital role in overseeing and safeguarding local communities since the early 1900s (Hamilton, 2016). Referred to as accountability journalism or the fourth estate, this form of journalism aims to protect citizens from the unjust, corrupt, or harmful actions of influential local players (Adserà et al., 2003; Brunetti & Weder, 2003). It encompasses not only investigative reporting that brings hidden cases to light but also the broader watchdog function that local journalists perform as part of their daily work (Anderson et al., 2016). However, in recent years, there has been a significant shift in media consumption patterns due to the rise of digital media and the widespread popularity of platforms like Facebook, Twitter, and LinkedIn (Blankespoor et al., 2014; Meel & Vishwakarma, 2020). These user-friendly platforms provide easy access to real-time information, surpassing the limitations of traditional print media (Bruhn et al., 2012; ShuKai et al., 2017).

Consequently, newspapers are losing their significance in public life due to the high costs of publishing and circulation, coupled with declining advertising revenues (Wahl-Jorgensen, 2018). This decline is evident in various towns and cities in the United States, where the number of local newspapers has significantly decreased (Meyer, 2009). According to a report by the Pew Research Center (2021), local press in the United States has experienced a substantial decline over the past two decades, with circulation decreasing by almost 50%. As a result, the absence of newspapers has led some regions to face the risk of becoming "news deserts", where essential news coverage is unavailable, resulting in a lack of awareness and knowledge among residents about local events (Abernathy, 2018; Mathews, 2020).

The potential for corporate cash holdings to reflect agency problems and the management of excess cash has drawn significant attention from scholars and practitioners (e.g., Opler et al., 1999; Pinowitz et al., 2006; Dittmar & Mahrt-Smith, 2007; Harford et al., 2008). Although current literature has provided valuable insights into the factors and outcomes of corporate cash holdings, the relationship between local newspapers as a corporate watchdog and this topic has been largely overlooked. To address this gap, this study examines the influence of local daily newspaper closures on corporate cash holdings policies.

Building on corporate cash holdings theories, agency theory, and media literature as a foundation, this study develops a set of hypotheses that associate the closure of local newspapers

with changes in corporate cash holdings. Specifically, the study proposes that companies situated in regions with fewer local newspapers are more likely to hoard cash due to the reduced monitoring activities provided by local newspapers. Thus, this research contributes to the existing body of literature on corporate cash holdings by highlighting the significance of local newspapers in corporate governance and cash management, and by offering practical implications for policymakers and investors.

3.1.2 *Research Question and Motivations*

This research is motivated by the ongoing discourse surrounding the importance of local newspapers in delivering responsible journalism and fostering community oversight. The goal is to add to this discussion by investigating the influence of local media on corporate behaviour, specifically focusing on the implications of local U.S. daily newspaper closures on neighbourhood corporate cash holdings policy. By examining the potential impact of such closures on corporate cash holdings practices, this study aims to address existing gaps in the literature related to the contentious agency problems encountered by publicly listed companies in the U.S. market.

One major concern revolves around the potential consequences of diminished local news coverage, such as reduced accountability, limited investigative reporting, and a subsequent rise in local corruption and crime (Waldman, 2011). Existing research has demonstrated that areas with limited local press tend to have less informed voters (Gentzkow et al., 2011), increased corruption among local politicians, and higher borrowing costs for municipalities (Gao et al., 2020). Nonetheless, understanding of the impacts of declining local newspapers on corporate cash holdings remains limited.

Despite previous research suggesting that local newspapers are ineffective in monitoring corporate behaviour (e.g., Gurun & Butler, 2012; Shapira & Zingales, 2017), there has been little examination of this topic. While some studies have explored the effectiveness of national or regional newspapers, there is no consensus on the role of local media in disciplining firms' behaviour (Dyck et al., 2008; Miller & Skinner, 2015). Furthermore, the digital revolution and the aftermath of the 2008 Financial Crisis have led to an increase in newspaper closures (Kirchhoff, 2009; Nielsen & Levy, 2010; Nielsen, 2015) resulting in the emergence of "news deserts" in communities lacking access to reliable news sources (Abernathy, 2020).

The field of corporate studies has extensively explored the interplay between media and firms in various contexts, including strategic decision-making (Bednar et al., 2013), market entry strategies (Kulchina, 2014), and executive compensation practices (Kang & Kim, 2017). When it comes to the media's role as a watchdog, prior research has predominantly focused on examining the impact of individual news reports on a firm's ethical conduct (e.g., Miller, 2006; Dyck et al., 2008; Zyglidopoulos et al., 2012; Aharonson & Bort, 2015; Jia et al., 2016; Heese et al., 2022). For example, Zyglidopoulos et al. (2012) conducted a study on S&P 500 U.S. firms and found a positive association between the frequency of mentions in major U.S. newspapers and a company's demonstration of social responsibility. By analysing specific news reports, this line of research provides valuable insights into the underlying mechanisms that shape the watchdog role of the media. Therefore, by investigating the influence of individual news reports, researchers gain a more nuanced understanding of how the media acts as a watchdog, illuminating the intricate dynamics between media and firms.

Shaker (2014) analyses data from *Denver and Seattle* to determine the impact on civic engagement when a newspaper closes. The study finds that the closure of a newspaper has a measurable negative effect on civic engagement in these cities, and this is supported by prior research that shows newspaper readership is significantly related to civic engagement. The decline in newspaper readership and subsequent closures may have significant negative consequences for democracy and citizen participation. The author suggests several potential solutions to address this issue, such as increasing funding for local journalism or exploring alternative models for sustaining local news outlets. Overall, this study highlights the importance of local newspapers for promoting civic engagement in communities and emphasises the need for continued support for local journalism to promote informed citizenship and democratic participation.

According to Hamilton (2016), local newspapers are considered non-economic institutions due to their primary role as watchdogs. Their function as providers of accountability journalism has historically been crucial in deterring corporate misconduct and maintaining a sense of institutional equilibrium. In relation to this, Gao et al. (2020) establish that newspaper closures lead to excess government salaries and increased municipal borrowing costs, consistent with the loss of a local monitor causing misuse of funds.

The study by Kim et al. (2021) investigates the impact of local newspaper closures and layoffs on firms, highlighting the important role of local newspapers in monitoring managers and

disseminating information about firms. The authors find that when local newspapers close or lay off staff, it weakens the information environment of firms and exacerbates agency problems, especially for firms with weaker governance structures and those located in areas with lower internet penetration rates. The study also mentions dividend policy as a disciplining mechanism for agency problems, noting that it involves real cash flows and is less subject to manipulation than weaker controls such as increased disclosure. This study underscores the significance of local newspapers as information intermediaries and monitors of public firms and highlights the need for regulators to support their continued existence.

In their recent study, Heese et al. (2022) emphasise the critical role played by local newspapers in monitoring and reporting on corporate wrongdoing, highlighting that the decline of local newspapers in the U.S. could lead to an increase in such misconduct. The study reveals that local newspaper closures raise penalties by 15.2% and violations by 1.1% at the facility level, emphasising the importance of local newspapers in promoting corporate accountability. These findings serve as a warning on the potential consequences of dwindling media coverage for corporate wrongdoing, making a strong case for the need to support local journalism to ensure transparency and accountability in corporate governance.

Although extensive research exists on corporate governance and cash holdings, a notable gap persists in the literature, especially concerning the linkage between media closures, governance mechanisms, agency issues, and corporate cash holdings behaviour. This Essay aims to address this gap, forging connections between these themes. Specifically, it seeks to empirically assess the potential causal impact of local media closures, acting as a watchdog, on corporate cash holdings policy.

This study adds to the growing literature on media-corporate governance by examining how active media coverage functions as an external governance mechanism and corporate watchdog, influencing corporate behaviour. By investigating the impact of local U.S. daily newspaper closures on corporate cash holdings, it underscores the role of media in exposing and deterring corporate misconduct. This research contributes to a deeper understanding of the relationships among media coverage, governance mechanisms, agency issues, and corporate cash management.

This research seeks to shed light on the significance of local media as a mechanism for monitoring corporate behaviour, exploring the potential impact of local newspaper closures on

the cash-hoarding practices of nearby firms. Previous studies have underscored the crucial role of newspapers in overseeing and regulating corporate conduct (e.g., Miller, 2006; Dyck et al., 2010). The absence of local media outlets arguably leads to a decline in effective external monitoring of corporate activities. By investigating this relationship, this study offers insights into the importance of local media as a mechanism for ensuring corporate accountability.

Moreover, other scholars have emphasised the importance of media in providing valuable information that enhances corporate transparency and governance mechanisms (e.g., Fang & Peress, 2009; Kothari et al., 2009; Drake et al., 2014; Shipilov et al., 2019). Research in the field of media-corporate governance indicates that media attention can influence management decisions by acting as a deterrent against managerial misconduct and exposing accounting fraud (e.g., Miller, 2006; Tetlock, 2007; Dyck et al., 2008; Bushee et al., 2010; Tetlock, 2011).

Furthermore, Joe et al. (2009) contend that media scrutiny prompts corporate boards to enhance shareholder protection measures and take actions that maximise shareholder value, leading to better corporate governance outcomes. In addition, Heese et al. (2022) demonstrate the vital role played by local newspapers as watchdogs that monitor local facilities' conduct. Consequently, the absence of local media outlets increases the risk of firms engaging in misconduct as the loss of external corporate monitoring results in further consequences. Therefore, this study contributes to this strand of knowledge by exploring the potential consequences of local newspaper closures on corporate cash-hoarding behaviour, highlighting the critical role played by media in corporate governance and accountability.

Local newspaper closures potentially influence corporate cash holding policies. When absent, local newspapers, being vigilant monitors, create a void in the external check and balance system, keeping corporate managers responsible. This lack of oversight affords managers more latitude, subsequently elevating the potential for agency costs. Therefore, the influence of local newspaper closures on corporate cash policies arises from the reduced monitoring and accountability that these newspapers supply.

In short, the absence of local newspapers, acting as monitoring mechanisms, can elevate agency costs and increase corporate cash holdings, adversely impacting shareholder interests. Further exploration is imperative to understand the connections between media coverage, governance mechanisms, agency dilemmas, and corporate cash holdings behaviour. Insights from such exploration can shape effective policies to reduce agency costs and enhance shareholder value.

3.1.3 Structure of the Study

This Essay employs a structured approach to comprehensively address its research objectives. The introduction section provides an overview, background, research question, and motivations behind the study. The literature review critically examines the function of local newspapers as a corporate monitoring channel and explores theories related to corporate cash holdings. Based on the literature review and research goals, hypotheses are formulated in the third section. The next section outlines the sample and data collection process, presents descriptive statistics, and explores pairwise correlations. In the fifth section, the empirical analysis is conducted, enriched by methodological insights and a detailed discussion of the findings, including their implications and engagement with academic discussion. Robustness tests are performed in section six to validate the results, and section eight extends the analysis by introducing supplementary variables to strengthen the reliability of the research findings. The final section provides a conceptual conclusion, offering recommendations and identifying potential directions for future research.

3.2 Literature Review

3.2.1   Local Newspapers as a Corporate Monitoring Channel

Local newspapers play a pivotal role in developing, certifying, and disseminating original and credible news to local communities (Metzgar et al., 2011). Their mission contributes substantially to achieving the sustainable development goals of local communities for four key reasons (Holt & Barkemeyer, 2012).

Firstly, local newspapers act as the news hub and distributor for the communities they serve (Smith, 1987). They provide the audience with a regular, responsible, authenticated and independent source of information at the lowest possible cost (Waldman, 2011). Secondly, local newspapers, as a pillar of press freedom, possess the ability to effectively highlight the positive aspects and expose instances of corruption within local communities in a professional, transparent, and ethical manner (Brunetti & Weder, 2003). Thirdly, local newspapers play a crucial role as public watchdogs and good neighbours by conducting thorough and credible investigations and analyses of issues relevant to the local community (Poindexter et al., 2006; Harte et al., 2016). They independently examine and analyse information, collect concrete evidence, and propose corrective actions to improve the lives of local residents (Lewis et al., 2009). Fourthly, the tone, sustained observations, and continuous follow-ups of newspapers provide a powerful and intentional societal surveillance instrument (Shaker, 2014). They generate original high-quality news and supported stories that promote community freedom, awareness, and best practices (Hamilton, 2016). Furthermore, local newspapers empower vulnerable communities by exposing social injustice, public corruption, financial scandals, and corporate fraud (Heath, 1984; Nielsen, 2015; Kim et al., 2021; Heese et al., 2022).

The influence of local newspapers on communities is profound, serving as crucial monitoring platforms and primary information sources (Miller, 2006). Their role in shaping market behaviours and ensuring corporate transparency and accountability is paramount (Dyck et al., 2008; Zyglidopoulos et al., 2012). The diminishing presence of such media entities can introduce severe consequences, possibly weakening community bonds, undermining market integrity, and compromising corporate ethics (Aharonson & Bort, 2015; Jia et al., 2016).

Local newspapers have been recognised for their indispensable role in addressing and relaying news and concerns pertinent to local communities, a role highlighted in various studies (Yamamoto, 2011). Their contribution is seen as even more crucial when compared to regional

or national newspapers, given their close proximity to diverse community segments (Ali et al., 2018). This closeness allows them to serve a unique and vital role, catering to a specialised audience by scrutinising and highlighting lapses in matters of public concern (Berkowitz & Beach, 1993; Jenkins & Nielsen, 2019).

Moreover, by covering local news content, these outlets play a substantial role in drawing the attention of local officials to pressing matters, prompting them to address such issues with efficiency and integrity (Francke, 1995; Schudson, 2001). As the vigilant guardians of democracy, local newspapers play a crucial role in upholding and preserving accountability journalism within local communities (Hamilton, 2016). Their presence ensures that matters of public interest are not only brought to light but are also addressed, reinforcing ethical standards and responsibility within local governance structures.

In contrast, regional and national newspapers typically overlook the daily affairs impacting residents of local communities and, therefore, cannot serve as substitutes for local newsmakers (Vella, 2009). The scope of regional and national press is to supply news from a state's political, social, or economic viewpoint (Mondak, 1995). This occurs as the expansive objectives of the national print media diverge from the mission and vision of local newsmakers, focusing instead on macro-level information to guarantee their circulation encompasses the widest readership (McLeod et al., 1996).

The decline of local newspapers brings substantial risks to journalism's role in overseeing local government and corporate actions. Research by Gao et al. (2020), Kim et al. (2021), and Heese et al. (2022) underscores how their disappearance can induce exogenous shocks, compromising journalism's ability to scrutinise the financial conduct of local entities and corporations effectively. This decline hampers critical oversight, affecting fiscal performance and corporate behaviour monitoring, with potential ramifications on local governance and corporate accountability.

The presence or absence of local newspapers serves as a barometer of the effectiveness of accountability journalism within a community, as the collective force of these newspapers plays a vital role in overseeing local governance (Cook, 2012; Hamilton, 2016; Gao et al., 2020). Consequently, this viewpoint investigates whether, despite variations in individual news reports regarding their level of analysis, originality, and potential biases (Miller, 2006), local newspapers as a whole contribute to curbing unethical conduct by firms (Heese et al., 2022).

As local monitoring declines, the risk of compromised governance mechanisms increases, as local companies may exploit the resulting conflict of interest between managers and shareholders, thereby aggravating the agency dilemma (Kim et al., 2021). The absence of an effective monitoring mechanism, such as local newspaper coverage, can give rise to unethical practices by managers, such as imposing improper investment decisions, cash holdings and payout policies, limiting disclosure, and pursuing personal wealth and power maximisation (Easterbrook, 1984; Jensen, 1986; Harford et al., 2008). This can have negative consequences for various stakeholders, including local investors, employees, creditors, consumers, policymakers, and the environment, and sustainable development.

Schulhofer-Wohl and Garrido (2013) conducted a study on the impact of the closure of The Cincinnati Post, a daily newspaper that served the Cincinnati metropolitan area. Their findings suggest that the closure of *The Cincinnati Post* resulted in a significant reduction in public affairs knowledge among residents, which persisted for several years after the newspaper's closure. Additionally, the study revealed that municipalities that had been covered by *The Cincinnati Post* experienced a decline in the quality of their financial reporting. Overall, the study highlights the crucial role newspapers play in promoting public affairs knowledge, political participation, and local governance. The closure of a newspaper can has significant negative consequences for a community in both the short and long run.

In summary, local newspapers play a vital role as an external corporate governance mechanism that monitors and critiques the behaviour and performance of local firms. The disappearance of a well-operating local press can have significant adverse economic, cultural, and social consequences on local firms' stakeholders by eliminating a credible and essential local monitoring and communication channel. This study aims to fill a gap in the literature by examining the measurable impact of the closure of traditional print local newspapers on corporate cash holdings behaviour. In undertaking this, the examination can reveal the degree to which local newspapers act as an effective check against managerial opportunism when no external monitoring mechanism is present.

3.2.2 Corporate Cash Holdings: Literature Review

3.2.2.1 Cash Holdings - Introduction

Corporate cash holdings have garnered substantial attention within the realm of corporate finance, especially over the last few decades (Opler et al., 1999). The way companies manage their cash is vital for various strategic decisions, including operational financing, long-term investments, and risk mitigation (Bates et al., 2009). As a result, gaining a deeper understanding of cash management policies is crucial for researchers seeking to expand their knowledge of corporate finance, value creation, and investment decision-making. By investigating the determinants and consequences of corporate cash holdings, scholars can refine their understanding of how firms strategically handle their cash resources, thus contributing to the broader field of knowledge in corporate finance (Dittmar & Mahrt-Smith, 2007).

In recent years, U.S. firms have been accumulating cash reserves at record levels. Bates et al. (2009) observed substantial growth in cash reserves, increasing from 10.5% in 1980 to 23.2% in 2006. Simultaneously, Harford et al. (2008) highlighted a surge in the U.S. corporate cash holdings ratio, climbing from 8.5% in 1980 to 13.9% in 2008. Moreover, Almeida et al. (2014) noted a significant upward trend in corporate cash hoardings, both in America and globally. For non-financial S&P500 companies, cash ratios experienced a sizable rise, escalating from $200 billion in 1996 to a remarkable $1,334 billion in 2012. The 2020 Moody's Report Moody's (2020) underscored further financial shifts during the COVID-19 pandemic, revealing a significant increase in U.S. non-financial firms' cash holdings. By June 2020, these holdings had reached a record $2.12 trillion, reflecting a 30% increase since the end of 2019. This noteworthy increase in cash stockpiling has captured the attention of numerous scholars and theorists, who have attempted to explain this phenomenon with varying perspectives and theories.

Numerous potential reasons for the upward trend in cash stockpiling have been explored. The foundation of studies on cash holdings can be traced back to the early 1930s when Keynes (1936) proposed that corporations hoard cash to meet operational needs and protect against future uncertainties. Supporting this view, Almeida et al. (2004) highlight the relationship between cash holdings and cash flows, particularly for financially constrained firms. Such firms may accumulate excess free cash flow to ensure their future financial security. During economic downturns, these firms may hold substantial cash reserves to hedge against adverse shocks.

Keynesian Theory challenges the classical notion that reserving liquid assets and cash is irrational (Keynes, 1936). Unlike classical and neo-classical theorists who considered liquidity only as interest rate loss (Dittmar & Mahrt-Smith, 2007), Keynes argues that holding cash is a way to meet liquidity constraints. According to the liquidity preference theory, individuals and firms prefer to hold liquid assets to meet their unexpected and urgent needs (Tobin, 1958). However, while Keynesian Theory and financial constraints faced by firms offer some explanations, a thorough investigation is required to fully comprehend the complexities of corporate cash management and its implications for firm behaviour and performance.

The finance literature has extensively debated the determinants of cash holdings, aiming to understand and predict corporate cash hoarding behaviour. Previous studies have examined firm-level factors, such as executive pay (Liu & Mauer, 2011; Cheng et al., 2022), firm size (Bigelli & Sánchez-Vidal, 2012; Dang et al., 2018), and debt levels (Ferreira & Vilela, 2004; Anderson & Carverhill, 2012). Industry-level determinants, including governance mechanisms (Dittmar & Mahrt-Smith, 2007; Kusnadi, 2011; Schauten et al., 2013), tax implications (Fritz Foley et al., 2007), crisis and exogenous shocks (Campello et al., 2010, 2011; Song & Lee, 2012), have also been explored.

Moreover, researchers have extensively investigated cash stockpiling in relation to various financial factors. Seminal work by Opler et al. (1999) examined cash holdings in relation to shareholders' payout, while other studies explored its connection with share repurchase programs (Haw et al., 2011; Lee & Suh, 2011; Almeida et al., 2016) and acquisitions (Harford, 1999; Almeida et al., 2011; Pinkowitz et al., 2013). This broad research scope, grounded in classical cash management theories, has provided valuable insights into the determinants of cash holdings.

However, to gain a comprehensive understanding of cash holdings, further analysis and exploration of cash theories are essential. Delving deeper into these theories will uncover insights and perspectives, contributing to a more accurate explanation of corporate cash hoarding behaviour.

3.2.2.2 Cash Holdings - Theoretical Background

The interest in corporate cash hoardings dates back to at least Keynes (1936), who proposed the precautionary motive to explain why companies hold onto cash. Since then, researchers have identified key factors that contribute to corporate cash stockpiling, including operational needs, agency costs, leverage, management entrenchment, capital market friction, technology

enhancements, and opportunity costs (Meltzer, 1963; Miller & Orr, 1966; Schmitt-Grohé & Uribe, 2007). Theoretical frameworks, such as agency, trade-off, and pecking-order theories, have also been introduced to provide better insights into corporate cash-hoarding behaviour (Jensen & Meckling, 1976; Myers, 1984; Jensen, 1986). These theories have been widely used to supplement various perspectives in many studies. Together, they offer a comprehensive understanding of the motivations and trends that underlie corporate cash holdings.

3.2.2.2.1 Agency Costs – Free Cash Flow Theory

Agency theory, introduced by Smith (1937), focuses on the contractual relationships between principals and agents and the resulting trade-offs caused by the separation of ownership and control. The theory recognises that conflicts can arise when agents, representing principals, have divergent interests and risk preferences (Berle & Means, 1932). Within the framework of agency theory, the accumulation of cash is believed to increase agency costs. Colquitt et al. (1999) conducted a study and found that the impact of agency costs on cash hoarding by managers is inconclusive. On one hand, risk-averse managers may hold excessive cash to exploit investment opportunities. On the other hand, self-interested managers may retain excess free cash flow to exert discretionary power and utilise the firm's resources to the detriment of shareholder value (Jensen, 1986).

According to agency theory, the presence of high cash reserves can potentially give rise to agency problems if the cash is not efficiently invested in profitable opportunities. Managers may choose to hoard cash to enhance their discretion and control, leading to increased agency conflicts between managers and shareholders (Fama, 1980; Fama & Jensen, 1983; Jensen, 1986; Eisenhardt, 1989). Furthermore, Myers and Rajan (1998) argue that managers with self-serving motives may prioritise their own benefits over the objectives of the corporation and its shareholders. Consequently, managers in firms that accumulate excess cash holdings can be viewed as acting in a self-opportunistic manner, resulting in the incurrence of agency costs, assuming all other factors remain constant (Harford et al., 2008). These perspectives highlight the potential agency dilemmas and conflicts of interest that may arise in the context of corporate cash holdings (Dittmar et al., 2003).

The agency dilemma refers to the situation where managers, in the absence of effective corporate monitoring mechanisms, may prioritise their personal interests over those of the firm (Myers & Rajan, 1998). This can lead to the misuse of corporate resources, including pursuing projects that are not in the best interest of the firm and ultimately undermine its value (Jensen, 1986; Stulz,

1990). According to this view, cash, being a highly liquid asset, can be easily used by managers to increase their corporate control at a low cost compared to other assets (Myers & Rajan, 1998; Elyasiani & Zhang, 2015). Instead of returning the cash to shareholders through dividends, managers may prefer to invest in inefficient projects or expand their own empires (Jiang & Lie, 2016).

Several prior studies suggest that a better legal system, higher investor protection, and more homogeneous ownership negatively affect the level of corporate cash holdings (e.g., Ozkan & Ozkan, 2004; Kusnadi & Wei, 2011; Nguyen et al., 2018). Gao et al. (2013) provide a sample of U.S. public and private companies from 1995 to 2011, and their research shows that public companies tend to hold more excess cash than private ones on average due to agency problems. Well-governed public companies with surplus cash are more likely to experience lower leverage because of disgorging cash to pay out external debt. In contrast, poorly governed peers hold high cash levels to dispel the excess cash in overinvestment and acquisitions of large tangible assets.

A study focused on small and medium-sized enterprises (SMEs) conducted by Al-Najjar (2015) reveals noteworthy insights. The investigation indicates that aspects of corporate governance, such as insider ownership, do not display a significant connection with choices concerning corporate cash hoarding. However, the study identifies a negative correlation between the size and leverage of SMEs and their cash holdings behaviour. Of particular interest, the study's results highlight a notable positive association between CEO compensation and the levels of corporate cash.

Arnold (2014) conducted an analysis exploring how managerial cash hoarding influences firms' financial strategies and default risk, using agency theory and the precautionary motives for cash stockpiling. The study reveals that during economic uncertainty, managers tend to accumulate cash as a protective measure. Since managers often receive fixed salaries and variable pay, they consider the impact of cash hoarding on default risk and their fixed wage when making corporate cash policy decisions. Consequently, managers are inclined to hoard more cash to mitigate default risk and secure their income. Managers with higher risk incentives tend to hold more surplus cash, which can lower shareholder cash values. As a result, cash holdings in firms are influenced not only by agency conflicts but also by managers' compensation incentives and risk-taking behaviour.

The agency view suggests that payout and repurchase strategies are important in preventing managers from using free cash flow on unproductive projects or acquiring assets solely to increase the firm's size (Jensen, 1986; Lee & Suh, 2011). Kalcheva and Lins (2007) conducted a cross-country comparative study of managerial control rights for over 5,000 firms and analysed the net cost-benefit of cash stockpiling. Their findings suggest that outside potential investors would discount the value of cash hoarded by firms likely to face high managerial agency conflicts. This is due to the behaviour of entrenched managers and the poor level of external investor protection in the country. The authors conclude that in the absence of strict external protections, controlling managers' behaviour may lead to hoarding more excess cash instead of paying dividends to shareholders, resulting in a devaluation of the firm.

According to agency theory, effective corporate monitoring and appropriate incentives are necessary to control the behaviour of agents (Fama, 1980). Well-designed compensation systems that incorporate performance-based and behavioural incentives can align the interests of managers and shareholders, thereby reducing agency conflicts (Jensen & Meckling, 1976). Minimising agency problems can have a positive impact on corporate cash holdings and financing decisions (Jensen, 1986; Han & Qiu, 2007).

External governance mechanisms refer to the controls implemented by external stakeholders to monitor corporate performance (Hutchinson & Gul, 2004; Cremers et al., 2005). Active media coverage can be viewed as an external governance mechanism that monitors firms' behaviour and potentially mitigates agency conflicts (Gillan, 2006; Bednar, 2012; Gao et al., 2020; Giuli & Laux, 2022). By providing independent and unbiased coverage, the media can contribute to transparency and accountability, thereby reducing agency problems in corporate settings (Miller, 2006; Dyck et al., 2008).

3.2.2.2.2 *Trade-off Theory*

The trade-off theory of cash holdings seeks to determine the optimal cash level for firms by considering the benefits and drawbacks of holding cash in the context of financial market constraints (Almeida et al., 2004). This theory recognises that striking a balance between the opportunity cost of holding cash, which involves accepting lower returns, and the advantage of reducing the dependence on expensive external financing becomes crucial when internal resources are inadequate to fund future investment prospects (Kim et al., 1998).

According to several studies Opler et al. (1999), Dittmar et al. (2003), and Bates et al. (2009), firms hold cash for three primary reasons: transactional, precautionary, and speculative motives. The transactional motive refers to the need for cash to support regular business operations, while the precautionary motive arises from the need to maintain cash reserves to deal with unexpected events. Lastly, speculative motives arise from potential investment opportunities that firms may want to capitalise on. These motives align with the views of Keynes (1936) on why firms hold cash.

Kim et al. (1998) propose that firms derive two benefits from holding cash: first, it reduces their reliance on expensive external financing, and second, it supports existing investment opportunities. However, cash hoarding also comes with two costs. The first is the carrying cost, which arises due to the decline in cash yield compared to other investments with similar risk levels. The second is the transaction cost related to external funding fees (Dittmar et al., 2003). While the carrying cost negatively impacts investment opportunities, transaction costs push firms to hold more cash due to the challenges in accessing external financing and the additional cost incurred during cash shortages (Miller & Orr, 1966; Faulkender et al., 2006; Bates et al., 2009). Consequently, the trade-off approach in cash management practices advocates for an optimal level of cash, where companies carefully consider the marginal benefits and costs of holding liquid assets.

According to Opler et al. (1999), maintaining a higher level of cash reserves could potentially lead to a rise in the firm's marginal tax rate. This is due to the possibility of double taxation on capital gains resulting from corporate cash hoarding. The initial taxation takes place at the firm level, and the subsequent taxation occurs when the earnings are distributed to shareholders.

Kim et al. (1998) developed an optimal cash hoarding model by analysing panel data from 915 industrial companies between 1975 and 1994. The model is based on a cost-benefit trade-off between the cost of holding cash and the benefits of using it for future investment opportunities through internal funding. The authors argue that the optimal investment of cash reserves is positively related to the cost of external financing, uncertainty about projected cash flows, and future returns on investment. However, cash holdings are likely to negatively correlate with company size, investment in tangible assets, and financial distress. Smaller companies, higher price-to-book ratios, higher cash flow volatility, and higher future investment opportunities were found to lead to higher levels of cash hoarding.

Almeida et al. (2004) investigate the liquidity needs of firms operating in imperfect capital markets. According to their model, firms select the optimal cash level based on the sensitivity of their cash hoarding to cash flow. Firms that face financial constraints tend to save on their cash flow to finance investments that increase their value. In contrast, unconstrained firms do not follow a consistent cash management policy. The authors examine a sample of U.S. manufacturing companies from 1971 to 2000, using five different proxy variables to measure financial constraints. Their findings reveal that financially constrained firms are more likely to hoard cash, whereas constraint-free counterparts exhibit no change in their cash management policy.

Riddick and Whited (2009) propose a dynamic trade-off model that suggests the optimal cash management policy is based on the cost of external and future funding requirements. Firms tend to hold a higher level of liquid cash as a precaution when external funding is expensive or income-generating uncertainty is high. Unlike the findings of Almeida et al. (2004) and Riddick and Whited (2009) predict a negative association between corporate cash holdings and cash flows, even after controlling for Tobin's Q in such firms. However, when positive productivity shocks occur, the adverse sensitivity of cash hoardings from cash flows and the marginal product of capital both rise in absolute terms. This model highlights the importance of cash flow shocks and the cost of external funds in influencing firms' cash management behaviour.

Anderson and Carverhill (2012) provide a different perspective on cash management policies, suggesting that firms have a negative marginal propensity to reserve liquid cash with higher profitability, regardless of their investment plans. However, the relationship between investment and cash stockpiling becomes path dependent due to lower profitability. Furthermore, the authors find a negative correlation between corporate leverage levels and cash holdings. Overall, their study adds to the existing literature on the factors that influence firms' cash management decisions.

Han and Qiu (2007) conducted a study using a dual-period investment model to explore the precautionary motive for corporate cash holdings in U.S. listed companies from 1997 to 2002. Their research focused on understanding the trade-off between present and future investments, considering the interaction between cash hoarding, cash flow uncertainty, and financial constraints. The findings indicated that firms facing financial constraints are more sensitive to cash flow volatility, adjusting their cash management policies accordingly. In contrast, unconstrained firms do not alter their cash holdings, as their optimal future investments are

separate from their existing projects. Furthermore, the study revealed a positive correlation between cash hoarding and higher cash flow volatility in financially constrained firms. However, in these firms, there was a negative correlation between cash flow volatility and current investments.

Gamba and Triantis (2008) examine the impact of financial flexibility on corporate investment, funding, and cash retention policies. They employ a dynamic framework that includes external funding costs, corporate and personal income tax rates, and capital liquidation value. The study reveals that the marginal value of cash reserves is negatively linked to liquidity and positively related to investment opportunities and corporate financial constraints, according to a simulation that accounts for multiple transactions and tax costs.

In their study, Bao et al. (2012) suggest that firms experiencing financial constraints and income shocks tend to reduce their capital expenditures, increase short-term leverage, hold cash, and miss out on profitable investments. They also discovered a non-linear correlation between changes in cash hoardings and cash flows, indicating that companies may have different levels of cash hoarding based on their cash flows. The findings further reveal that companies with negative cash flows tend to have lower cash reserves, whereas those with positive cash flows hold higher levels of cash.

Through their examination of U.S. publicly listed companies from 1972 to 2001, Faulkender et al. (2006) discover that the marginal value of cash negatively affects cash levels and leverage. However, they also find a positive correlation between this negative relationship and factors such as potential investment opportunities, financially constrained firms, and share buyback strategies. These findings suggest that various firm-specific factors and financial strategies play a role in influencing the value of cash holdings.

In alignment with the trade-off theory, Arslan et al. (2006) examine Turkish non-financial firms from 1998 to 2002 and find that smaller, financially constrained, and relatively newer companies tend to maintain higher levels of cash reserves. They believe such cash hoarding reduces the firms' vulnerability to capital expenditure fluctuations. Similarly, Bigelli and Sánchez-Vidal (2012) study Italian private companies and confirm that firms with smaller sizes, higher exposure to risk, and lower effective tax rates hold larger cash balances.

The studies conducted by Opler et al. (1999) and Ferreira and Vilela (2004) suggest that the level of cash reserves and investment opportunities of U.S. and EU corporations are adversely affected

by the number, size, and leverage of liquid asset replacements. In contrast, cash flows are likely to have a positive impact on corporate cash holdings. However, Duchin (2010) argues from a precautionary savings perspective that diversified companies have a lower correlation between investment opportunities and cash flow and a higher correlation between investment horizon and cash flow when they have lower cash reserves.

3.2.2.2.3 *Pecking Order Theory*

The Pecking Order Theory, as outlined by Myers (1984), suggests that companies do not maintain an optimal level of cash holdings. Rather, such holdings are the consequence of the firm's investment and financing decisions. The theory posits that companies first utilise internal funds, like retained earnings or other liquid assets, for investment opportunities. When these internal resources are insufficient, the firm will reduce its cash reserves and opt for safer forms of external debt to meet its financing needs. If further financing is still required, riskier debt or even equity issuance becomes the last resource option. Thus, the theory underscores the sequential nature of corporate financing choices, from internal resources to varying forms of external debt, based on the value of potential investments relative to available cash.

The Pecking Order Theory outlines a hierarchical approach in firms' cash management. Excess funds are either retained or used for debt repayment, while deficits drive firms to external financing. In their influential study, Opler et al. (1999) propose a close connection between year-end cash balances and a firm's earnings throughout the year, implying a positive correlation between the year-end cash ratio and excess cash ratio for firms with higher current cash flow. The study examines factors such as the current year's operating cash flow (adjusted for dividends and capital expenditures) and an indicator variable identifying firms that raised external capital to explore these effects and deviations from the predicted cash ratio target.

Ferreira and Vilela (2004) conducted a study focusing on corporations from EMU countries between 1987 and 2000, uncovering several insights into the relationships among leverage, cash holdings, and investment climate. They found that companies with higher leverage levels tend to maintain lower cash reserves to finance projects and comply with debt covenants. Their research also reveals a positive correlation between corporate cash hoarding and favourable investment conditions. Moreover, the study indicates that more profitable firms are less reliant on external financing, leading to reduced debt levels and an accumulation of cash to fund future investments. These findings collectively shed light on the nuanced interplay between cash management, corporate leverage, and investment opportunities.

Despite its relevance to capital structure decisions, the pecking order theory has received relatively limited attention in studies investigating corporate cash holdings. Dittmar et al. (2003) underline the complexity that arises when integrating the pecking order theory with agency and trade-off theories in analysing the relationship between cash hoarding, leverage, and future investment opportunities. Their work emphasises the necessity for further research that integrates multiple theoretical frameworks to obtain a comprehensive understanding of corporate cash holdings behaviour. By incorporating a broader range of theories, researchers can unravel the intricate dynamics influencing firms' cash management strategies and shed light on the factors driving cash holdings and its implications for future investments.

3.3 Hypothesis Development

3.3.1 Introduction and Overview

The review of available literature reveals several underlying motives behind the causal relationship between the closure of local print media and various government, economic, corporate, and societal aspects. Previous studies have pointed out the implications of local newspaper disappearance on various areas: political participation, efficiency of local governments, municipal borrowing costs, private syndicated loans, and layoffs (e.g., Gentzkow et al., 2011; Gao et al., 2020; Kim et al., 2021). However, these studies have not conclusively proven the reliability of local newspapers as effective monitors of corporate behaviour. Nonetheless, the study by Heese et al. (2022) suggests that the closure of local newspapers can impact corporate misconduct. This underscores the need for further investigation to fill the gaps in the existing literature.

The differentiation between owners and managers was definitively resolved during the Great Depression of the 1930s, marking the emergence of a distinct class known as "managers" (Berle & Means, 1932). Agency problems have been the subject of extensive research in the field of corporate governance, with scholars referring to the separation of ownership and control as "agency costs" (Jensen & Meckling, 1976; Fama, 1980; Fama & Jensen, 1983; Eisenhardt, 1989; Ang et al., 2000; Singh & Davidson, 2003). These costs relate to the structure, behaviour, monitoring, and motivation that govern the relationship between directors (agents) and shareholders (principals). Numerous studies have focused on the negative consequences of agency costs, how they impact firm direction, and the means by which corporate performance and value are achieved (e.g., Brudney, 1985).

However, there are various factors that influence agency relationships in a company, leading to discrepancies in their effectiveness. To ensure appropriate management and governance, controls and standards must be established to achieve sustainability and success. Failure to do so can lead to conflicts of interest, which will ultimately affect the company's performance (Nicholson & Kiel, 2007). Therefore, effective governance mechanisms are necessary to mitigate the adverse effects of agency problems.

Brennan and Solomon (2008) suggest that corporate governance can be viewed as a combination of internal and external checks and balances. These checks and balances are designed to ensure that the company operates responsibly and with due diligence towards all stakeholders. This is

particularly important given the potential for corporate collapses, fraud, and collusion between managers. Such outcomes can result in the loss of stakeholder rights, particularly for the most vulnerable. To prevent such risks, it is essential to develop rigorous governance mechanisms for effective corporate monitoring. Arjoon (2005) identifies the importance of such mechanisms in promoting corporate sustainability and preventing adverse outcomes.

This paper examines the impact of the closure of daily local newspapers on local corporate monitoring. Local newspapers are considered an effective external corporate governance mechanism, as suggested by previous research Kim et al. (2021) and Heese et al. (2022). The closure of these newspapers results in the loss of a reliable governance mechanism, which has adverse effects on the public, the market, and the investment environment. The presence of local newspapers, serving as watchdogs, plays a crucial role, and their absence can lead to significant adverse consequences.

The decline in access to credible local news has extensive ramifications for voter behaviour and the responsiveness of governance. This scarcity of reliable information has been linked to an increase in instances of corruption (Arnold, 2013; Campante et al., 2014) and a decrease in voter turnout (Schulhofer-Wohl & Garrido, 2013). As reliable local news sources become rarer, individuals may fall back on their own partisan leanings and turn to national news sources to shape their political decisions (Hopkins, 2018). This shift not only impacts individual voting choices but also carries broader implications for the overall health of democratic processes and the well-informed engagement of citizens (Schaffner, 2006).

In their study, Heese et al. (2022) underscore the critical role of local newspapers in monitoring and reporting corporate wrongdoing. They highlight that the decline of local newspapers in the U.S. can contribute to an increase in such misconduct. The study findings reveal that local newspaper closures result in a significant 15.2% rise in penalties and a 1.1% increase in violations at the facility-level, underscoring the vital role of local newspapers in promoting corporate accountability. These findings serve as a compelling warning about the potential consequences of reduced media coverage on corporate wrongdoing, making a strong argument for supporting local journalism to uphold transparency and accountability in corporate governance.

According to Ma et al. (2022), the closure of a local newspaper, which serves as an important local watchdog, has the effect of raising interest rates for borrowers. Their research emphasises

the significance of the local press in environments with limited information, noting that the impact of media closures on interest rates and syndicated loans becomes more pronounced. In settings where the local press plays a critical role in the local news industry, the absence of a local watchdog weakens monitoring mechanisms. As a result, companies seeking loans face higher borrowing costs.

The arguments presented earlier align with the perspective that the media has significant implications for various corporate behaviours, including cash holding policies. Consequently, the absence of local newspapers results in a loss of monitoring channels that play a rigorous role in holding companies accountable. However, this study presents a novel understanding of how media closures impact corporate behaviour, providing the first empirical evidence that the loss of local press can have substantial implications on corporate cash holding policies.

Looking forward, the findings of this study are expected to have significant implications for investors, managers, employees, customers, and policymakers. With the ongoing decline of the print media industry, especially local press activities, these results offer vital insights. They highlight the diminishing influence of daily local newspapers in fostering sound corporate governance and spotlight challenges for stakeholders in a digital age.

Cash plays a dominant and vital role in academia and finance professional practice due to its direct impact on business administration and operations. Its liquid nature means that it has tangible and broad consequences on firm value, investment plans, risk management, and dividend decisions (Opler et al., 1999). According to Chen et al. (2020), cash is essential in facilitating the necessary funds for day-to-day business operations and is crucial in deciding the firm's optimal capital structure and investment budget. Therefore, corporate cash holding is a central theme that receives significant consideration by corporate finance management.

The extant literature shows that organisations hold cash for two fundamental reasons, as proposed by Keynes (1936). First, cash holdings define the determinants of how efficiently a firm can design its leverage strategy and smoothly exploit the cost-benefit of the debt-free cash concept. Second, companies hold cash to encounter potential operational contingencies or unpredicted investment deficits by injecting excess liquid cash and taking advantage of relatively low transaction costs.

Prior literature in finance has indeed highlighted that cash holdings can create incentives for corporate managers to exploit those reserves for personal gain (e.g., Pinkowitz et al., 2006). This

behaviour, as explained by the Agency Theory (Jensen & Meckling, 1976), gives rise to a conflict of interest between managers and shareholders. Managers may accumulate cash and utilise their privileged access to information to invest in projects that primarily benefit themselves, thereby increasing their personal wealth at the expense of shareholders (Stulz, 1990).

Consequently, previous studies on cash holdings have demonstrated that effective corporate governance can provide robust mechanisms that place shareholders in a stronger position (e.g., Dittmar & Mahrt-Smith, 2007; Harford et al., 2008). Such mechanisms can help alleviate agency problems by establishing appropriate checks and balances, aligning the interests of managers and shareholders, and ensuring responsible cash management practices. By promoting transparency, accountability, and shareholder rights, effective corporate governance becomes an essential safeguard against managerial self-interest and the potential misappropriation of cash reserves.

The role of corporate governance in firm cash management, specifically cash holdings, has been extensively studied in the literature. Harford et al. (2008) provide insights into two perspectives that shape the relationship between agency problems, governed by governance characteristics, and corporate cash management. The first perspective suggests that managers, at the expense of shareholders, accumulate excess cash to mitigate risk and enhance their discretion (Jensen, 1986). This viewpoint implies that poorly governed firms with higher agency costs tend to maintain high levels of cash due to managerial discretion. The second perspective posits that self-interested managers utilise the cash reserves for expansionary purposes, often leading to the acquisition of value-destroying tangible assets within a weakly governed environment (Morck et al., 1990). These perspectives shed light on the complex dynamics between corporate governance, agency problems, and the management of cash resources.

In the absence of effective monitoring mechanisms, vulnerable shareholders face an uphill battle in convincing self-interested managers to efficiently manage the cash surplus and implement an optimal payout policy (Adjaoud & Ben-Amar, 2010). This underscores the vital role that media, particularly daily local newspapers, can play in providing external corporate monitoring through independent, specialised, and unbiased journalistic investigations (Miller, 2006; Dyck et al., 2008). The efforts of local newspapers align with the principles of the free cash flow hypothesis and help mitigate agency costs by controlling managers' opportunistic behaviour and exposing alleged manipulation (Kim et al., 2021).

In addition, local managers seek to secure debt and improve their organisation's capital structure by accessing financial markets (Harvey et al., 2004). The media also play a crucial external monitoring role allowing them to assess whether the price they pay justifies the financial claims (Tetlock et al., 2008; Bushman et al., 2017). This monitoring function becomes increasingly important for institutions that generate significant cash flow but are likely to face limited growth and expansion opportunities due to their local context (Chen et al., 2021).

Local newspapers also strengthen the corporate governance framework by enhancing the external monitoring function and exposing management practice deficiencies (Kim et al., 2021; Heese et al., 2022). Consequently, the absence of local press is expected to impact corporate monitoring and firm cash management, which could lead managers to increase cash holdings.

Alternatively, there is evidence suggesting that local print media may be ineffective in monitoring the behaviour of local firms. Gurun and Butler (2012) found that local newspapers, being for-profit private companies, have financial motives that can hinder transparent and negative reporting on local firms. This conflict of interest prevents the local press from fulfilling its watchdog role by ignoring corporate misconduct.

Moreover, the capacity of the local press to effectively monitor violations by local firms is compromised by limited resources and a shortage of competent journalists. This challenge arises from the difficulty of a few competent journalists in efficiently monitoring all local firms' misconduct, particularly when local newspapers lack sufficient resources such as high-tech logistics and powerful connections. Consequently, if the local press is biased in monitoring firm misconduct, the closure of newspapers should not significantly impact local corporate misconduct (Groseclose & Milyo, 2005).

Additionally, as highlighted by Malmendier and Tate (2009), media coverage can have a dark side for shareholders, as it can elevate the status of CEOs and enable them to undertake actions that destroy value. However, the effectiveness of media in uncovering and addressing corporate misconduct is hampered by several factors. The limited resources and shortage of skilled journalists in local newspapers undermine their capacity to effectively monitor and expose fraudulent activities. This, in turn, compromises the media's role as a robust external governance mechanism in disciplining corporate managers engaged in misconduct.

This study empirically examines the potential effects of the disappearance of local U.S. newspapers on corporate cash holdings. The motivation behind this research is to address the

inconclusive findings from previous studies that have investigated the relationship between the closure of local media outlets and firms' behaviour. Existing studies have highlighted the importance of further exploration in this area (Kim et al., 2021; Heese et al., 2022; Jiang & Kong, 2023). The hypothesis is that the absence of local U.S. daily newspapers may lead to a decrease in corporate monitoring, which in turn could result in an increase in cash holdings by firms. By focusing on this specific context, this paper aims to contribute to the existing literature and provide valuable insights into the implications of the decline of local media for firm behaviour and financial decisions.

Integrating the preceding arguments, the baseline/first hypothesis of this essay can be articulated as follows:

H_1 *Local U.S. newspaper closures lead to an increase in corporate cash holdings for nearby firms.*

3.3.2 Media Closure-Corporate Monitoring and Corporate Cash Holdings

3.3.2.1 The Role of Corporate Governance

Cash is often viewed as a company's most liquid and vulnerable asset due to its ability to be quickly mobilised or misused. This poses a risk of managerial waste and potential harm to shareholders interests (Myers & Rajan, 1998; Chung et al., 2015). In fact, research has shown that excessive cash holdings can incentivise managers to engage in self-serving behaviour, such as increasing their own compensation (La Porta et al., 2002). While holding surplus cash can increase a firm's ability to access external funding and pursue investment opportunities, there is no guarantee that managers will make decisions that align with shareholder interests (Arnold, 2014). This is because the separation of ownership and control can create agency problems, where managers may prioritise their own interests over those of shareholders (Smith, 1936; Jensen & Meckling, 1976).

Without effective governance mechanisms, managers may misuse the excess cash to finance investments with negative net present value (NPV) or engage in financial misconduct (Jensen, 1986; Chung et al., 2005; Dittmar & Mahrt-Smith, 2007). Therefore, companies must establish a robust monitoring function to mitigate potential agency conflicts and align managerial actions with shareholder objectives (Faulkender et al., 2006; Guney et al., 2007; Harford et al., 2008).

Corporate governance plays a crucial role in protecting shareholders against inefficient use of corporate assets by managers (Gompers et al., 2003; Dittmar & Mahrt-Smith, 2007; Kalcheva &

Lins, 2007). Research conducted by (Pinkowitz et al., 2006; Frésard Laurent & Salva, 2010) suggest that the power of corporate insiders to decide on cash holdings depends on the effectiveness of the governance framework in place. When corporate actions are not monitored effectively, entrenched managers may squander corporate free cash flow on investments that destroy value (Jensen, 1986). Martínez-Sola et al. (2013) argue that changes in the cash holdings ratio can significantly impact the market value of a firm. According to Dittmar and Mahrt-Smith (2007), poorly governed companies can value an additional dollar of cash between $0.42 and $0.88, depending on the governance measures employed. However, well-designed governance mechanisms have the potential to double this value, highlighting the importance of a strong governance framework.

This Essay aims to explore the potential impact of local media closures on firms' cash holding behaviour, building on the argument that local media serve as corporate watchdogs and governance mechanisms. Local newspapers significantly shape and disseminate the local news environment (Poindexter et al., 2006). Previous research suggests that media can serve as effective external corporate governance mechanisms (e.g., Dyck & Zingales, 2002; Gillan, 2006; Miller, 2006; Dyck et al., 2008; Bednar, 2012; Gao et al., 2020). Miller (2006) has shown that the local press can monitor the performance of local companies and uncover accounting fraud. Moreover, Dyck et al. (2008) argue that local media coverage of managerial misconduct can help mitigate corporate wrongdoing. Similarly, Kim et al. (2021) claim that local newspapers have the potential to effect meaningful changes in corporate monitoring and governance framework of local firms. Therefore, any disruption to the local media industry could have implications for the behaviour of these firms (Heese et al., 2022).

The disappearance of local newspapers can have a negative impact on the local information context and can expose the media's potential role in monitoring and criticising the behaviour of domestic firms, as highlighted by various studies (e.g., Miller, 2006; Joe et al., 2009; Kim et al., 2021). When local monitoring reduces, several local companies may respond by rebounding the fundamental conflict of interest between managers and shareholders (Haw et al., 2004; Chung et al., 2005). This undermines the governance efforts that aim to mitigate the consequences of the agency dilemma as proposed by Jensen and Meckling (1976) and Fama (1980).

In the absence of effective corporate monitoring and sound governance mechanisms, such as robust local newspaper coverage, managers may be incentivised to engage in opportunistic behaviour and malpractice, disregarding their fiduciary duties (Holthausen, 1990; Ghazali et al.,

2015). For instance, instead of distributing dividends to shareholders, managers may hoard available cash to increase their own compensation and expand their sphere of influence (Shleifer et al., 1997; Pinkowitz et al., 2006; Kalcheva & Lins, 2007; Denis & Osobov, 2008). Such actions can undermine shareholder value, the firm's sustainability, and harm other stakeholders, such as local investors, employees, creditors, and customers (Hill & Jones, 1992; Dittmar et al., 2003). Overall, the arguments presented underscore the need to examine whether local newspapers can significantly monitor and hold nearby firms accountable.

The discussions previously outlined serve as the foundation for establishing the second hypothesis:

H_2 *The impact of local newspaper closures on corporate cash holdings will be more pronounced for firms with lower corporate governance scores.*

3.3.2.2 The Influence of CEO Salary Gap

The CEO salary gap serves as a valuable indicator of corporate monitoring and governance within an organisation's structure (Pissaris et al., 2010), particularly in scenarios where local newspaper closures pose as an exogenous shock to the monitoring environment. This gap reflects the level of oversight and accountability maintained within the corporate hierarchy (Henderson & Fredrickson, 2017). Bebchuk and Fried (2003) assert that when CEO pay is exceptionally high, it can be a signal of insufficient monitoring of CEOs by the board of directors, potentially leading to agency problems and below-standard firm performance. Agency problems, as conceptualised by Jensen and Meckling (1976), Fama and Jensen (1983), and Hart (1995), arise when there is a divergence of interests between managers and shareholders. In such scenarios, managers may prioritise their self-interests, such as maximising their compensation, over the interests of shareholders (Henry & Gomez-Mejia, 2017). The CEO salary gap, therefore, becomes a critical metric in evaluating the effectiveness of corporate monitoring.

Extensive research has delved into the relationship between CEO pay and various facets of corporate governance, including agency problems, managerial entrenchment, and corporate monitoring (e.g., Borokhovich et al., 1997; Cyert et al., 2002; Hambrick et al., 2005; Faleye et al., 2013; Daily et al., 2017; Conyon & Peck, 2017). Weak governance structures often correlate with heightened agency problems, resulting in elevated CEO compensation and diminished firm performance (Core et al., 1999). Conversely, robust governance mechanisms can mitigate the influence of chance on executive compensation, making it more challenging for CEOs to manipulate the pay-setting process and aligning CEO pay with the long-term performance of the

company (Bertrand & Mullainathan, 2001). These findings underscore the pivotal role that effective corporate monitoring and governance play in addressing and understanding the CEO pay gap while promoting better alignment between executive compensation and firm performance.

Furthermore, it is crucial to highlight the significant role of the media in strengthening effective corporate governance frameworks (Tetlock, 2007; Dyck et al., 2008; Liu & McConnell, 2013). Research underscores that the absence of local media coverage can exacerbate corporate misconduct (Heese et al., 2022), potentially creating an environment susceptible to agency conflicts and managerial entrenchment behaviours (Kim et al., 2021). In such circumstances, corporate managers may prioritise their personal interests over those of shareholders, which can lead to wider CEO salary gaps and excessive corporate cash holdings (Masulis et al., 2009; Phan et al., 2017). Local media outlets often serve as watchdogs, exposing corporate misdeeds and exerting pressure on firms to maintain transparency and adhere to ethical practices (Miller, 2006; Bednar, 2012). When local newspapers close, this vital external governance mechanism weakens, potentially encouraging corporate managers to pursue actions that may not align with shareholder interests and corporate governance principles.

Taken together, the debates and empirical evidence presented lay the foundation for establishing the third hypothesis, which posits a sequence of influence connecting local media closures, CEO Salary Gap, and corporate cash holdings as follows:

H_3 *The impact of local newspaper closures on corporate cash holdings will be more pronounced for firms that experience an increase in the CEO salary gap.*

3.3.2.3 The Role of Institutional Shareholders

Corporate governance scholars are highly interested in exploring the role of media as an external governance mechanism (e.g., Gillan, 2006; Miller, 2006; Dyck et al., 2008; Bednar, 2012; Gao et al., 2020). The media has the potential to provide essential and relevant information to a diverse audience and regularly assesses the performance of corporate leaders (Bednar, 2017). Moreover, research has shown that the media can actively monitor corporations, creating pressure on boards and management to behave responsibly and avoid policies that harm shareholder value (Dyck & Zingales, 2002; Joe et al., 2009; Kim, 2019).

The closure of a local newspaper could result in the loss of an important monitoring tool for local investors, thereby increasing agency costs (An et al., 2020; Kim et al., 2021). As a result, shareholders may lack confidence in the firm's management and search for effective governance mechanisms that can substitute media monitoring (Bednar et al., 2013; Aguilera et al., 2015; Peña-Martel et al., 2020). Thus, shareholders seek various monitoring mechanisms to align the interests of managers and shareholders (Alexander & Cohen, 1999; Weir et al., 2002). These mechanisms aim to mitigate agency costs, motivate managers to prioritise shareholder interests, and strengthen the firm's control system (Singh & Davidson, 2003; Dey, 2008). La Porta et al. (2002) argue that excess cash required to finance the firm's investments creates a conflict of interest between managers and shareholders. According to Jensen (1986), the free cash flow theory suggests that managers tend to retain control over resources and show reluctance in distributing dividends.

Institutional shareholders are widely recognised as an essential mechanism for corporate governance (Gillan & Starks, 2000; Mccahery et al., 2016). Research has shown that the presence of institutional shareholders can lead to better governance practices and performance outcomes for companies (e.g., Elyasiani & Jia, 2010; Chung & Zhang, 2011; Callen & Fang, 2013; Bushee et al., 2014; Borochin & Yang, 2017).

Institutional investors, such as pension funds and mutual funds, play a crucial role in shaping a company's financial decisions, as they often hold significant ownership stakes in firms (Duggal & Millar, 1999). Contemporary studies have suggested that some institutional investors are not passive owners and may demand greater transparency and information production from firms, especially during times of uncertainty and negative shocks (e.g., Schmidt & Fahlenbrach, 2017). Empirical evidence from Appel et al. (2016) supports the notion that institutional investors can exert influence over managers and push for greater transparency and public information production. By having access to more information about the firm's financial health and risk profile, institutional investors can make more informed investment decisions and potentially minimise their exposure to risk (Boone & White, 2015).

However, despite holding significant power, institutional shareholders may have different views on how much cash a company should hold. On the one hand, the precautionary motive suggests that a company should maintain large cash reserves as a buffer against economic downturns or other potential risks (Han & Qiu, 2007). On the other hand, some argue that excess cash should be returned to shareholders through dividends or share buybacks (Harford et al., 2008).

The closure of local media and limited availability of information could impact the ability of institutional shareholders to monitor a firm's behaviour and performance firmly, which may impact the firm's free cash flow and dividend policy (Kim et al., 2021). According to Espen Eckbo and Verma (1994), institutional shareholders would favour the distribution of free cash flow through dividends as it would help mitigate the agency costs associated with such cash flow.

While Jensen (1986) suggests that debt is an effective governance mechanism to decrease surplus cash and control managerial discretion. This suggests that institutional shareholders may act as a check against managers who prefer to retain excess cash flow and use their voting power to push for dividend payout (Short et al., 2002). To obtain the required funds, however, the debt capital market should monitor the firm's performance until maturity (Agrawal & Knoeber, 1996).

Institutional shareholders can pressure managers to protect their corporate value through various means (Almazan et al., 2005; Cornett et al., 2007). First, they can determine the optimal capital structure and diversification, along with leveraging mechanisms, to finance value-adding projects (Brown et al., 2019). Second, institutional shareholders can force managers to pay dividends and prevent value-destroying decisions that drain shareholders' money (Short et al., 2002). Third, debt covenants can discipline and incentivise managers to make efficient decisions by restricting access to capital markets or imposing higher borrowing costs if covenants are not met (Billett et al., 2007; Whitehead, 2008; Margaritis & Psillaki, 2010). Finally, institutional shareholders can benefit from the market for corporate control, which provides a free-riding mechanism for monitoring and reduces agency costs and corporate cash holdings, especially in the absence of local monitoring such as newspapers (Opler et al., 1999; Jiraporn & Gleason, 2007; Ward et al., 2018;).

The closure of local newspapers is expected to drive institutional shareholders to pressure managers to adopt governance reforms through several mechanisms (Kim et al., 2021). For example, the market for corporate control, institutional shareholders, and alignment of manager-shareholder interests can rigorously address the cash holding problem and relax other agency costs (Jarrell et al., 1988; Singh & Davidson, 2003; Chen et al., 2011; Nikolov et al., 2014). The monitoring base in the absence of local newspaper coverage can be compensated by these mechanisms (Bednar, 2017; Kim, 2019). Robust and corrective actions, including the encouragement of whistleblowing to expose fraudulent activities, can be implemented to contain managerial hubris and deter value-destroying decisions (Dyck et al., 2010; Liu & McConnell, 2013; Anderson & Hamadi, 2016).

The discussions previously outlined provide the basis for the fourth hypothesis, which posits that:

H_4 The impact of local newspaper closures on corporate cash holdings will be moderated by institutional shareholders exerting pressure on managers to distribute the accumulated cash.

3.4 Employed Variables

3.4.1 Introduction

In this section, the dependent, independent, and control variables used in Essay One are outlined, including their definitions, measurement methods, and sources. These variables are crucial for examining the impact of local newspaper closures on corporate cash holdings, with a focus on the proxies used to measure the three monitoring channels. Descriptive statistics and pairwise correlations are also provided to offer a preliminary understanding of the data and the relationships between variables.

3.4.2 Dependent Variable – Cash Holdings Ratio: Ln(Cash_Hold)

The cash holdings ratio is employed as the dependent variable in the empirical model for this research. To ensure the credibility of the proposed approach, the methodology from previous cash holdings studies is followed, including those conducted by Opler et al. (1999), Mikkelson and Partch (2003), Almeida et al. (2004), Han and Qiu (2007), Bates et al. (2009), Tong (2010), Liu and Mauer (2011), Palazzo (2012), Schauten et al. (2013), and Chen et al. (2015). In alignment with the research of Opler et al. (1999), Dittmar et al. (2003), Drobetz and Grüninger (2007), Gao et al. (2013), Hill et al. (2014), and Chen et al. (2014), this study utilises the natural logarithm of the cash ratio. This ratio is calculated by applying the natural logarithm to the division of cash and cash equivalents by total assets. Using this approach serves a dual function: it normalises the distribution of data and mitigates the problem posed by extreme outliers in panel data models.

To capture the true impact of assets in place, cash and cash equivalents are subtracted from total assets to derive net assets. This method is supported by studies by Opler et al. (1999), Dittmar et al. (2003), Haushalter et al. (2007), and Qiu and Wan (2015). Additionally, an alternative measure of cash holdings is explored, using the fraction of cash and cash equivalents to total assets, as suggested by Harford et al. (2008), Fresard (2010), and Gao et al. (2013). Adopting this alternative measure helps to ensure the robustness of the study's findings (Chen et al., 2020).

3.4.3 Independent Variables

3.4.3.1 Variable of Interest – Local Media Closure

Based on the empirical framework introduced by Kim et al. (2021), the key independent variable is the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. This two-way term captures the difference in the

average changes in corporate cash holdings between treatment and control firms before and after the local newspaper closure event. The $Treat\_firm_{i,t}$ dummy variable is a binary variable that takes a value of (1) if a firm is headquartered within a 50-mile radius of a closed newspaper (treatment), and (0) otherwise (control). The $Post_{i,t}$ dummy variable is also a binary variable that captures the ten-year closure window observations, up to five years before (control) and up to five years (treatment) during and after the local newspaper closure, centered on the year of closure. Specifically, the year of closure and the following four years are assigned a value of (1), while all other years are assigned a value of (0).

3.4.3.2 Corporate Monitoring Channels

3.4.3.2.1   Corporate Governance Score (CGS)

Corporate governance is a set of guidelines and procedures that ensure transparency, effective management, and the reconciliation of various stakeholders' interests (Shleifer & Vishny, 1997). Good corporate governance can lead to better company performance, especially in terms of cash management and agency problems (Dittmar & Mahrt-Smith, 2007; Subramaniam et al., 2011). The Corporate Governance Score (*CGS*) is a widely recognised metric used to evaluate a company's governance practices and the effectiveness of management monitoring (Brown & Caylor, 2006; Brown et al., 2011). It considers various factors such as board independence, segregation of Chairman and CEO roles, meetings frequency, board size, director qualifications, and the effectiveness of board committees (Fama & Jensen, 1983; John & Senbet, 1998; Hermalin & Weisbach, 1998; Bhagat & Black, 2001; Adams et al., 2010; Daily & Dalton, 2017).

Studies have shown that companies with high governance scores tend to perform better financially, have lower risk, and higher stakeholder trust (e.g., Gompers et al., 2003; Dey, 2008; Dittmar & Mahrt-Smith, 2007; Bebchuk et al., 2009; Chen et al., 2020). While corporate governance is crucial, the media also plays a critical role in monitoring and reporting on companies and their management, promoting transparency, accountability, and integrity (Miller, 2006; Dyck et al., 2008). Local newspapers, in particular, play a vital role in monitoring local government and corporate activities, and the loss of these newspapers can lead to a decline in corporate monitoring and accountability (Gao et al., 2020; Kim et al., 2021; Heese et al., 2022).

To evaluate the potential impact of local media closure on corporate governance quality, the Corporate Governance Score (*CGS*), introduced by Gompers et al. (2003), can serve as a proxy

for corporate monitoring. The *CGS* data can be obtained from *Refinitiv-Eikon (Screener)* and can be logarithmically transformed for analytical purposes.

3.4.3.2.2   *CEO Salary Gap (CEO_SG)*

The CEO salary gap refers to the discrepancy in pay between the highest-paid executive, usually the CEO, and the average employee within the same organisation. It is commonly gauged by comparing the CEO's total compensation to that of the median employee and is frequently utilised to underscore the disparity in earnings within a company. It draws attention to the substantial wealth held by top executives in relation to the rest of the workforce. A recent Economic Policy Institute report revealed that in the United States in 2021[7], the CEO-to-worker pay ratio averaged 399-to-1, meaning that CEOs earned roughly 399 times more than their average employee. This figure is in stark contrast to the ratio of 42-to-1 that was reported in the 1980s. The AFL-CIO's 2020[8] study found that S&P 500 companies had a CEO-to-worker pay ratio of 299-to-1, with the average CEO earning $15.5 million in total compensation compared to the average worker's $56,000.

The CEO salary gap has been studied as a potential proxy for corporate monitoring, as it may reflect the level of monitoring and accountability within a company's governance structure (Henderson & Fredrickson, 2017). Bebchuk and Fried (2003) argue that high CEO pay can indicate inadequate monitoring of the CEO by the board of directors, which in turn can lead to agency problems and poor firm performance. Agency problems occur when there is a conflict of interest between managers and shareholders, with managers potentially prioritising their own interests, such as maximising their own compensation, over the interests of shareholders (Jensen & Meckling, 1976; Fama & Jensen, 1983; Hart, 1995).

Numerous studies have explored the relationship between CEO pay and corporate governance factors, including agency problems, managerial entrenchment, and corporate monitoring (e.g., Borokhovich et al., 1997; Cyert et al., 2002; Hambrick et al., 2005; Faleye et al., 2013; Daily et al., 2017; Conyon & Peck, 2017). Weak governance structures are associated with greater agency problems, resulting in higher CEO compensation and poorer firm performance (Core et al., 1999). In contrast, stronger governance mechanisms can mitigate the impact of luck on executive compensation, making it more challenging for CEOs to exert control over the pay process and aligning CEO pay with long-term firm performance objectives (Bertrand & Mullainathan, 2001).

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[7]   2021 Economic Policy Institute (EPI) Report
[8]   AFL-CIO (2021)

These findings underscore the crucial role of effective corporate monitoring and governance in addressing the CEO pay gap and promoting better alignment between executive compensation and company performance.

Research emphasises the significance of media in supporting effective corporate governance frameworks (e.g., Tetlock, 2007; Dyck et al., 2008; Liu & McConnell, 2013). The absence of local media coverage can exacerbate corporate misconduct (Heese et al., 2022), potentially leading to an environment prone to agency conflicts and entrenchment behaviours (Kim et al., 2021). In such circumstances, corporate managers may prioritise their personal interests over those of shareholders, leading to high CEO salary gaps and excessive corporate cash holdings (Masulis et al., 2009; Phan et al., 2017).

To strengthen the validity of the first hypothesis, the CEO Salary Gap (*CEO_SG*) variable from *Refinitiv-Eikon (Screener)* is incorporated as an alternative measure for assessing corporate monitoring. This integration allows for a more comprehensive investigation of the connection between local media closures, corporate governance, and corporate cash holdings, leading to a more reliable evaluation of H_3.

3.4.3.2.3 *Institutional Ownership (InstOwn)*

Institutional ownership refers to the proportion of a company's shares held by institutional investors, including mutual funds, pension funds, and hedge funds (Duggal & Millar, 1999; Chung & Zhang, 2011). Institutional ownership can greatly affect a company's stock price and overall performance since institutional investors possess the resources and expertise to conduct thorough analyses of companies and make significant investments (Bushee et al., 2014; Mccahery et al., 2016; Borochin & Yang, 2017). There is a substantial body of literature on the role of institutional investors as a proxy for corporate monitoring (e.g., Gillan & Starks, 2000; Chen et al., 2007). For instance, Coffee (1991) indicates that institutional investors can act as monitors of corporate performance by engaging in active dialogue with management and boards, voting on important issues, and advocating for changes in corporate governance.

Similarly, Bhojraj and Sengupta (2003) found that institutional investors can help reduce agency costs by monitoring the use of corporate cash and pushing for more efficient cash management practices. In the event of local media closure, institutional investors may act as a monitoring function and put pressure on corporate managers to disgorge cash. Research has shown that institutional investors can act as a disciplining mechanism, encouraging firms to adopt more

transparent and accountable financial policies (e.g., Bushman et al., 2004). This can be particularly important in the absence of local media coverage, which can make it more difficult for local stakeholders to hold companies accountable. This variable is downloaded from *Refinitiv-Eikon (Screener)*.

3.4.4   Control Variables

To address potential endogeneity concerns and validate the robustness of the findings, this study incorporates a comprehensive array of control variables. Specifically, this research considers firm-specific, industry-specific, and time-specific effects that could jointly influence corporate cash holdings behaviour are incorporated. Nine firm-specific variables, widely acknowledged in the literature as influential factors on cash holdings policy behaviour are included. These variables are based on the studies of Opler et al. (1999), Almeida et al. (2004), Ferreira and Vilela (2004), Acharya et al. (2007), Harford et al. (2008), Bao et al. (2012), and Gao et al. (2013). By controlling for these factors, the aim is to mitigate potential endogeneity confounding factors and reinforce the credibility of the findings.

Including firm size (*Size*) as a control variable is important. Previous cash holdings studies lack consensus about the extent to which corporate size influences cash stockpiling behaviour (e.g., Opler et al., 1999; Almeida et al., 2004; Guney et al., 2007; Harford et al., 2008). Some studies argue that larger firms hoard less cash due to their accurate forecasts, lower issuance and external funding costs based on economies of scale (e.g., Miller & Orr, 1966; Almeida et al., 2004). However, counterarguments suggest that larger organisations may have a greater need to fund future investments and may therefore hedge and stockpile more cash for precautionary reasons (Opler et al., 1999). Firm size is typically measured as the natural logarithm of total firm assets, which has been identified as an important factor in analysing cash holdings behaviour (Almeida et al., 2004; Harford et al., 2008).

Leverage (*LEV*) measures the proportion of a company's assets financed by debt rather than equity (Acharya et al., 2007). It is calculated as the firm's total debt divided by total assets minus cash and cash equivalents, as described by previous studies Dittmar et al. (2003), Ozkan and Ozkan (2004), and Harford et al. (2008). According to Ferreira and Vilela (2004), firms with higher leverage tend to hold lower cash reserves as they prioritise using available funds to support growth initiatives and debt repayment.

According to the trade-off theory, corporations tend to hold more cash to finance their R&D expenses. Additionally, the greater the risk of financial distress, the more incentive companies have to hedge against these risks by stockpiling a higher volume of cash (Opler et al., 1999). As a result, there should be a positive association between R&D expenses and corporate cash holdings (Dittmar et al., 2003; Bates et al., 2009). In this analysis, the (**R&D**) ratio is measured as research and development expenditures relative to the firm's total assets.

The Market-to-book ratio (**MTB**) is another control variable that is important to consider in studying cash holdings behaviour. Myers and Majluf (1984) argue that firms with increased growth opportunities typically require more funding. However, if a company has a more liquid cash reserve, it can avoid the additional costs of raising external capital. Therefore, the more investment opportunities available to a company, the larger the corporate cash hoardings tend to be (Opler et al., 1999; Ferreira & Vilela, 2004; Acharya et al., 2007; Harford et al., 2008). The market-to-book ratio is calculated by dividing the market price of firm equity plus the book value of liabilities by total assets and provides a useful measure for understanding cash holdings behaviour (Bates et al., 2009).

Free Cash Flow (**FCF**) impacts corporate cash holdings. The agency-free cash flow and pecking order theories posit that an increase in cash flow leads to higher cash hoarding, while the trade-off theory suggests a negative relationship (Jensen, 1986; Almeida et al., 2004; Riddick & Whited, 2009). Opler et al. (1999) and Harford et al. (2008) recommend using the cash flow ratio, calculated as the firm's profit after interest, dividends, and taxes but before depreciation over total assets. This measure has been widely employed to investigate the link between CF and cash holdings (Dittmar & Mahrt-Smith, 2007; Chen et al., 2014; Cheng et al., 2022).

Cash Flow Volatility (**CFV**) is used to measure the uncertainty of a firm's cash flow fluctuations, serving as a proxy for precautionary motives for holding cash reserves. Previous studies have shown a positive relationship between cash hoardings and cash flow volatility, suggesting that firms may need to hold more cash to protect against potential shocks. To calculate **CFV**, researchers use the standard deviation of corporate cash flows divided by the firm's total assets (e.g., Opler et al., 1999; Almeida et al., 2004; Harford et al., 2008; Bao et al., 2012; Brisker et al., 2013).

Net Working Capital (**NWC**) is a commonly used metric to evaluate a company's short-term liquidity position. It measures the excess of current assets over current liabilities, which

represents the amount of liquid assets that a company has available to fund its operations in the near term (Dittmar et al., 2003; Ozkan & Ozkan, 2004; Chen et al., 2014; Cheng et al., 2022). Capital expenditure (*CAPEX*) is a measure of a company's investment in long-term assets, calculated as the ratio of corporate investments in fixed assets. The pecking order theory suggests that firms prefer to use internal finance resources to fund fixed-asset investments rather than incurring external funding costs (Myers, 1984). An increase in capital expenditure is likely to result in lower cash levels, as the acquisition of such assets would consume the reserved cash (Harford et al., 2008). Therefore, capital expenditure is expected to have a negative correlation with corporate cash holdings. *CAPEX* is measured as the fraction of the change in fixed assets, plus depreciation, divided by the total firm assets, as suggested in prior research Guney et al. (2007), Harford et al. (2008), Iskandar-Datta and Jia (2012), and Locorotondo et al. (2014) .

Return on Assets (*ROA*) is a commonly used financial ratio that indicates a company's performance and profitability based on how efficiently it utilises its assets. A higher cash balance may suggest a lower *ROA* since it may mean that the company is holding excess cash instead of investing in projects that could generate higher returns. Previous research has found that there is a negative relationship between a firm's cash holdings and its *ROA* (e.g., Dittmar & Mahrt-Smith, 2007; Fresard, 2010; Simutin, 2010; Gao et al., 2013). The *ROA* ratio is calculated by dividing a company's net income by its total assets.

All variables used in the empirical models are defined in *Appendix (1)*, providing a comprehensive understanding of their definitions and measurements. The sample period for this study spans from 1986 to 2021, facilitating for a robust examination of the data over a significant time frame. All continuous variables are winsorised at the 1st and 99th percentiles.

3.4.5 Descriptive Statistics

Table (5) presents the descriptive statistics for the variables used in the empirical analyses, organised into two sections: Panel A and Panel B.

Panel A: Univariate Statistics and Covariate Balance for Local Newspaper Closure (Treatment: N=5276, Control: N=19964)

Variable	Treatment Group		Control Group		Differences		Test	
	Mean	Median	Mean	Median	Mean Difference	Median Difference	T-test Mean (p-value)	MW U-Test Median (p-value)
Cash/AT	0.288	0.178	0.197	0.196	0.091	0.018	0.001	0.002
Cash/AN	1.095	0.136	0.660	0.675	0.435	-0.539	0.000	0.000
Corporate Governance Score	11.038	9.23	11.726	10.688	-0.688	-1.458	0.002	0.003
CEO Salary Gap	215.769	218.095	156.887	145.554	58.881	72.542	0.000	0.000
Institutional Ownership	0.422	0.4	0.429	0.406	-0.007	-0.006	0.009	0.011
Short-term Borrowing Dummy	0.398	0.0	0.389	0.0	0.008	-0.276	0.699	0.001
Dividend Payment Dummy	0.517	1.0	0.514	1.0	0.003	0.0	0.008	0.009
Size (Ln AT)	5.766	5.972	5.694	5.952	0.072	0.02	0.001	0.001
Leverage/AT	0.423	0.194	0.345	0.199	0.078	-0.005	0.012	0.015
R&D/AT	0.608	0.007	0.482	0.007	0.126	0.0	0.003	0.004
MTB	1.586	0.727	1.491	0.727	0.095	0.0	0.005	0.007
NWC/AT	0.061	0.228	-0.726	0.241	0.787	-0.013	0.002	0.003
CAPEX/AT	0.04	0.025	0.045	0.031	-0.005	-0.006	0.015	0.017
FCF/AT	0.042	0.0	0.041	0.0	0.001	0.0	0.014	0.016
CFV/AT	0.042	0.0	0.036	0.0	0.006	0.0	0.003	0.005
ROA	0.095	0.132	0.075	0.112	0.02	0.02	0.011	0.013
State-Level EPU Index	79.555	70.931	77.555	68.931	2.0	2.0	0.005	0.007
State-Level Unemployment Rate	6.627	6.117	6.163	5.742	0.464	0.375	0.001	0.002
State-Level GDP	13.154	13.177	13.003	13.087	0.151	0.09	0.003	0.004
State-Level GDP Growth	3.616	3.734	4.035	3.973	-0.419	-0.239	0.005	0.007

Panel B: Descriptive Statistics for Full Sample (N = 25,240)

	Mean	Median	St. Dev.	P5	P95
Cash/AT	0.216	0.112	0.255	0.007	0.832
Cash/AN	0.763	0.104	2.723	0.005	3.049
Corporate Governance Score	11.928	10.547	9.465	0.725	32.966
CEO Salary Gap	97.197	30.627	154.805	0.99	400.810
Institutional Ownership	0.427	0.403	0.198	0.178	0.765
Short-term Borrowing Dummy	0.391	0	0.488	0	1
Dividend Payment Dummy	0.427	0	0.495	0	1
Size (Ln AT)	5.709	5.957	2.679	0.961	9.681
Leverage/AT	0.362	0.198	1.529	0	0.727
R&D/AT	0.202	0.02	0.787	0	0.689
MTB	1.511	0.727	2.348	0.004	5.875
NWC/AT	0.120	0.239	1.123	-0.214	0.78
CAPEX/AT	0.044	0.03	0.048	0.001	0.141
FCF/AT	0.195	0.146	0.181	0.023	0.660
CFV/AT	0.098	0.036	0.163	0.003	0.358
ROA	0.085	0.122	0.090	-0.028	0.273
State-Level EPU Index	78.555	69.931	47.796	33.988	140.795
State-Level Unemployment Rate	6.26	5.767	2.074	3.475	10.192
State-Level GDP	13.034	13.097	0.725	11.663	14.255
State-Level GDP Growth Rate	3.947	3.931	2.718	-1.817	8.69

The analysis of descriptive statistics in Table 5, Panel A, provides a focused comparison between the treatment group (5,276 observations) and the control group (19,964 observations), highlighting the effects of local newspaper closures on corporate behaviour and financial decisions. This group analysis is crucial in understanding how reduced media scrutiny impacts firms' governance, cash management, and broader financial strategies.

Corporate cash holdings present a clear distinction between the two groups. Firms in the treatment group, affected by newspaper closures, maintain significantly higher reserves, with *Cash/AT* averaging 0.288 compared to 0.197 in the control group. Similarly, the mean *Cash/AN* is 1.095 in the treatment group versus 0.660 in the control group. This behaviour aligns with the precautionary motive theory, which suggests that firms increase cash reserves to mitigate uncertainty, particularly when external monitoring diminishes. Dittmar et al. (2003) and Bates et al. (2009) support this theory, noting that firms often hoard cash when they anticipate financial instability or face reduced scrutiny. Harford et al. (2008) and Chen et al. (2020) further underscore that diminished media oversight leads to defensive financial strategies, including increased cash holdings.

In terms of corporate governance, the treatment group exhibits a lower average score of 11.038 compared to 11.726 in the control group, indicating a decline in governance quality in regions affected by newspaper closures. The *Corporate Governance Score*, introduced by Gompers et al. (2003), is designed to measure the strength of governance practices within firms. This trend is consistent with the broader findings from the full sample analysis in Panel B, where the corporate governance score has a mean of 11.928, a median of 10.547, and a standard deviation of 9.465. These figures align with those reported by Cheng et al. (2022), who found a Governance Index mean of 9.27, suggesting that governance practices across firms, while varied, are generally consistent with industry standards. This decline in governance quality aligns with the findings of Dyck and Zingales (2002), who highlight the critical role of media in supporting robust corporate governance practices. The lower scores in the treatment group reflect the reduced pressure to maintain rigorous governance standards when external monitoring wanes. Core et al. (1999) observed that weaker governance structures are often correlated with higher cash holdings and less effective oversight, a pattern that appears to be exacerbated in the absence of media scrutiny. This situation allows for greater managerial discretion and increases the potential for agency problems, as previously highlighted by Jensen and Meckling (1976).

One of the most significant disparities between the groups is observed in the *CEO Salary Gap*. The treatment group shows an average ratio of 215.769, compared to 156.887 in the control group, indicating a substantial difference in executive compensation. This gap is exacerbated by the absence of media oversight and aligns with broader economic trends, such as those reported by the Economic Policy Institute[9], which noted a CEO-to-worker pay ratio of 399-to-1 in 2021, a dramatic increase from the 42-to-1 ratio in the 1980s. Similarly, the AFL-CIO's 2020 study[10] found a 299-to-1 ratio among S&P 500 companies. The higher gap in the treatment group suggests that reduced media scrutiny allows for greater latitude in setting executive pay, contributing to the growing income inequality seen in corporate America. Bebchuk and Fried (2003) and Bertrand and Mullainathan, 2003 both highlighted how weaker governance structures and diminished oversight can lead to disproportionate increases in CEO compensation, further widening the pay gap.

Institutional ownership, which averages 42.7% across the sample, also varies between the groups, with the treatment group showing a slightly lower percentage 0.422 compared to the control group 0.429. This difference suggests that institutional investors may be more cautious about holding shares in firms affected by newspaper closures, possibly due to concerns about governance risks. The variability in institutional ownership, ranging from 17.8% to 76.5%, underscores the significant influence these investors have on corporate governance. Institutional investors typically advocate for stronger governance and more balanced compensation structures, a role that may be compromised when local newspapers close, reducing external scrutiny. This observation aligns with Gillan and Starks (2000), Chung and Zhang (2011), and Mccahery et al. (2016), who noted that institutional investors prefer firms with robust governance frameworks, which are likely weakened in the absence of media oversight.

Regarding *Short-term Borrowing Dummy*, the analysis does not reveal a significant difference between the treatment and control groups (mean difference of 0.008, p-value=0.699). This aligns with Harford (1999) and Brown and Petersen (2011), who discusses the complexity of debt structure decisions. Although not statistically significant, the slightly higher borrowing in the treatment group might indicate a cautious approach to liquidity management in an environment of increased uncertainty (Chen et al., 2015).

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[9] 2021 Economic Policy Institute (EPI) Report
[10] AFL-CIO (2021)

The ***Dividend Payment Dummy*** variable shows a minor positive difference in the treatment group (mean difference=0.003, p-value=0.008), indicating a slightly higher likelihood of dividend payments among these firms. This finding may be interpreted as an effort by these firms to signal financial stability and mitigate potential negative perceptions resulting from reduced local media scrutiny. This behaviour aligns with theories by Easterbrook (1984), Brav et al. (2008), and Manconi et al. (2012), which suggest that dividend payments can serve as a mechanism to reduce agency costs and reassure investors in the absence of external monitoring.

The differences between the groups extend to other firm characteristics metrics as well. Analysing firm size (***Size***) (measured as Ln AT), the treatment group exhibits a slightly larger average firm size compared to the control group, with a mean difference of 0.072 (p-value=0.001). Larger firms typically benefit from better access to capital markets, which might reduce their need to hold excessive cash reserves (Opler et al., 1999; Bates et al., 2009). However, the slightly larger size in the treatment group could indicate that these firms are more impacted by media closures, potentially because they face greater scrutiny and thus have more to lose from reduced transparency (Chang & Yang, 2022).

The analysis of leverage (***Leverage/AT***) reveals a higher average in the treatment group, at 0.423, compared to 0.345 in the control group. This suggests that firms in the treatment group may rely more on debt financing, potentially as a strategy to navigate the uncertainty caused by reduced external monitoring. Myers and Majluf (1984) and Opler et al. (1999) observed that firms with higher leverage often maintain higher cash reserves to buffer against financial risks, a behaviour that seems more pronounced in the absence of media scrutiny. Additionally, the treatment group's R&D intensity (***R&D/AT***) is higher at 0.608 compared to 0.482 in the control group, indicating a more aggressive investment strategy despite reduced oversight. This finding aligns with Harford (1999), Brown and Petersen (2011), and Chen et al. (2015), who noted that firms with significant R&D investments tend to hold more cash as a precaution against the uncertainties of innovation.

The Market-to-Book Ratio (***MTB***) shows a positive mean difference of 0.095 (p-value=0.005) between the treatment and control groups, suggesting that firms in the treatment group may be perceived as having higher growth potential or facing greater risks. This observation is consistent with the research of Fama and French (1992) and Root and Yung (2022), who noted that firms with higher MTB ratios often face higher risk levels, which could be exacerbated by reduced information flow from local media.

A significant contrast is observed in the (*NWC/AT*) metric, with the treatment group showing a positive mean difference of 0.787 (p-value=0.002), whereas the control group has a significantly negative average. This difference suggests that firms in the treatment group are managing their liquidity more conservatively, possibly as a response to the heightened uncertainty and risks associated with greater information asymmetry. This finding is in line with D'Mello et al. (2008), Kieschnick et al. (2013), and Marwick et al. (2020), who suggest that firms with higher NWC ratios tend to adopt more cautious liquidity management practices, especially in uncertain environments.

Conversely, capital expenditures (*CAPEX/AT*) are slightly lower in the treatment group, averaging 0.04 compared to 0.045 in the control group. This suggests a more conservative investment approach, possibly due to the reduced external pressures from media scrutiny. Almeida et al. (2004) discussed how firms might scale back on investments when external monitoring decreases, reflecting a cautious strategy in uncertain environments. Additionally, the treatment group exhibits slightly higher free cash flow (*FCF/AT*), and cash flow volatility (*CFV/AT*) compared to the control group, which may indicate a defensive financial posture as firms prepare for potential instability. The precautionary motive discussed by Dittmar et al. (2003) and Bates et al. (2009) suggests that firms increase cash reserves and manage their cash flows conservatively in uncertain environments, a trend that is evident in the treatment group.

Return on Assets (*ROA*) is another critical metric where the treatment group shows a higher average of 0.095 compared to 0.075 in the control group. This suggests that firms in the treatment group are focusing on more efficient asset utilisation to offset the risks associated with reduced external scrutiny. ROA, as a measure of profitability, indicates how effectively a company is converting its assets into net income (Harford et al., 2008). A higher ROA in the treatment group may reflect a strategic emphasis on maximizing internal efficiencies, which aligns with the findings of Demsetz and Lehn (1985) and Cornett et al. (2007), who argued that firms with higher ownership concentration, often a result of weakened external governance, tend to exhibit better operational efficiency.

State-level economic variables provide a broader context for these findings. The treatment group's higher State-Level Economic Policy Uncertainty (*EPU*) Index (79.555 vs. 77.555) and state-level *unemployment rate* (6.627 vs. 6.163) indicate that newspaper closures are associated with increased economic uncertainty and stress. These findings align with Baker et al. (2016), who emphasised the media's role in shaping perceptions of economic policy and stability. The elevated EPU and unemployment rates in the treatment group suggest that the absence of local newspapers

contributes to economic instability. Although the state-level **GDP** is slightly higher in the treatment group (13.154 vs. 13.003), the lower **GDP Growth Rate** (3.616 vs. 4.035) indicates that while economic size remains stable, growth prospects may be hindered in areas affected by reduced media coverage. This finding supports the conclusions of Gentzkow et al. (2011), who discussed the critical role of media in fostering economic growth through improved information dissemination.

Moving to Panel B, the descriptive statistics for the full sample, encompassing 25,240 firm-year observations, offer a comprehensive overview of the financial and operational characteristics across the firms studied. By examining these metrics, one can gain valuable insights into the variability and trends that influence corporate financial behaviour within the dataset. This analysis builds on the understanding derived from the treatment and control groups, while also revealing broader patterns and distinctions within the entire sample.

Beginning with cash holdings (**Cash/AT** and **Cash/AN**), the mean values of 0.216 and 0.763, respectively, indicate that firms typically maintain substantial cash reserves relative to their assets. This trend is consistent with findings by Faulkender and Wang (2006), who emphasise that firms accumulate cash as a safeguard against future uncertainties. Furthermore, Bates et al. (2018) suggest that these reserves are particularly critical in contexts where external financing might be prohibitively expensive or difficult to obtain, a consideration that applies across firms in various industries and economic climates.

The **Corporate Governance Score**, with a mean of 11.928 and a median of 10.547, reflects a significant diversity in governance practices among the firms in the sample. This wide range aligns with literature on corporate governance, such as the work of Gompers et al. (2003) and Bebchuk et al. (2009), which highlights the impact of strong governance on mitigating agency conflicts and enhancing firm performance. The variations in governance scores underscore the different approaches firms take to oversight and control, influenced by factors such as ownership structure, board composition, and market environment.

The **CEO Salary Gap**, showing a mean of 97.197 and a median of 30.627, points to a broad disparity in compensation practices across the sample. This variation is indicative of potential agency issues, where large pay gaps may lead to managerial behaviour that prioritises personal gain over shareholder value (Daily et al., 2017; Conyon & Peck, 2017). This concern is echoed in studies by Bebchuk and Fried (2003) and Henderson and Fredrickson (2017), who discuss the

implications of executive compensation on corporate governance, suggesting that significant gaps can exacerbate agency conflicts and reduce overall firm efficiency.

In terms of *Institutional Ownership*, the mean value of 0.427 suggests that institutional investors hold a significant portion of equity in these firms. This level of ownership is critical as it often leads to stronger oversight and improved governance practices. Studies by Shleifer and Vishny (1997), Ferreira and Matos (2008), and (Loncan, 2020) highlight the role of institutional investors in pushing for better corporate governance and performance, pointing out their influence on strategic decisions, including those related to cash management.

The *Short-term Borrowing Dummy* and *Dividend Payment Dummy* both have means around 0.4, indicating that a substantial proportion of firms utilise these mechanisms. The use of short-term borrowing as a liquidity management tool is consistent with Diamond (1991) model, which suggests that shorter maturity debt enforces financial discipline by requiring frequent refinancing. Similarly, the prevalence of dividend payments aligns with Easterbrook (1984) agency cost hypothesis, which posits that returning cash to shareholders can help reduce agency costs by limiting the resources available for managers to engage in unproductive or self-serving investments.

In the full sample, firm size (*Size*) averages 5.709, revealing that larger firms tend to hold less cash relative to their assets, consistent with the trade-off theory (Bates et al., 2009; Duchin, 2010). Leverage (*LEV/AT*) at an average of 0.362 indicates firms' reliance on debt financing, with a negative correlation to cash holdings, supporting the pecking order theory (Myers & Majluf, 1984; Hugonnier et al., 2015). R&D intensity (*R&D/AT*) averages 0.202, positively correlating with cash holdings, suggesting that firms with high R&D investments maintain larger cash reserves as a buffer against potential risks (Brown & Petersen, 2011; Beladi et al., 2021).

The market-to-book ratio (*MTB*) averages 1.511, showing that firms with higher growth opportunities are more likely to retain cash, in line with the trade-off theory (Fama & French, 1998; Alves et al., 2022). Net working capital (*NWC/AT*) at 0.120 highlights liquidity positions, with firms having ample working capital needing less additional cash (Kieschnick et al., 2013). Capital expenditures (*CAPEX/AT*) average 0.044, and firms with higher capital spending tend to hold less cash, focusing on long-term investments (Cunha & Pollet, 2020).

Free cash flow (*FCF/AT*) averages 0.195, correlating positively with cash holdings, which aligns with Jensen (1986) agency theory, where managers retain excess cash to maintain control. Cash flow volatility (*CFV/AT*) averages 0.098, with more volatile cash flows leading firms to hold larger

cash buffers, supporting the precautionary motive (Opler et al., 1999; Han & Qiu, 2007; Im et al., 2017). Return on assets (***ROA***) averages 0.085, with a negative correlation to cash holdings, suggesting that more profitable firms require less cash (Chen et al., 2016; Chang & Tang, 2021).

Finally, the state-level economic indicators in Panel B, including the State-Level Economic Policy Uncertainty (***EPU***) Index, State-Level Unemployment Rate, State-Level ***GDP***, and ***GDP Growth Rate*** reveal important insights into corporate cash holdings. A higher EPU Index (mean of 78.555) suggests that firms might increase cash reserves to safeguard against economic volatility, aligning with the precautionary motive for cash holdings. Similarly, higher unemployment rates (mean of 6.26%) indicate a potential for firms to hold more cash as a buffer against demand shocks. The average State-Level GDP (13.034) and GDP Growth Rate (3.947%) suggest that firms in larger and growing economies may be less inclined to hoard cash, favouring reinvestment instead, as discussed in studies such as Almeida et al. (2004), Gentzkow et al. (2011), Baker et al. (2016), and Duong et al. (2020).

In conclusion, the group analysis of Panel A and the full sample analysis of Panel B together highlight that reduced media scrutiny leads to significant changes in corporate behaviour, including increased cash holdings, weakened governance, greater disparities in executive compensation, and broader economic uncertainty. These findings underscore the critical role of media in supporting transparent and efficient markets, highlighting the need for robust external monitoring to ensure balanced corporate practices and economic stability.

3.4.6 Pairwise Correlations

Table (6) Pairwise Correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Treatment Firm*Post	1.000																
Cash/AT	0.146*	1.000															
Cash/AN	0.040*	0.665*	1.000														
Corporate Governance Score	-0.028*	-0.202*	-0.135*	1.000													
CEO Salary Gap	0.042*	0.176*	0.141*	-0.163*	1.000												
Institutional Ownership	-0.015*	-0.173*	-0.115*	0.518*	-0.192*	1.000											
Short-term Borrowing	-0.032*	-0.114*	-0.045*	0.067*	-0.075*	0.075*	1.000										
Dividend Payment	-0.063*	-0.299*	-0.174*	0.363*	-0.149*	0.234*	-0.084*	1.000									
Size (Ln AT)	-0.011*	-0.355*	-0.233*	-0.573*	-0.424*	0.467*	-0.187*	0.438*	1.000								
Leverage/AT	-0.025*	-0.514*	-0.637*	-0.114*	0.098*	-0.106*	0.029*	-0.169*	-0.264*	1.000							
R&D/AT	0.021*	0.001	0.015*	-0.069*	0.080*	-0.077*	0.691*	-0.066*	-0.195*	0.054*	1.000						
MTB	0.016*	0.199*	0.088*	0.027*	0.078*	-0.025*	-0.023*	0.009*	-0.062*	0.100*	-0.021*	1.000					
NWC/AT	-0.021*	-0.053*	-0.027*	0.017*	-0.012*	0.021*	-0.056*	-0.005	0.070*	-0.104*	-0.111*	0.029*	1.000				
CAPEX/AT	-0.044*	-0.206*	-0.160*	0.095*	-0.042*	0.063*	0.000	0.050*	0.081*	-0.112*	-0.018*	0.009*	-0.019*	1.000			
FCF/AT	0.001	0.141*	0.127*	-0.138*	0.286*	-0.156*	0.410*	-0.130*	-0.437*	0.167*	0.395*	0.042*	-0.689*	-0.045*	1.000		
CFV/AT	0.010*	0.138*	0.115*	-0.143*	0.258*	-0.140*	0.403*	-0.132*	-0.397*	0.171*	0.410*	0.034*	-0.681*	-0.034*	0.780*	1.000	
ROA	-0.060*	-0.286*	-0.283*	0.071*	-0.086*	0.061*	-0.068*	0.097*	0.073*	-0.314*	-0.043*	0.003	0.051*	0.068*	-0.081*	-0.086*	1.000

* Indicate statistical significance at $p<0.05$

Table (6) shows the pairwise correlation coefficients between the variables. The results reveal that cash holdings have a negative correlation with corporate governance score, institutional ownership, short-term borrowing and dividend payment, while having a positive correlation with CEO salary gap. Additionally, the control variables show a positive correlation with cash holdings for Market-to-Book Ratio, Free Cash Flow, and Cash Flow Volatility, and a negative correlation for Size, Leverage, Net Working Capital, Capital Expenditure, and ROA.

However, it is essential to note that correlation coefficients only offer a first look into the linear relationship between variables and do not establish causality. To establish a causal relationship between cash holdings and other variables, further analysis and testing are required. Additionally, there may be other interactions that could play a crucial role in explaining the relationships between the studied variables. Therefore, a more in-depth empirical analysis is essential to arrive at conclusive interpretations.

3.5 Empirical Analysis

3.5.1 Baseline Model - Hypothesis (1) Empirical Testing:

To test the research hypotheses, a staggered difference-in-differences (DID) approach is employed to empirically estimate the impact of local newspaper closures on the cash holdings behaviour of neighbouring firms during the sample period, commencing with an examination of the baseline regression Model (1) and the first hypothesis H_1 as follows:

$$ln(CASH\_HOLD)_{i,t} = a_0 + a_1 Treat\_firm_{i,t} * Post_{i,t} + a_2 Post_{i,t} + a_3 Treat\_firm_{i,t} + a_4 Size_{i,t-1} + a_5 LEV_{i,t-1} + a_6 R\&D_{i,t-1} + a_7 MTB_{i,t-1} + a_8 NWC_{i,t-1} + a_9 Capex_{i,t-1} + a_{10} FCF_{i,t-1} + a_{11} CFV_{i,t-1} + a_{12} ROA_{i,t-1} + Year\ FE + Year * State\ FE + \varepsilon_{i,t}$$

$$(1)$$

Table (1.1) H_1 Baseline Empirical Results

The following table reports the baseline results of the Ordinary Least Squares (OLS) regression models with clustered standard errors and fixed-effects models. The dependent variable is the natural logarithm to the division of cash and cash equivalents scaled by either total assets $ln(Cash/AT)_{i,t}$ or net assets $ln(Cash/AN)_{i,t}$ for firm i at time t. The primary independent (explanatory) variable is the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. This binary variable is set to 1 if the firm is part of the treatment group (i.e., experiencing media closure) during the post-treatment period (i.e., after the media closure) and 0 otherwise. This variable captures the treatment effect of media closure on cash holdings. $Treat\_firm_{i,t}$ is a binary variable that equals 1 if firm i belongs to the treatment group, and 0 otherwise. $Post_{i,t}$ is a binary variable that equals 1 for years after the media closure event, and 0 otherwise. Control variables are also incorporated to capture other firm-specific characteristics, including firm $Size_{i,t-1}$ a continuous variable that measures the log of total assets of firm i in period t_{-1}, used as a proxy for firm size. $LEV_{i,t-1}$ is a continuous variable that measures a firm's i total debt level relative to its total assets in period t_{-1}. Research and development expenditures $R\&D_{i,t-1}$ is a continuous variable that measures a firm's i research and development expenses relative to its total assets in period t_{-1}. Market-to-book ratio $MTB_{i,t-1}$ is a continuous variable that measures a firm's i market-to-book ratio in period t_{-1}. $NWC_{i,t-1}$ is a continuous variable that measures a firm's i net working capital relative to its total assets in period t_{-1}. Capital expenditures to total assets. $Capex_{i,t-1}$ is a continuous variable that measures a firm's i capital expenditures relative to its total assets in period t_{-1}. Free cash flow $FCF_{i,t-1}$ is a continuous variable that measures a firm's i free cash flow relative to its assets in period t_{-1}. Cash flow volatility $CFV_{i,t-1}$ is continuous variable that measures a firm's i cash flow volatility in period t_{-1}. Return on assets $ROA_{i,t-1}$ is a continuous variable that measures a firm's i return on assets in period t_{-1}. The model incorporates fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time-varying effects, and location-specific influences, enhancing the robustness of the estimates and reducing potential biases in the analysis of corporate cash holdings. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (1)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	(1) Ln(Cash/AT) Clustered SE	(2) Ln(Cash/AN) Clustered SE	(3) Ln(Cash/AT) Clustered SE	(4) Ln(Cash/AN) Clustered SE	(5) Ln(Cash/AT) Fixed Effects	(6) Ln(Cash/AN) Fixed Effects	(7) Ln(Cash/AT) Fixed Effects	(8) Ln(Cash/AN) Fixed Effects
Treatment Firm	0.347***	0.288***	0.239***	0.302***	0.211***	0.207***	0.177**	0.252**
	(0.045)	(0.064)	(0.044)	(0.056)	(0.065)	(0.080)	(0.083)	(0.101)
Post	-0.022	-0.033	-0.143***	-0.201***	-0.075***	-0.135***	-0.191***	-0.247***
	(0.028)	(0.036)	(0.048)	(0.058)	(0.015)	(0.018)	(0.036)	(0.044)
Treatment Firm*Post	0.376***	0.526***	0.379***	0.309***	0.328***	0.242***	0.368***	0.283***
	(0.038)	(0.052)	(0.043)	(0.056)	(0.024)	(0.029)	(0.028)	(0.034)
Size (Ln AT)			-0.115***	-0.166***			-0.089***	-0.070***
			(0.007)	(0.009)			(0.012)	(0.015)
LEV/AT			-0.044***	-0.059***			-0.015***	-0.028***
			(0.012)	(0.018)			(0.005)	(0.006)
R&D/AT			0.127***	0.293***			0.037***	0.144***
			(0.006)	(0.011)			(0.005)	(0.006)
MTB			0.055***	0.074***			0.013***	0.016***
			(0.005)	(0.007)			(0.003)	(0.004)
NWC/AT			0.000	0.001			-0.001***	-0.001***
			(0.000)	(0.001)			(0.000)	(0.000)
CAPEX/AT			-1.251***	-2.532***			-0.749***	-1.733***
			(0.293)	(0.373)			(0.192)	(0.234)
FCF/AT			0.176***	0.289***			0.083***	0.168***
			(0.022)	(0.034)			(0.015)	(0.018)
CFV/AT			0.007***	0.007***			0.003***	0.000
			(0.001)	(0.001)			(0.001)	(0.001)
ROA			-0.212***	-0.480***			-0.104***	-0.105***
			(0.040)	(0.056)			(0.033)	(0.040)
Constant	-2.399***	-2.033***	-1.278	-0.450	-2.302***	-1.844***	-1.539***	-0.984
	(0.031)	(0.041)	(0.895)	(1.011)	(0.027)	(0.033)	(0.568)	(0.692)
R-squared	0.044	0.033	0.289	0.384	0.011	0.004	0.050	0.064
No. of Firms	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726
Firm FE	No	No	No	No	Yes	Yes	Yes	Yes
Year FE	No	No	Yes	Yes	No	No	Yes	Yes
Year*State FE	No	No	Yes	Yes	No	No	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240	25,240	25,240	25,240	25,240	25,240

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

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The empirical analysis presented in Table (1.1) is designed to explore the impact of local U.S. newspaper closures on corporate cash holdings through the lens of compromised local monitoring and the weakened watchdog function of the media. The study employs a staggered difference-in-differences (DID) approach, utilising both Ordinary Least Squares (OLS) regression models with clustered standard errors and fixed-effects models. The analysis covers a sample of 25,240 firm-year observations across 2,726 firms from 1986 to 2021, offering comprehensive insights into how diminished media scrutiny affects corporate financial behaviour, particularly focusing on agency theory, the free cash flow hypothesis, and other cash holding theories like the trade-off theory and the pecking order theory.

In the first two columns of Table (1.1), OLS regression results are presented, with standard errors clustered at the firm level to control for potential heteroscedasticity and correlation within firms over time. This method enhances the reliability of the results by accounting for firm-specific effects that could introduce bias if not properly controlled (Arellano & Bond, 1991). The coefficients for the interaction term $Treat\_firm_{i,t} * Post_{i,t}$ are positive and highly significant (0.376 and 0.526), indicating that firms located near closed newspapers tend to increase their cash holdings after the closure. This finding is consistent with agency theory, particularly as articulated by Jensen and Meckling (1976) and Jensen (1986), which posits that in the absence of external monitoring, managers have more discretion to retain excess cash rather than distributing it to shareholders. This result also resonates with findings by Myers (1977), Harford et al. (2008), and Chung et al. (2015), who observed that firms with weaker governance structures tend to hoard more cash as a means to reduce the risk of financial distress and protect managerial job security, ultimately reflecting an increase in agency costs.

Columns 3 and 4 of Table (1.1) introduce a comprehensive set of control variables, including firm size (**Ln AT**), leverage (**LEV/AT**), R&D expenditures (**R&D/AT**), market-to-book ratio (**MTB**), net working capital (**NWC/AT**), capital expenditures (**Capex/AT**), free cash flow (**FCF/AT**), and cash flow volatility (**CFV/AT**), and return on assets (**ROA**). Even with these controls, the coefficients for the interaction term $Treat\_firm_{i,t} * Post_{i,t}$ remain positive and significant (0.379 and 0.309), suggesting that the increase in cash holdings is not merely a reflection of firm-specific characteristics but is closely tied to the reduction in media scrutiny. This persistence across models underscores a strong relationship between reduced external monitoring and increased corporate cash reserves, aligning with the broader literature on corporate governance and cash holdings (e.g., Gao et al., 2013; Couzoff et al., 2022).

Additionally, it supports recent findings on the impact of local media closures on corporate behaviour (e.g., Kim et al., 2021; Heese et al., 2022; Kyung & Nam, 2023).

The control variables themselves provide additional insights into the determinants of cash holdings. For instance, the negative relationship between firm size (*Size*) and cash holdings is consistent with the trade-off theory, which suggests that larger firms have better access to capital markets and lower transaction costs, reducing their need for large cash reserves. This finding aligns with previous studies such as Opler et al. (1999), Han and Qiu (2007), and Bates et al. (2009), which similarly observed that larger firms tend to hold less cash.

To further validate the findings, the analysis in Columns 5 to 8 employs fixed-effects models, which control for unobserved heterogeneity by accounting for all time-invariant firm-specific characteristics. This approach allows for a more precise estimation of the impact of local newspaper closures on cash holdings, mitigating potential biases related to omitted variables (Allison, 2009; Baltagi, 2021). The coefficients for the interaction term $Treat\_firm_{i,t} * Post_{i,t}$ remain positive and significant, though slightly reduced in magnitude compared to the OLS models (ranging from 0.242 to 0.368). This consistency across different model specifications highlights the robustness of the results, reinforcing the critical role of external governance mechanisms, such as media scrutiny, in corporate cash management (Engelberg & Parsons, 2011; Peress, 2014).

The inclusion of year and state fixed effects further controls for time-varying and location-specific factors that could influence cash holdings, ensuring that the observed effects are due to the reduction in media oversight rather than other external variables (Wooldridge, 2010; Bell & Jones, 2015). This methodological rigor is in line with findings from recent studies, such as Heese et al. (2022) and Kyung and Nam (2023) which highlight the critical role of local media in corporate governance.

The findings can be interpreted through various theoretical frameworks. Agency theory, particularly Jensen (1986) free cash flow hypothesis, offers a foundational explanation. Managers in firms with weakened external monitoring, such as that provided by local media, have greater discretion to retain cash rather than return it to shareholders (Kim et al., 2021). This increased managerial discretion can lead to higher cash holdings as a means of avoiding the scrutiny and discipline associated with distributing excess cash. This interpretation is supported by studies like Dittmar et al. (2003) and Ferreira and Vilela (2004), which found that firms with

greater agency problems tend to hold more cash, underscoring the need for stronger governance mechanisms to mitigate such behaviour.

The precautionary motive for cash holdings also provides a relevant framework. Firms hold cash as a buffer against future uncertainties, particularly when access to external financing is costly or uncertain. Opler et al. (1999), Almeida et al. (2004), and Brisker et al. (2013) demonstrated that firms with higher cash flow volatility and greater growth opportunities are more likely to hold cash as a precaution. The positive and significant coefficients on cash flow volatility (*CFV*) in both the clustered SE and fixed-effects models support this view, indicating that firms with more volatile cash flows tend to increase their cash holdings as a safeguard against financial risk.

The pecking order theory (Myers & Majluf, 1984) offers additional insights. This theory suggests that firms prefer internal financing over external sources due to the adverse selection costs associated with raising external capital. In the context of reduced media scrutiny, which could exacerbate these costs, firms are likely to increase their cash reserves to ensure sufficient internal funds for future investments. Harford (1999) and Brown and Petersen (2011) support this notion, finding that firms with fewer external financing options tend to hold more cash, highlighting the significance of internal resources in the absence of robust external oversight.

The control variables in the regression models provide additional insights into the determinants of cash holdings and reinforce the robustness of the findings. The negative coefficients on firm *size* (*Ln AT*) across all models indicate that larger firms tend to hold less cash relative to their assets. This result is consistent with the trade-off theory, which posits that larger firms benefit from better access to capital markets and lower transaction costs, reducing their need for precautionary cash reserves (Almeida et al., 2004; Harford et al., 2008). This observation is supported by studies such as Opler et al. (1999), Subramaniam et al. (2011), and Hong and Liu (2023), which found that larger firms are less likely to hoard cash due to their enhanced ability to access external financing when needed.

The negative relationship between leverage (*LEV*) and cash holdings observed in the results further aligns with the trade-off theory (Han & Qiu, 2007; Lin et al., 2023). Highly leveraged firms face greater pressures to use available cash for debt servicing, reducing their cash reserves. Faulkender et al. (2006) and Jiang and Wu (2022) also found that debt reduces the need for precautionary cash holdings, as firms with higher leverage are subject to stricter financial discipline and have less flexibility to retain excess cash.

Conversely, the positive coefficients on R&D expenditures (**R&D/AT**) highlight the importance of maintaining cash reserves for firms with significant investments in research and development. Firms with high R&D intensity face greater uncertainty in returns and may hold more cash to safeguard against potential liquidity risks (Chang & Yang, 2022; Magerakis et al., 2022). This finding is consistent with Brown and Petersen (2011) and Li & Luo (2020) who found that firms with substantial R&D investments tend to hoard cash to ensure continuous funding for innovation, particularly in the face of uncertain cash flows.

The positive relationship between the market-to-book ratio (**MTB**) and cash holdings suggests that firms with higher growth opportunities maintain higher cash reserves to capitalize on future investments (Nyborg & Wang, 2021). This finding supports the trade-off theory, where firms with valuable growth options are more likely to hold cash to avoid underinvestment due to financial constraints (Magerakis et al., 2023). Fama and French (1998), Denis and Osobov (2008), and Sun et al. (2023) provided similar evidence, showing that firms with higher MTB ratios tend to accumulate more cash as a precautionary measure, particularly when external financing is less accessible.

The negative coefficients on capital expenditures (**CAPEX/AT**) suggest that firms with higher capital spending tend to hold less cash, as these firms are more likely to reinvest their cash into long-term projects rather than hoarding it (Bates et al., 2009). This behaviour is consistent with the free cash flow hypothesis, which posits that managers prefer to allocate excess cash to investments that can enhance firm value rather than retaining it (Lang et al., 1991; Elamer & Utham, 2024). Harford (1999) and (Lin et al., 2023) found that firms with significant capital expenditures are less likely to hoard cash, as they are actively deploying resources into growth opportunities.

Additionally, the positive and significant coefficients on free cash flow (**FCF/AT**) support the notion that firms with higher free cash flow tend to hoard more cash, consistent with Jensen (1986) theory that managers may retain excess cash to maintain control over the firm's resources. This finding also aligns with the precautionary motive for cash holdings, where firms with higher free cash flow maintain larger reserves to protect against future uncertainties (Gamba & Triantis, 2008; Nyborg & Wang, 2021).

The positive relationship between cash flow volatility (**CFV/AT**) and cash holdings further supports the precautionary motive. Firms with more unpredictable cash flows are likely to

maintain larger cash buffers to manage financial risks, particularly in the absence of strong external monitoring mechanisms like local media. This behaviour is consistent with findings by Opler et al. (1999), Bates et al. (2009), and Spiropoulos and Zhao (2023), who showed that firms with higher cash flow volatility tend to hold more cash as a safeguard against financial instability.

Upon analysing the outcomes of the baseline models reported in Table 1.1, it becomes evident that the results are robust and provide compelling evidence of a significant relationship between the closure of local newspapers and corporate cash holdings. After controlling for a battery of control variables, the effect remains pronounced in the treatment group, suggesting that media can serve as an essential external governance mechanism and corporate watchdog (Dyck & Zingales, 2002; Miller, 2006; Dyck et al., 2008; Bednar, 2012).

The media plays a crucial role in monitoring the behaviour of corporations, ensuring that they operate in the best interest of their stakeholders. By reporting on corporate activities, the media can hold corporations accountable for their actions and bring attention to any potential wrongdoing (Gillan, 2006; Peress, 2014). This external scrutiny can supplement internal monitoring mechanisms within the firm, such as an efficient internal control system and a rigorous risk management function (Gao et al., 2020; Giuli & Laux, 2022).

However, the absence of local media can compromise corporate monitoring, potentially leading to adverse consequences on corporate behaviour (Kim et al., 2021; Heese et al., 2022; Jiang & Kong, 2023). The results reveal that local newspaper closures weaken external governance, increase agency conflicts, and prompt nearby firms' managers to raise corporate cash holdings. Without the external scrutiny provided by local media, corporations may be more likely to engage in risky or unethical behaviour, which can harm their stakeholders in the long run. Therefore, the baseline findings underscore the importance of local media in promoting good corporate behaviour and shaping the financial decisions of nearby corporations.

3.5.2 Hypothesis (2) Empirical Testing through Corporate Governance Score

The second hypothesis of this study proposes that the closure of local U.S. newspapers weakens corporate monitoring, prompting nearby firms' managers to increase corporate cash holdings. To examine H_2, the following empirical Model (2) is estimated:

$$ln(CASH\_HOLD)_{i,t} = a_0 + a_1 Treat\_firm_{i,t} * Post_{i,t} + a_2 Post_{i,t} + a_3 Treat\_firm_{i,t} +$$
$$a_4 C\_Governance\_Score_{i,t} + a_5 Treat\_firm_{i,t} * Post_{i,t} * C\_Governance\_Score_{i,t} + a_6 Size_{i,t-1} +$$
$$a_7 LEV_{i,t-1} + a_8 R\&D_{i,t-1} + a_9 MTB_{i,t-1} + a_{10} NWC_{i,t-1} + a_{11} Capex_{i,t-1} + a_{12} FCF_{i,t-1} + a_{13} CFV_{i,t-1} +$$
$$a_{14} ROA_{i,t-1} + Year\ FE + Year * State\ FE + \varepsilon_{i,t} \tag{2}$$

VARIABLES	(1) Ln(Cash/AT) Clustered SE	(2) Ln(Cash/AN) Clustered SE	(3) Ln(Cash/AT) Fixed Effects	(4) Ln(Cash/AN) Fixed Effects
Treatment Firm	0.281***	0.317***	0.161*	0.196*
	(0.044)	(0.059)	(0.083)	(0.102)
Post	-0.144***	-0.205***	-0.192***	-0.250***
	(0.049)	(0.060)	(0.036)	(0.044)
Corporate Governance Score	0.004	-0.002	-0.015*	-0.019*
	(0.012)	(0.017)	(0.008)	(0.010)
Treatment Firm*Post	0.244***	0.200***	0.313***	0.212***
	(0.054)	(0.075)	(0.035)	(0.043)
Treatment firm*Post*C_Governance Score	-0.053***	-0.058**	-0.029***	-0.040***
	(0.016)	(0.024)	(0.011)	(0.014)
Size (Ln AT)	-0.133***	-0.204***	-0.099***	-0.101***
	(0.008)	(0.011)	(0.012)	(0.015)
LEV/AT	-0.046***	-0.064***	-0.015***	-0.031***
	(0.012)	(0.018)	(0.005)	(0.006)
R&D/AT	0.021***	0.054***	0.007***	0.026***
	(0.003)	(0.006)	(0.001)	(0.002)
MTB	0.060***	0.085***	0.014***	0.016***
	(0.005)	(0.008)	(0.003)	(0.004)
NWC/AT	0.000	0.001	-0.001***	-0.000
	(0.000)	(0.001)	(0.000)	(0.000)
CAPEX/AT	-1.448***	-2.951***	-0.769***	-1.771***
	(0.297)	(0.387)	(0.192)	(0.235)
FCF/AT	0.167***	0.272***	0.083***	0.172***
	(0.023)	(0.035)	(0.015)	(0.018)
CFV/AT	0.006***	0.006***	0.003***	0.036*
	(0.001)	(0.001)	(0.001)	(0.021)
ROA	-0.364***	-0.817***	-0.111***	-0.129***
	(0.041)	(0.061)	(0.033)	(0.040)
Constant	-1.078	-0.036	-1.512***	-0.828
	(0.912)	(1.051)	(0.569)	(0.696)
R-squared	0.270	0.333	0.049	0.055
No. of Firms	2,726	2,726	2,726	2,726
Firm FE	No	No	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240	25,240

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table (2.1) presents the empirical findings of the investigation into H_2, which explores the link between the closure of local media outlets and corporate cash holdings. It also examines the potential moderating impact of corporate governance quality. Model (2) extends the baseline model (1) by introducing interaction effects between the variable of interest, *Treatment Firm*Post*, and a moderator variable, *Corporate Governance Score*. The *Corporate Governance Score* is used as a proxy for the level of corporate monitoring and captures whether the treatment effect differs across firms with different levels of governance quality.

The study employs a staggered difference-in-differences (DID) methodology using four different regression models (OLS/Clustered SE - Fixed-effects) to investigate the relationship between local media closure, corporate governance quality, and corporate cash holdings behaviour. This approach is intended to enhance the robustness of the results by addressing potential sources of bias and unobserved heterogeneity. The dependent variable in all regression models is the natural logarithm to the division of cash and cash equivalents scaled by either total assets or net assets.

When comparing the two tables (1.1, 2.1), the impact of introducing the *Corporate Governance Score* as a moderator in Table (2.1) on the variable of interest, *Treatment Firm*Post*, becomes evident. In Table (1.1), using OLS regression with clustered standard errors, the *Treatment Firm*Post* coefficient is significant for both *Ln(Cash/AT)* and *Ln(Cash/AN)*, with values of 0.376 and 0.526, respectively. Similarly, when employing fixed effects in Table (1.1), the *Treatment Firm*Post* coefficients remain significant, although smaller, at 0.328 for *Ln(Cash/AT)* and 0.242 for *Ln(Cash/AN)*. However, in Table (2.1), with the inclusion of the corporate governance score as a moderator, the OLS model shows a further decrease in the *Treatment Firm*Post* coefficient, with values of 0.244 for *Ln(Cash/AT)* and 0.200 for *Ln(Cash/AN)*. This suggests that corporate governance plays a moderating role in the relationship between media closure and corporate cash holdings, indicating its influence in shaping the observed effects.

The significant and positive coefficient of *Treatment Firm*Post* in all four models, as displayed in Table (2.1) could be attributed to the increased uncertainty and volatility in the business environment following local media closure, which may prompt firms' managers to hold more cash. However, the insight result from the triple interaction term, where the coefficient of *Treatment Firm*Post*C_Governance Score* is significant ($p<0.01$) and negative in all models, offers a noteworthy observation. It implies that higher corporate governance scores have a mitigating effect, countering the impact of local media closure on corporate cash holdings, highlighting the crucial contribution of internal governance mechanisms.

The R-squared value is higher in the OLS models (0.270 and 0.333) compared to the Fixed-effects models (0.049 and 0.055), indicating that the OLS (Clustered SE) models explain more of the variance in the dependent variable. The OLS model assumes that the unobserved heterogeneity is not correlated with the independent variables, while the fixed-effects model accounts for unobserved heterogeneity by including individual firm-specific fixed-effects. By doing so, the Fixed-effects models reduce the likelihood of omitted variable bias and provide a more accurate estimation of the relationship between local media closure and corporate cash

holdings. This technique is widely used in empirical research to address endogeneity concerns and enhance the robustness of the findings (Allison, 2009; Wooldridge, 2010; Baltagi, 2021).

In terms of the control variables, the results show that firms with larger size, higher leverage, lower R&D intensity, higher market-to-book ratio, and lower profitability tend to hold more cash. These findings align with prior studies on the determinants of corporate cash holdings practices (Opler et al., 1999; Harford et al., 2008), and with research demonstrating the adverse effects of reduced media coverage on agency conflicts and corporate behaviour (Snyder & Strömberg, 2010; Gao et al., 2020; Kim et al., 2021; Heese et al., 2022). Furthermore, the results reveal that H_2 holds, implying that local media closure increases the demand for liquidity by increasing uncertainty and perceived risks, leading to an increase in corporate cash holdings for the treated firms. However, this effect is weaker for firms with better corporate governance, suggesting that good governance practices can mitigate the negative effects of media closure on firms' financial policies.

In terms of cash holdings theories, the results provide support for the precautionary motive theory, which suggests that firms hold cash as a buffer against future uncertainty and shocks (Han & Qiu, 2007; Friberg & Seiler, 2017). The results also suggest that agency costs may play a role in the relationship between media closure and cash holdings, as stronger corporate governance structures appear to moderate the effect of local newspaper closures on cash holdings. This supports the agency cost theory, which suggests that corporate governance can help mitigate agency costs and improve firm performance (Jensen, 1986; Dittmar & Mahrt-Smith, 2007; Harford et al., 2008).

3.5.3   *Hypothesis (3) Empirical Testing through CEO Salary Gap*

To reinforce the argument on H_1 and H_2, it is proposed to deploy CEO Salary Gap as a second proxy for corporate monitoring. Previous research has established that CEO Salary Gap can serve as a reliable indicator of the strength and effectiveness of corporate monitoring, with wider gaps pointing to weaker monitoring mechanisms (Core et al., 1999; Bebchuk & Fried, 2003; Newton, 2015; Henderson & Fredrickson, 2017; Conyon & Peck, 2017). The underlying objective is to examine the degree to which the absence of local newspapers may intensify the negative impact of CEO pay disparities on the behaviour of nearby corporations. It is hypothesised that the closure of local newspapers could exacerbate such adverse effects, resulting in greater agency conflicts and increased corporate cash hoarding. To examine this hypothesis, a multiple regression model is estimated, incorporating a three-way interaction term to capture the joint

effect of the media closure shock and the CEO salary gap on the level of corporate cash holdings. Subsequently, other factors such as leverage, size, R&D, and year fixed effects, are controlled for. To investigate H_3, empirical Model (3) is represented as follows:

$$ln(CASH\_HOLD)_{i,t} = a_0 + a_1 Treat\_firm_{i,t} * Post_{i,t} + a_2 Post_{i,t} + a_3 Treat\_firm_{i,t} +$$
$$a_4 CEO\_Salary\_Gap_{i,t} + a_5 Treat\_firm_{i,t} * Post_{i,t} * CEO\_Salary\_Gap_{i,t} + a_6 Size_{i,t-1} + a_7 LEV_{i,t-1} +$$
$$a_8 R\&D_{i,t-1} + a_9 MTB_{i,t-1} + a_{10} NWC_{i,t-1} + a_{11} Capex_{i,t-1} + a_{12} FCF_{i,t-1} + a_{13} CFV_{i,t-1} + a_{14} ROA_{i,t-1} +$$
$$Year\ FE + Year * State\ FE + \varepsilon_{i,t} \qquad (3)$$

Table (3.1) H_3 Empirical Results through CEO Salary Gap:
The below table presents the results of the Ordinary Least Squares (OLS) regression models with clustered standard errors and fixed-effects models through CEO Salary Gap. The dependent variable is the natural logarithm to the division of cash and cash equivalents scaled by either total assets $ln(Cash/AT)_{i,t}$ or net assets $ln(Cash/AN)_{i,t}$ for firm i at time t. The primary independent (explanatory) variable is the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. This binary variable is set to **1** if the firm is part of the treatment group (i.e., experiencing media closure) during the post-treatment period (i.e., after the media closure) and **0** otherwise. This variable captures the treatment effect of media closure on cash holdings. $Treat\_firm_{i,t}$ is a binary variable that equals **1** if firm i belongs to the treatment group, and **0** otherwise. $Post_{i,t}$ is a binary variable that equals **1** for years after the media closure event, and **0** otherwise. $CEO\_Salary\_Gap_{i,t}$ denotes for the difference between the CEO's salary and the median salary of the firm's employees, which serves as a proxy for the strength of corporate monitoring for firm i at time t. $Treat\_firm_{i,t} * Post_{i,t} * CEO\_Salary\_Gap_{i,t}$ is an interaction term between the $Treat\_firm_{i,t} * Post_{i,t}$ and $CEO\_Salary\_Gap_{i,t}$. This triple-interaction term captures the joint effect of the media closure shock and the CEO salary gap on the level of corporate cash holdings. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (1.1) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (1)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	(1) Ln(Cash/AT) Clustered SE	(2) Ln(Cash/AN) Clustered SE	(3) Ln(Cash/AT) Fixed Effects	(4) Ln(Cash/AN) Fixed Effects
Treatment Firm	0.245***	0.322***	0.174**	0.242**
	(0.044)	(0.056)	(0.083)	(0.101)
Post	-0.132***	-0.180***	-0.185***	-0.231***
	(0.048)	(0.058)	(0.036)	(0.044)
CEO Salary Gap	0.026***	0.053***	0.024***	0.064***
	(0.009)	(0.015)	(0.006)	(0.007)
Treatment Firm*Post	0.357***	0.262***	0.349***	0.238***
	(0.044)	(0.057)	(0.028)	(0.034)
Treatment firm*Post*CEO Salary Gap	0.086***	0.127***	0.055***	0.078***
	(0.026)	(0.042)	(0.017)	(0.021)
Size (Ln AT)	-0.112***	-0.158***	-0.085***	-0.050***
	(0.007)	(0.010)	(0.012)	(0.015)
LEV/AT	-0.043***	-0.058***	-0.014***	-0.027***
	(0.012)	(0.018)	(0.005)	(0.006)
R&D/AT	0.128***	0.295***	0.038***	0.144***
	(0.006)	(0.011)	(0.005)	(0.006)
MTB	0.054***	0.072***	0.013***	0.015***
	(0.005)	(0.007)	(0.003)	(0.004)
NWC/AT	0.000	0.001	-0.001***	-0.001***
	(0.000)	(0.001)	(0.000)	(0.000)
CAPEX/AT	-1.232***	-2.487***	-0.753***	-1.745***
	(0.293)	(0.373)	(0.192)	(0.233)
FCF/AT	0.182***	0.303***	0.083***	0.171***
	(0.022)	(0.034)	(0.015)	(0.018)
CFV/AT	0.007***	0.008***	0.003***	0.028
	(0.001)	(0.001)	(0.001)	(0.020)
ROA	-0.209***	-0.471***	-0.103***	-0.099**
	(0.040)	(0.056)	(0.033)	(0.040)
Constant	-1.364	-0.615	-1.603***	-1.177*
	(0.896)	(1.007)	(0.568)	(0.691)
R-squared	0.290	0.386	0.051	0.068
No. of Firms	2,726	2,726	2,726	2,726
Firm FE	No	No	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240	25,240

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table (3.1) displays the coefficient estimates for the variable of interest, ***Treatment Firm*Post***. The results reveal that firms located within a 50-mile radius of the closed local newspapers experience a significant increase in their cash holdings after the closure, with the coefficient estimate ranging from 23.8% to 35.7% (p<0.01) across all model specifications. The moderator variable, ***CEO Salary Gap***, which measures the difference between the CEO's pay and the average employee's pay, has a positive coefficient in all specifications and is statistically significant at the 1% level. Additionally, the coefficient on the triple-interaction term ***Treatment firm*Post*CEO Salary Gap*** is positive and statistically significant in all specifications, indicating that the effect of media closure on cash holdings is even more pronounced for firms with larger CEO salary gaps.

The table highlights the inclusion of fixed effects, such as ***Firm***, ***Year,*** and ***Year*State*** fixed effects, which control for unobserved heterogeneity and time-varying factors. Incorporating these fixed effects helps reduce potential biases and provides more robust estimates in the analysis.

This finding is in line with a study by Core et al. (1999), which suggests that CEO compensation can serve as a proxy for managerial power and discretion. According to the authors, CEOs with higher salaries may have greater power to influence firm policies, including those related to cash management. This observation is also consistent with the study by Cheng et al. (2022), where they utilised exogenous shocks to corporate cash and observed that CEO compensation promptly responds to increases in cash holdings. This confirmation supports the notion that managers can derive private benefits from excess cash hoardings.

Furthermore, the findings from Table (3.1) support the managerial entrenchment theory as proposed by Berger et al. (1997). This theory posits that managers with more power, confidence and discretion are more likely to expropriate shareholder wealth, thereby exacerbating the agency problem (Jensen, 1986; Kalcheva & Lins, 2007; Chen et al., 2020; Couzoff et al., 2022). Thus, firms with wider CEO pay gaps may face greater agency problems and are more likely to increase their cash stockpiling as a precautionary measure following the closure of local media. Overall, these findings support the first hypothesis of our study, which suggests that media closure weakens corporate monitoring and increases the agency problem, leading firms to hoard cash as a precautionary measure.

Overall, these findings corroborate the second hypothesis of this essay, positing that media closures impair corporate monitoring and exacerbate the agency problem, prompting firms to hoard cash as a precautionary measure.

3.5.4 Hypothesis (4) Empirical Testing through Institutional Ownership:

The following empirical Model (4) is estimated to test H_4, which suggests that the closure of local U.S. newspapers leads the shareholders of nearby firms to exert pressure on managers to disgorge corporate cash holdings:

$$ln(CASH\_HOLD)_{i,t} = a_0 + a_1 Treat\_firm_{i,t} * Post_{i,t} + a_2 Post_{i,t} + a_3 Treat\_firm_{i,t} +$$
$$a_4 Institutional\ Ownership_{i,t} + a_5 Treat\_firm_{i,t} * Post_{i,t} * Institutional\ Ownership_{i,t} +$$
$$a_6 Size_{i,t-1} + a_7 LEV_{i,t-1} + a_8 R\&D_{i,t-1} + a_9 MTB_{i,t-1} + a_{10} NWC_{i,t-1} + a_{11} Capex_{i,t-1} + a_{12} FCF_{i,t-1} +$$
$$a_{13} CFV_{i,t-1} + a_{14} ROA_{i,t-1} + YearFE + Year * State\ FE + \varepsilon_{i,t} \qquad (4)$$

Table (4.1) H_4 Empirical Results through Institutional Ownership
The below table presents the results of the Ordinary Least Squares (OLS) regression models with clustered standard errors and fixed-effects models through Institutional Ownership. The dependent variable is the natural logarithm to the division of cash and cash equivalents scaled by either total assets $ln(Cash/AT)_{i,t}$ or net assets $ln(Cash/AN)_{i,t}$ for firm i at time t. The primary independent (explanatory) variable is the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. This binary variable is set to **1** if the firm is part of the treatment group (i.e., experiencing media closure) during the post-treatment period (i.e., after the media closure) and **0** otherwise. This variable captures the treatment effect of media closure on cash holdings. $Treat\_firm_{i,t}$ is a binary variable that equals **1** if firm i belongs to the treatment group, and **0** otherwise. $Post_{i,t}$ is a binary variable that equals **1** for years after the media closure event, and **0** otherwise. $Institutional\ Ownership_{i,t}$ denotes for the proportion of the firm's shares held by institutional investors for firm i at time t. $Treat\_firm_{i,t} * Post_{i,t} * Institutional\ Ownership_{i,t}$ is an interaction term between the $Treat\_firm_{i,t} * Post_{i,t}$ and $Institutional\ Ownership_{i,t}$. This triple-interaction term captures the joint effect of the media closure shock and the institutional ownership on the level of corporate cash holdings. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (1.1) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (1)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	(1) Ln(Cash/AT) Clustered SE	(2) Ln(Cash/AN) Clustered SE	(3) Ln(Cash/AT) Fixed Effects	(4) Ln(Cash/AN) Fixed Effects
Treatment Firm	0.235***	0.306***	0.174**	0.245**
	(0.044)	(0.059)	(0.083)	(0.102)
Post	-0.123**	-0.174***	-0.194***	-0.250***
	(0.049)	(0.060)	(0.036)	(0.044)
Institutional Ownership	-0.031	-0.056*	-0.940	-0.965
	(0.022)	(0.034)	(1.145)	(1.396)
Treatment Firm*Post	0.377***	0.311***	0.371***	0.289***
	(0.044)	(0.058)	(0.028)	(0.034)
Treatment Firm*Post* Institutional Ownership	-0.238***	-0.330***	-0.423**	-0.493**
	(0.048)	(0.059)	(0.174)	(0.212)
Size (Ln AT)	-0.117***	-0.182***	-0.088***	-0.069***
	(0.007)	(0.010)	(0.012)	(0.015)
LEV/AT	-0.040***	-0.051**	-0.014***	-0.027***
	(0.014)	(0.020)	(0.005)	(0.006)
R&D/AT	0.021***	0.054***	0.038***	0.144***
	(0.003)	(0.006)	(0.005)	(0.006)
MTB	0.058***	0.082***	0.013***	0.015***
	(0.005)	(0.008)	(0.003)	(0.004)
NWC/AT	0.000	0.001	-0.001***	-0.001***
	(0.000)	(0.001)	(0.000)	(0.000)
CAPEX/AT	-0.275	-0.586	-0.117*	-0.279***
	(0.207)	(0.409)	(0.062)	(0.076)
FCF/AT	0.158***	0.261***	0.084***	0.170***
	(0.023)	(0.035)	(0.015)	(0.018)
CFV/AT	0.005***	0.004***	0.003***	0.000***
	(0.001)	(0.001)	(0.001)	(0.001)
ROA	-0.363***	-0.821***	-0.104***	-0.104***
	(0.040)	(0.061)	(0.033)	(0.040)
Constant	-1.215	-0.278	-0.869	-0.370
	(0.893)	(1.028)	(0.889)	(1.083)
R-squared	0.271	0.333	0.050	0.063
No. of Firms	2,726	2,726	2,726	2,726
Firm FE	No	No	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240	25,240

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table (4.1) presents the OLS (Clustered SE) and fixed effects regression results, examining the impact of local newspaper closure on corporate cash holdings, with institutional ownership as a moderator. Consistent with prior research (e.g., Harford, 1999; Brown & Petersen, 2011), the findings show that firms tend to increase their cash holdings in response to negative external shocks. Specifically, the *Treatment Firm*Post* coefficient is positive and statistically significant across all models, indicating that firms within a 50-mile radius of media closure increased their cash holdings compared to those greater than 50-mile and within 150-mile radius.

However, the coefficient for *Institutional Ownership* is generally not statistically significant, except in specification 2 (p<0.10), which aligns with the inconclusive outcomes reported in previous research (Demsetz & Lehn, 1985; Agrawal & Knoeber, 1996; Karpoff et al., 1996; Duggal & Millar, 1999; Faccio & Lasfer, 2000; Cornett et al., 2007). These findings suggest that while local media closures have a significant impact on firms' cash holdings, the direct influence of institutional ownership in isolation of other governance mechanisms on corporate performance may be compromised.

Interestingly, the coefficient for the triple-interaction term *Treatment Firm*Post*Institutional Ownership* is consistently negative and statistically significant across all specifications (1-4) at the 1% level. This intriguing finding suggests that institutional investors play a crucial role in mitigating the adverse effects of local media closures on corporate cash holdings. These results align with previous studies highlighting the influential power of institutional investors in corporate governance and their ability to reduce agency costs (e.g., McConnell & Servaes, 1990; Smith et al., 1996; Wahal, 1996; Guercio & Hawkins, 1999; Gillan & Starks, 2000).

The negative coefficient implies that institutional investors actively intervene to curtail the impact of local media closures on firms' cash holdings. This phenomenon may be attributed to institutional investors' heightened concern for the long-term financial well-being of their invested firms (Daily et al., 2003). Their proactive response to absorb the shocks arising from disruptions in corporate monitoring, such as the closure of local newspapers, is in line with their dedication to safeguarding the firms' stability (Cella et al., 2013; Cella, 2020; Kim et al., 2021). The findings suggest that institutional investors act as a stabilising force in times of external turmoil, underscoring their critical role in corporate governance (Shleifer et al., 1997; Yermack, 2017).

The presence of institutional investors with higher ownership stakes serves as a mechanism to mitigate agency conflicts and ensure better corporate governance practices (Chung et al., 2002).

Their heightened vigilance and ability to curb opportunistic behaviour by managers contribute to more prudent financial decision-making during periods of external disruptions, such as local media closures (Kim et al., 2021). These results correspond to the conclusions of Harford et al. (2008), who viewed greater institutional ownership as a mirror of better governance. Institutional investors actively monitor firm executives, advocating for policies that align the actions of managers with the interests of shareholders. The findings further support the concept that institutional ownership acts as a protective factor, enhancing the resilience of firms in the face of adverse events. This underscores the importance of effective institutional monitoring in corporate governance practices (John & Senbet, 1998; Gompers et al., 2003).

3.6 Robustness Checks

3.6.1 Introduction

This section tackles identification concerns by sharpening the causal links between managerial practices and financial strategies amidst changes in media monitoring, particularly due to local newspaper closures. The absence of local media can weaken corporate monitoring, leading to potential shifts in managerial behaviour and financial strategies (Kim et al., 2021; Heese et al., 2022), such as increased cash holdings. To strengthen the identification strategy, the first robustness test focuses on media visibility, recognising its critical role in enforcing managerial discipline and resource efficiency (Hao & Li, 2021; Kuzey et al., 2023).

The media visibility test particularly examines S&P 500 firms, which constitute about 80% of U.S. market capitalisation and are subject to greater media scrutiny (Tetlock et al., 2008; Tsileponis et al., 2020). These firms rely heavily on media oversight for governance, and the analysis hypothesises that reduced media monitoring after local newspaper closures will significantly affect their cash holdings.

Moreover, the analysis examines the combined influence of firm size and firms operating in regions classified as news deserts, where local newspapers have ceased to operate (Jensen, 1993; Almeida et al., 2004). It also controls for the potential role of social media as a substitute for traditional local media, although recognising that social media cannot entirely replicate the depth and accountability of traditional journalism (Abernathy, 2023; Usher, 2023).

Addressing endogeneity concerns is crucial for robust analysis. To mitigate these, the study employs instrumental variables such as broadband service and Craigslist entry, exogenous shocks that influenced local newspaper closures (Gentzkow et al., 2014; Gao et al., 2020). These instruments ensure that the effects observed are driven by local media changes rather than confounding factors.

To further isolate the effects of local newspaper closures from broader economic conditions, the study includes state-level controls such as Economic Policy Uncertainty (EPU), unemployment rates, GDP, and GDP growth, following the approach of Gulen and Ion (2016). These controls help differentiate the impact of local media oversight from general economic influences.

Finally, the robustness of the Difference-in-Differences (DID) design is validated through placebo (falsification) tests, Propensity Score Matching (PSM), and an analysis of dynamic effects over

time. Together, these methods ensure the findings are reliable across various specifications, highlighting the crucial role of local media in corporate governance and the risks posed by the decline in traditional newspaper oversight (Dyck & Zingales, 2002; Miller, 2006; Peress, 2014).

3.6.2   *Impact of Media Visibility on Corporate Cash Holdings*

To enhance the identification strategy within the DID design, several tests are conducted in this sub-section. Media visibility enforces managerial discipline and efficient resource use by monitoring corporate actions (Hao & Li, 2021; Chen et al., 2019; Kuzey et al., 2023). For S&P 500 firms, which constitute about 80% of the U.S. stock market's capitalisation, this attention fosters better governance (Tetlock et al., 2008; Tsileponis et al., 2020). Ritala et al. (2018) note that S&P 500 firms face intense scrutiny and must disclose activities through various channels, enhancing transparency. Research indicates that post-S&P 500 inclusion, stock prices rise (Shleifer, 1986; Brennan & Subrahmanyam, 1995; Beneish & Whaley, 1996), bond premiums increase (Morck & Yang, 2002), liquidity improves, and transaction costs decline (Hegde & McDermott, 2003; Cai, 2007). Additionally, cash holdings drop significantly, with an average decline of 7% and 32% lower when adjusted for industry (Brisker et al., 2013b).

Engelberg and Parsons (2011) demonstrate that local media coverage boosts trading activity for S&P 500 firms' earnings announcements. Guest (2021) notes that S&P 500 firms are frequently highlighted by local media, acting as crucial whistleblowers on corporate wrongdoings (Miller, 2006; Dyck et al., 2010). The hypothesis suggests that newspaper closures have a more pronounced impact on cash management policies for these highly visible firms due to a considerable reduction in media monitoring (Kim et al., 2021). Accordingly, the first test evaluates media coverage, focusing specifically on S&P 500 companies. The dummy variable *High Media Visibility* is used, assigning a value of 1 to S&P 500 firms with significant media coverage and 0 to all others. The triple interaction term *Treatment Firm*Post*High Media Visibility* measures the impact of local newspaper closures on the cash holding practices of S&P 500 firms, considering both their high visibility and the intensity of the media scrutiny they receive.

The second test examines the influence of firm size (*Size*) on corporate cash holding practices following local newspaper closures. Previous studies on cash holdings have not reached a consensus on how corporate size impacts cash stockpiling practices (e.g., Opler et al., 1999; Almeida et al., 2004; Guney et al., 2007; Harford et al., 2008). Due to their notable economic influence and wide stakeholder networks, larger firms are more susceptible to the adverse effects of negative publicity, as they attract greater visibility and scrutiny (Jensen, 1993; Core et al.,

2008). Some research suggests that larger firms hoard less cash due to their more accurate forecasts and lower issuance and external funding costs, benefiting from economies of scale (Miller & Orr, 1966; Almeida et al., 2004).

However, there is a gap in understanding how local newspaper closures, which reduce media scrutiny, impact cash holdings across firms of different sizes. This test aims to clarify these effects by analysing how firms of varying sizes adjust their cash holdings in response to diminished media oversight. By comparing small and large firms, the goal is to understand the relationship between firm size and cash management strategies under different levels of external monitoring. To measure this, **Large Firm** is defined as 1 for companies with asset sizes above the median within the sample, and 0 otherwise, reflecting the idea that larger firms receive more attention and monitoring compared to smaller ones.

The interaction term **Treatment Firm*Post*Large Firm** assesses the differential impact of newspaper closures on larger firms. The hypothesis proposes that reduced external oversight may lead to increased cash holdings among these firms, which have traditionally relied more on media monitoring as a fourth-estate mechanism. This analysis, detailed in Table (5.1), provides insight into how firm size affects the relationship between media closures and cash holding strategies.

The third test in this analysis examines the influence of local newspaper availability on cash holding activities, focusing on whether a firm operates in a region still served by local newspapers or has become a news desert (Abernathy, 2023; Usher, 2023). This test aims to determine how the absence of local journalistic scrutiny impacts corporate cash holdings, particularly in regions where newspapers have ceased operations, potentially leaving a void in local monitoring and accountability mechanisms (Kim et al., 2021; Heese et al., 2022; Kyung & Nam, 2023).

Following the methodology of Gao et al. (2020), the dummy variable **News Desert** is used, set to 1 for firms located in regions where local newspapers have closed, and 0 for firms in areas still served by at least one local newspaper. This classification is crucial, as it hypothesizes that firms in news deserts may exhibit different cash holding behaviours due to the absence of media oversight, which typically acts as a deterrent to corporate misconduct (Miller, 2006; Dyck et al., 2008; Bednar, 2012).

The triple interaction term **Treatment Firm*Post*News Desert** evaluates the impact of being in a news desert on firms' cash holding practices following newspaper closures. The findings, presented in Table (5.1), illustrate how the absence of local newspapers influences cash

management strategies. To account for the influence of social media on information dissemination, the variable *Social Media Entry* is included in each of the three tests. This variable is set to 1 starting in 2004, marking the rise of Facebook and the introduction of the term "*Social Media*", and is set to 0 for earlier years (Kaplan & Haenlein, 2010). This adjustment allows for an examination of whether social media platforms can compensate for the information gap created by the decline of local newspapers, as discussed by Shaker (2014), Miller and Skinner (2015), and Baloria and Heese (2018). By incorporating this variable into the analyses of firm visibility, firm size, and local newspaper availability, the study assesses whether social media provides sufficient transparency to mitigate the effects of newspaper closures. This approach offers a comprehensive understanding of how shifts in media consumption impact corporate governance and firm decision-making (Liu & McConnell, 2013; Zhang & Su, 2015;Wu et al., 2022).

Table (5.1) Impact of Media Visibility and Availability on Corporate Cash Holdings

The following table presents the results of the analysis examining the cross-sectional impact of media visibility and availability on corporate cash holdings. $High\_Media\_Visibility_{i,t}$ a dummy variable set to **1** for S&P 500 firms with high media coverage, and **0** for all others. The triple interaction term $Treat\_firm_{i,t} * Post_{i,t} * High\_Media\_Visibility_{i,t}$ captures the effects of local newspaper closures on the cash holding behaviour of S&P 500 firms. $Large\_Firm_{i,t}$ defined as **1** for companies whose asset size is above the median within our sample, and **0** otherwise. The interaction term $Treat\_firm_{i,t} * Post_{i,t} * Large\_Firm_{i,t}$ assesses the differential impact of newspaper closures on the cash holding activities of these firms. $News\_Desert_{i,t}$ a dummy variable set to **1** for firms located in regions classified as news deserts, where local newspapers have closed, and **0** for those in areas still served by at least one local newspaper. The triple interaction term $Treat\_firm_{i,t} * Post_{i,t} * News\_Desert_{i,t}$ assesses the impact of being in a news desert on firms' cash holding practices post-newspaper closure. $Social\_Media\_Entry_{i,t}$ a dummy variable, set to **1** from 2004 onwards, marking the entry of Facebook, and **0** for earlier years. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (1.1) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (1)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	(1) Ln(Cash/AT)	(2) Ln(Cash/AN)	(3) Ln(Cash/AT)	(4) Ln(Cash/AN)	(5) Ln(Cash/AT)	(6) Ln(Cash/AN)
Treatment Firm*Post	0.334***	0.238***	0.263***	0.153**	0.323***	0.226***
	(0.044)	(0.057)	(0.045)	(0.064)	(0.042)	(0.056)
High Media Visibility	-0.190***	-0.139***				
	(0.057)	(0.044)				
Treatment Firm*Post*High Media Visibility	0.262***	0.202***				
	(0.064)	(0.054)				
Large Firm			0.046*	0.024*		
			(0.028)	(0.012)		
Treatment Firm*Post*Large Firm			0.178***	0.143***		
			(0.061)	(0.043)		
News Desert					0.141**	0.109**
					(0.057)	(0.044)
Treatment Firm*Post* News Desert					0.157***	0.218***
					(0.043)	(0.052)
Social Media Entry	0.018	0.015	0.018	0.015	0.017	0.014
	(0.023)	(0.030)	(0.023)	(0.030)	(0.023)	(0.030)
Size (Ln AT)	-0.090***	-0.070**	-0.095***	-0.077**	-0.090***	-0.071**
	(0.019)	(0.031)	(0.019)	(0.031)	(0.019)	(0.031)
LEV/AT	-0.015**	-0.028**	-0.015**	-0.028**	-0.015**	-0.028**
	(0.007)	(0.011)	(0.007)	(0.011)	(0.007)	(0.011)
R&D/AT	0.037***	0.143***	0.036***	0.142***	0.037***	0.143***
	(0.005)	(0.010)	(0.005)	(0.010)	(0.005)	(0.010)
MTB	0.014***	0.016***	0.013***	0.015***	0.014***	0.016***
	(0.004)	(0.005)	(0.004)	(0.005)	(0.004)	(0.005)
NWC/AT	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)
CAPEX/AT	-0.752***	-1.737***	-0.758***	-1.744***	-0.740***	-1.720***
	(0.243)	(0.310)	(0.244)	(0.311)	(0.243)	(0.310)
FCF/AT	0.083***	0.168***	0.085***	0.171***	0.084***	0.170***
	(0.023)	(0.039)	(0.023)	(0.039)	(0.023)	(0.038)
CFV/AT	0.003***	-0.000	0.003***	-0.000	0.003***	-0.000
	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)
ROA	-0.103**	-0.103	-0.103**	-0.103	-0.102**	-0.102
	(0.046)	(0.070)	(0.046)	(0.070)	(0.046)	(0.070)
Constant	-1.502*	-0.933	-1.189	-0.527	-1.421*	-0.848
	(0.778)	(0.868)	(0.780)	(0.868)	(0.759)	(0.844)
R-squared	0.050	0.065	0.049	0.063	0.050	0.065
No. of Firms	2,726	2,726	2,726	2,726	2,726	2,726
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240	25,240	25,240	25,240

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The results from Table (5.1) illustrate the influence of media visibility and availability on corporate cash holdings. The interaction term ***Treatment Firm*Post*** continually shows significant positive effects across all models (columns 1 to 6), with coefficients ranging from 0.153 ($p<0.05$) to 0.334 ($p<0.01$). This indicates an economic rise in corporate cash holdings following newspaper closures, particularly in high-profile firms such as those in the S&P 500 (Tetlock et al., 2008; Tsileponis et al., 2020). This pattern suggests increased agency conflicts as managers may accumulate cash to enhance their discretion and personal benefits (Jensen, 1986; Harford et al., 2008).

The variable ***High Media Visibility*** negatively impacts cash holdings (Model 3: -0.139, $p<0.01$; Model 4: -0.190, $p<0.01$), indicating that increased media scrutiny restrains cash hoarding (Miller, 2006; Dyck et al., 2010). The interaction term ***Treatment Firm*Post*High Media Visibility*** shows positive effects (Model 3: 0.202, $p<0.01$; Model 4: 0.262, $p<0.01$), suggesting intensified impacts of newspaper closures on high-visibility firms (Tetlock et al., 2008; Tsileponis et al., 2020; Hao & Li, 2021). Brisker et al. (2013) discover that constrained firms elevate borrowing by 11.31% and lessen credit spreads by 1.58% upon S&P 500 listing. This suggests a reduced need for precautionary cash reserves as risk decreases and access to more affordable external funds enhances.

Large Firm shows insignificant shifts in cash holdings without local newspaper closures. However, the interaction term ***Treatment Firm*Post*Large Firm*** displays a significantly positive impact (Model 5: 0.143, $p<0.01$; Model 6: 0.178, $p<0.01$), indicating increased cash holdings with reduced external oversight (Gentzkow et al., 2004; Chahine et al., 2015). Larger firms, which receive more media attention, face more scrutiny and have less incentive to hoard cash (Dittmar et al., 2003; Almeida et al., 2004). Reduced media scrutiny increases agency conflicts, as managers in larger firms might exploit reduced oversight to build cash reserves for their own interests (Jensen, 1993; Core et al., 2008; Kim et al., 2021).

News Desert, symbolising areas with no local newspaper coverage, shows a positive impact on cash holdings (Model 7: 0.139, $p<0.01$; Model 8: 0.191, $p<0.01$). The interaction term ***Treatment Firm*Post*News Desert*** has significant positive coefficients (Model 7: 0.157, $p<0.01$; Model 8: 0.218, $p<0.01$), indicating that firms in news deserts are more likely to engage in opportunistic acts such as increasing cash holdings due to reduced oversight (Kim et al., 2021; Abernathy, 2023; Kyung & Nam, 2023). The disappearance of local news sources undermines monitoring quality and increases the risk of misconduct (An et al., 2020; Heese et al., 2022).

Lastly, *Social Media Entry* indicates negligible effects on restraining the impact of newspaper closures on corporate cash holdings, with coefficients between 0.014 and 0.018 (p>0.1), suggesting that social media does not effectively compensate for the decline in traditional local newspaper scrutiny (Shaker, 2014; Miller & Skinner, 2015; Baloria & Heese, 2018). This implies that social media might not deliver the same level of detailed and accountable reporting typically associated with traditional newspapers (Trenz, 2009; Fletcher & Nielsen, 2018).

The findings from Table (5.1) reinforce the baseline results, showing the crucial role of traditional media in monitoring corporate behaviour. Without newspaper oversight, cash holdings increase, and agency conflicts worsen, underscoring the need for alternative monitoring mechanisms to protect shareholder value. These results highlight the importance of external scrutiny in maintaining corporate governance.

3.6.3   *Local Economic Conditions*

To address concerns that the baseline findings might be more influenced by local economic factors than by the impact of local newspaper closures on corporate cash holding behaviours, direct controls for state-level economic conditions are incorporated, following the approach of Gulen and Ion (2016). These controls include Economic Policy Uncertainty (EPU), unemployment, GDP (log-transformed for normalisation), and GDP growth in the regression model. The EPU Index (EPUI), developed by Baker et al. (2016), measures economic policy uncertainty by analysing the frequency of newspaper articles discussing policy uncertainty, tax law changes, and divergent economic forecasts. Incorporating these controls helps to isolate the effect of local newspaper closures from broader economic factors, ensuring a more accurate assessment of how these closures impact corporate cash management practices.

This investigation seeks to determine whether economic indicators alone drive newspaper closures and subsequently impact companies' cash reserves. Factors such as higher EPU, increased unemployment, and lower GDP may contribute to decreased advertising revenue, while slow GDP growth could lead to economic challenges and, ultimately, newspaper closures. By incorporating these economic controls, the strategy ensures that the findings are accurately adjusted to reflect the true impact of local newspaper closures on corporate cash holdings. This approach isolates the specific effects of the loss of media oversight from broader economic fluctuations, allowing for a clearer understanding of how newspaper closures directly influence corporate cash management practices.

Table (5.2) State-Level Economic Conditions

The following table explores the effect of local newspaper closures on corporate cash holdings, incorporating state-level economic indicators such as $EPUI_{i,t}$, $Unemployment_{i,t}$, $GDP_{i,t}$, and $GDP\_Growth_{i,t}$, following the methodology of Gulen and Ion (2016). This approach aims to rule out broader economic influences and identify whether changes in cash holdings are specifically attributable to newspaper closures. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (1.1) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (1)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	(1) Ln(Cash/AT)	(2) Ln(Cash/AN)	(3) Ln(Cash/AT)	(4) Ln(Cash/AN)	(5) Ln(Cash/AT)	(6) Ln(Cash/AN)	(7) Ln(Cash/AT)	(8) Ln(Cash/AN)
Treatment Firm	-0.036	-0.023	-0.036	-0.023	-0.036	-0.023	-0.036	-0.023
	(0.036)	(0.046)	(0.036)	(0.046)	(0.036)	(0.046)	(0.036)	(0.046)
Post	0.040	0.065*	0.040	0.065*	0.040	0.065*	0.040	0.065*
	(0.031)	(0.037)	(0.031)	(0.037)	(0.031)	(0.037)	(0.031)	(0.037)
Treatment Firm*Post	0.292***	0.202***	0.294***	0.204***	0.293***	0.204***	0.293***	0.204***
	(0.030)	(0.038)	(0.030)	(0.038)	(0.030)	(0.038)	(0.030)	(0.038)
EPUI	0.015	0.020						
	(0.026)	(0.031)						
Unemployment			-0.006	-0.006				
			(0.008)	(0.010)				
Ln GDP					-0.008	-0.023		
					(0.070)	(0.084)		
GDP Growth							0.002	0.002
							(0.004)	(0.004)
Size (Ln AT)	-0.158***	-0.183***	-0.158***	-0.183***	-0.158***	-0.183***	-0.158***	-0.183***
	(0.019)	(0.030)	(0.019)	(0.030)	(0.019)	(0.030)	(0.019)	(0.030)
LEV/AT	0.018**	0.029**	0.018**	0.029**	0.018**	0.029**	0.018**	0.029**
	(0.008)	(0.012)	(0.008)	(0.012)	(0.008)	(0.012)	(0.008)	(0.012)
R&D/AT	0.036***	0.142***	0.036***	0.142***	0.036***	0.142***	0.036***	0.142***
	(0.005)	(0.010)	(0.005)	(0.010)	(0.005)	(0.010)	(0.005)	(0.010)
MTB	0.008**	0.006	0.007**	0.005	0.008**	0.005	0.008**	0.005
	(0.004)	(0.005)	(0.004)	(0.005)	(0.004)	(0.005)	(0.004)	(0.005)
NWC/AT	0.170***	0.289***	0.170***	0.289***	0.170***	0.289***	0.170***	0.289***
	(0.021)	(0.032)	(0.021)	(0.032)	(0.021)	(0.032)	(0.021)	(0.032)
CAPEX/AT	-0.667***	-1.581***	-0.670***	-1.584***	-0.667***	-1.580***	-0.669***	-1.584***
	(0.245)	(0.306)	(0.245)	(0.306)	(0.246)	(0.306)	(0.246)	(0.306)
FCF/AT	0.034	0.085**	0.034	0.085**	0.034	0.085**	0.034	0.085**
	(0.025)	(0.040)	(0.025)	(0.040)	(0.025)	(0.040)	(0.025)	(0.040)
CFV/AT	0.001	-0.001	0.001	-0.001	0.001	-0.001	0.001	-0.001
	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)
ROA	-0.096**	-0.099	-0.097**	-0.099	-0.097**	-0.099	-0.097**	-0.099
	(0.047)	(0.072)	(0.048)	(0.072)	(0.047)	(0.072)	(0.048)	(0.072)
Constant	-1.941***	-1.236**	-1.881***	-1.175**	-1.835*	-0.941	-1.927***	-1.217**
	(0.458)	(0.543)	(0.461)	(0.547)	(0.966)	(1.156)	(0.458)	(0.542)
R-squared	0.041	0.068	0.041	0.068	0.041	0.068	0.041	0.068
Number of Firms	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	No	No	No	No	No	No	No	No
Firm-Year Observations	25,240	25,240	25,240	25,240	25,240	25,240	25,240	25,240

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table (5.2) reveals that local newspaper closures lead to increased corporate cash holdings. The interaction term **Treatment Firm*Post** is significantly positive across all models (columns 1 to 8), with coefficients ranging from 0.202 to 0.294 ($p<0.01$). This finding supports the notion that reduced external scrutiny heightens agency conflicts, leading managers to hoard cash for personal gain, as suggested by Jensen (1986) and Dittmar and Mahrt-Smith (2007).

The **EPUI** variable shows positive but statistically insignificant coefficients (Model 1: 0.015; Model 2: 0.020), suggesting that state-level economic policy uncertainty does not significantly influence corporate cash holdings in this context. These findings are consistent with Jayakody et al. (2023), who found that broad policy uncertainty does not alter the combined effect of local political corruption and uncertainty on cash holdings. Additionally, this result aligns with Gulen and Ion (2016), who demonstrated that while policy uncertainty affects corporate investment, it may not have a direct and significant impact on cash holdings. Similarly, the **unemployment rate's** coefficients are negative and insignificant (Model 3: -0.006; Model 4: -0.006), indicating that variations in unemployment do not notably affect corporate cash holdings. This supports Almeida et al. (2000), who found that firm-specific factors often outweigh macroeconomic conditions in determining cash holding practices.

The log-transformed **GDP** and **GDP growth** rate variables both exhibit insignificant coefficients, indicating that neither the overall size of the economy nor short-term economic growth significantly affects corporate cash holdings in this context. This suggests that, although economic conditions typically play a role in shaping corporate behaviour, they do not appear to directly influence cash holding policies in the absence of local newspapers.

These results align with previous research by Miller (2006) and Kim et al. (2021), which highlighted the importance of local media in exerting external pressure on firms. In environments where local newspapers are no longer present, the reduced media scrutiny may diminish the influence of broader economic factors on managerial decisions related to cash holdings. Prior studies, such as those by Ferreira and Vilela (2004) and Pinkowitz et al. (2006), have shown that external monitoring, including media oversight, can significantly impact corporate cash policies, particularly in response to economic conditions. The presence of local newspapers may serve as a crucial check on managerial behaviour, ensuring that financial decisions, including those related to cash reserves, are made with greater accountability and transparency (Kyung & Nam, 2023).

The findings also contribute to the broader literature on the relationship between economic conditions and corporate cash holdings, suggesting that robust external monitoring mechanisms, such as local newspapers, are necessary for economic factors like GDP and growth rates to exert a significant influence on cash management practices. Without such oversight, managers might not feel as compelled to adjust their cash holdings in response to changing economic conditions, as also suggested by the work of Harford et al. (2008), Chen et al. (2012), and Cheung (2016). This underscores the multifaceted role that local media can play in corporate governance, particularly in contexts where traditional economic indicators might otherwise be expected to have a more direct impact.

In sum, Table (5.2) suggests that the strategic increase in cash holdings by firms is primarily a response to the loss of local newspapers, rather than a result of broader state economic conditions, which appear to have a minimal impact on the changes in cash levels observed.

3.6.4   *Addressing Endogeneity with Instrumental Variables*

To enhance our identification of the effects of local newspaper closures on corporate cash holdings and address potential endogeneity, we introduce broadband services entry and Craigslist's market entry as instrumental variables (IVs). We employ a two-stage least squares (2SLS) approach, using these IVs to mitigate unobservable factors and potential endogeneity concerns. This method allows us to isolate the causal impact of local newspaper closures on corporate cash holdings, ensuring our analysis is robust and free from external confounding influences.

The expansion of broadband internet provided a digital alternative to print media consumption, significantly reducing the demand for print newspapers and leading to a surge in local newspaper closures (George, 2008; Gentzkow et al., 2014; Cho et al., 2016). This reduction in media oversight creates opportunities for nearby firms to engage in cash stockpiling practices due to diminished scrutiny (Jensen, 1986; Miller, 2006; Dyck et al., 2010; Campello et al., 2011). To analyse this relationship, the study employs an instrumental variable approach, coding broadband services entry as a binary variable. It is coded as (1) if broadband entry occurs within five years before a newspaper's closure and is matched with the ZIP codes of the closed newspaper and affected firms within a 50-mile radius, otherwise coded as (0). Broadband services availability provides an exogenous instrumental variable to address potential endogeneity when assessing the causal effects of local newspaper closures.

Further strengthening the identification strategy and tackling endogeneity concerns, the entry of Craigslist into the classified ads market serves as a second instrumental variable, as discussed by Gao et al. (2020) and Heese et al. (2022). This rigorous test identifies Craigslist's nationwide expansion as an instrument for local newspaper closures. Craigslist[11], an online classified advertisements platform with over 60 million global users, has been extensively studied, with scholars documenting adverse effects on local newspaper advertising revenue (e.g., Gurun & Butler, 2012; Seamans & Zhu, 2013; Kroft & Pope, 2014; Gurun et al., 2016). Investigating this disruption aims to establish a causal link between the decline of local news outlets and changes in corporate cash holdings, thereby addressing potential endogeneity concerns present in baseline results.

By implementing Craigslist's market entry as a binary variable coded as (1) if it occurs within five years before a newspaper's closure and within a 50-mile radius, and (0) otherwise, this strategy isolates Craigslist's exogenous influence on newspaper viability and indirectly on cash holdings actions, aligning with the empirical analysis framework.

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[11] www.craigslist.org

Table (5.3) 2SLS-Instrumental Variables Approach

The below table presents the results of the 2SLS-IV approach using $Broadband_{i,t}$ and $Craigslist\_Entry_{i,t}$ as instrumental variables to analyse the impact of local newspaper closures on corporate cash holdings. The analysis begins with Broadband Entry, predicting newspaper closures in Column 1, and examining their effects on cash holdings in Columns 2 and 3. The Craigslist analysis follows, predicting newspaper closures in Column 4, and their impact on cash reserves in Columns 5 and 6. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (1.1) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (1)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	Broadband-1st Stage Newspaper Closure (1)	Broadband-2nd Stage Ln(Cash/AT) (2)	Broadband-2nd Stage Ln(Cash/AN) (3)	Craigslist -1st Stage Newspaper Closure (4)	Craigslist -2nd Stage Ln(Cash/AT) (5)	Craigslist -2nd Stage Ln(Cash/AN) (6)
Broadband Entry (1)/Craigslist Entry (4)	0.873***			0.728***		
	(0.007)			(0.010)		
Predicted Closure		0.367***	0.309***		0.555***	0.543***
		(0.040)	(0.049)		(0.064)	(0.077)
Size (Ln AT)	0.003	-0.090***	-0.071***	0.001	-0.090***	-0.071***
	(0.002)	(0.012)	(0.015)	(0.002)	(0.012)	(0.015)
LEV/AT	0.003**	-0.015***	-0.028***	0.004**	-0.015***	-0.029***
	(0.002)	(0.005)	(0.006)	(0.002)	(0.005)	(0.006)
R&D/AT	-0.001	0.037***	0.143***	-0.002	0.037***	0.144***
	(0.001)	(0.005)	(0.006)	(0.002)	(0.005)	(0.006)
MTB	-0.002*	0.013***	0.016***	-0.001	0.014***	0.016***
	(0.001)	(0.003)	(0.004)	(0.001)	(0.003)	(0.004)
NWC/AT	-0.000	-0.001***	-0.001***	0.000	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CAPEX/AT	-0.140**	-0.749***	-1.730***	-0.207***	-0.732***	-1.709***
	(0.070)	(0.192)	(0.234)	(0.071)	(0.192)	(0.235)
FCF/AT	-0.002	0.083***	0.168***	-0.001	0.083***	0.169***
	(0.005)	(0.015)	(0.018)	(0.006)	(0.015)	(0.018)
CFV/AT	0.000	0.003***	-0.000	0.000	0.003***	-0.000
	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)
ROA	-0.019	-0.103***	-0.102**	-0.017	-0.100***	-0.099**
	(0.012)	(0.033)	(0.040)	(0.013)	(0.033)	(0.040)
Constant	-0.531***	-1.189**	-0.502	-0.169*	-1.005*	-0.272
	(0.071)	(0.567)	(0.691)	(0.095)	(0.570)	(0.695)
R-squared	0.578	0.048	0.062	0.431	0.046	0.059
No. of Firms	2,726	2,726	2,726	2,726	2,726	2,726
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240	25,240	25,240	25,240
Sargan-Hansen Overidentification Test Chi-sq p-value		0.981	0.083		0.585	0.530

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table (5.3) presents the results of the 2SLS-IV analysis, which uses broadband and Craigslist entry as instrumental variables to assess the impact of local newspaper closures on corporate cash holdings. The first-stage results validate the suitability of these instruments. The Sargan-Hansen overidentification test, following the methodology originally proposed by Sargan (1958) and later extended by Hansen (1982), produced the following results: For Broadband Entry, the p-values are 0.981 for *Ln(Cash/AT)* and 0.083 for *Ln(Cash/AN)*. Similarly, for Craigslist Entry, the p-values are 0.585 and 0.530 for both cash measures, respectively. These results indicate that the Sargan-Hansen test confirms the validity of both Broadband Entry and Craigslist Entry as instruments for both cash measures. The p-values support the robustness of these instrumental variables in isolating the effect of local newspaper closures on corporate cash holdings.

The coefficient for broadband entry in Column 1 is positive and significant (0.873, $p<0.01$), aligning with prior research that demonstrates how the expansion of broadband internet significantly reduced print media consumption, ultimately leading to local newspaper closures (e.g., Gentzkow et al., 2014; Cho et al., 2016). This decline in newspaper readership, driven by the shift to online media, weakened the financial viability of local newspapers, forcing many to close. Similarly, the coefficient for Craigslist's market entry in Column 4 is also positive and significant (0.728, $p<0.01$), further validating its role as an instrumental variable. The entry of Craigslist into local markets had a notable negative impact on newspaper advertising revenues, particularly classified ads, which were a critical revenue stream for many newspapers (Gurun & Butler, 2012; Seamans & Zhu, 2013). The significant reduction in advertising income contributed to the financial struggles of local newspapers, leading to more closures.

In the second stage of the analysis, the results clearly show that predicted newspaper closures have a significant impact on corporate cash holdings. Specifically, the analysis reveals that these closures lead to a marked increase in cash holdings by firms, with coefficients of 0.367 ($p<0.01$) and 0.309 ($p<0.01$) in the broadband analysis, and 0.555 ($p<0.01$) and 0.543 ($p<0.01$) in the Craigslist analysis. This significant increase in cash reserves suggests that, in the absence of local newspaper scrutiny, managers may feel less constrained by external monitoring and more inclined to hoard cash, potentially as a buffer against the increased risks associated with reduced oversight.

These findings are consistent with the broader literature that emphasizes the role of media as a key external governance mechanism. Previous studies have shown that robust media coverage serves as a deterrent to managerial opportunism, as it increases transparency and holds firms accountable to shareholders and the public (e.g., Dyck & Zingales, 2002; Miller, 2006; Chen et

al., 2020). Without the presence of local newspapers, which traditionally serve as watchdogs, the reduction in external scrutiny may embolden managers to act in their own interests, including accumulating excess cash (Jensen, 1986; Dittmar & Mahrt-Smith, 2007; Harford et al., 2008). The increase in cash holdings observed in this study reinforces the idea that local media plays a crucial role in curbing potential agency conflicts and ensuring that corporate decisions are aligned with shareholder value (Core et al., 2006; Solomon, 2012).

Overall, the first-stage results confirm the effectiveness of broadband and Craigslist market entry as instrumental variables, demonstrating their strong predictive capability for local newspaper closures. The successful use of these instruments addresses potential endogeneity concerns, providing a robust causal link between local newspaper closures and changes in corporate cash holding behaviours. The second-stage findings clearly establish that reduced media monitoring significantly influences corporate cash management strategies, affirming the critical role that local newspapers play in corporate governance and financial decision-making.

3.6.5 *Placebo (Falsification) Test*

To validate the robustness of the Difference-in-Differences (DID) analysis findings on the impact of local newspaper closures on corporate cash holding behaviour, a placebo test is performed using a randomisation procedure (Abadie et al., 2010). This approach aligns with methodologies proposed by Chen et al. (2020) and Heese et al. (2022) and aims to confirm that the results are not merely due to omitted characteristics of the treatment group or random chance.

A uniform distribution is used to generate 1000 random placebo iterations of the newspaper closure interaction term, aiming to assess the robustness of the findings from the DID analysis. The results, shown in Table (6.1), compare the coefficients obtained from the baseline findings in Table (1.1) with those derived from the placebo iterations for each cash holdings measure.

Table (6.1) Placebo (Falsification) Test Results

This table presents falsification tests on corporate cash holdings in response to the closure of local newspapers. The dependent variable is either $ln(Cash/AT)_{i,t}$ or $ln(Cash/AN)_{i,t}$. The primary independent (explanatory) variable is the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. This binary variable is set to **1** if the firm is part of the treatment group (i.e., experiencing media closure) during the post-treatment period (i.e., after the media closure) and **0** otherwise. The randomisation process involves using a uniform distribution to determine the timing of newspaper closures. This involves generating 1000 random draws of the randomised element. The p-values reflect the probability that the coefficient estimated using the randomised data ($Placebo\_Treat\_firm_{i,t} * Post_{i,t}$) is greater than the coefficient estimated using the actual data from Table (1.1) (columns 3 and 4), $ln(\widehat{Cash/AT} = 0.368)$ and $ln(\widehat{Cash/AN} = 0.283)$. All variables used in the empirical models are defined in *Appendix (1)* and the sample period spans from 1986 to 2021. Standard errors are clustered at the firm level and are presented below the respective coefficients. The significance levels are denoted by asterisks: *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively. All continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	Actual_Treat_firm$_{i,t}$ * Post$_{i,t}$	Placebo_Treat_firm$_{i,t}$ * Post$_{i,t}$		
		P-value		
		Two-sided	Left-sided	Right-sided
ln(Cash/AT)$_{i,t}$ (1)	0.368***	0.000	1.000	0.000
	(0.028)			
ln(Cash/AN)$_{i,t}$ (2)	0.283***	0.000	1.000	0.000
	(0.034)			

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Figure (6) Histograms of Placebo Test for ln(Cash/AT) *Figure (7) Histograms of Placebo Test for ln(Cash/AN)*
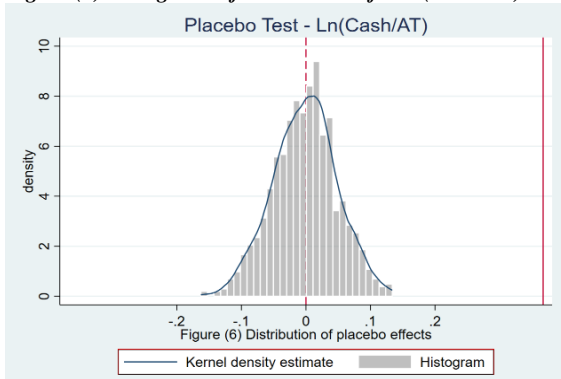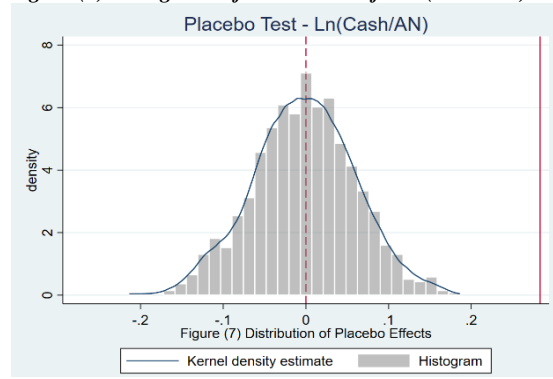
Figures (6) and (7) show histograms of placebo coefficients centered around 0 and 1, with the red dashed line indicating the placebo coefficients for $ln(Cash/AT)_{i,t}$ and $ln(Cash/AN)_{i,t}$. This involves generating 1000 random draws of the randomised element. The actual coefficients, indicated by the red continued line, falling outside the central mass of the placebo distribution confirm the statistical significance of the observed effects, suggesting they are not random.

For *Ln(Cash/AT)*, the actual coefficient is 0.368 (p<0.01), which is statistically significant at the 1% level. For *Ln(Cash/AN)*, the actual coefficient is 0.283 (p<0.01), also statistically significant at the 1% level (as reported in Table 1.1). In the placebo test results, the two-sided p-value for both dependent variables is 0.000, indicating that the probability of obtaining a coefficient as extreme as the actual one by random chance is virtually zero. The left-sided p-value is 1.000, suggesting that the actual coefficient is significantly greater than what would be expected by chance. The right-sided p-value is 0.000, indicating that the actual coefficient is significantly different from zero and falls outside the central mass of the placebo distribution.

The histograms plotted in Figures (6) and (7) show the distribution of placebo coefficients centered around 0 and 1. The red dashed line denoting the placebo coefficients for *Ln(Cash/AT)* and *Ln(Cash/AN)*. This process entails generating 1000 random draws of the randomised element. The actual coefficients, depicted by the red continued line, falling outside the central mass of the placebo distribution confirm the statistical significance of the observed effects, suggesting they are

not random, validating our DID design. This visualisation demonstrates the robustness of the study's findings and supports the hypothesis that local newspaper closures increase corporate cash holdings due to reduced media oversight rather than unobserved external economic factors.

Table (6.1) provide empirical support for the notion that the observed effects on corporate cash holdings in proximity to local newspaper closure are driven by the actual event itself, rather than other sources of heterogeneity. The lack of significant placebo effects further reinforces the validity of the difference-in-differences research design employed in this study.

3.6.6 *Propensity Score Matching (PSM)*

The propensity score matching approach (PSM), recommended by Caliendo and Kopeinig (2008) is additionally deployed as an alternative estimation technique. This application is important as it augment the validity of the baseline results and resolve concerns of endogeneity and functional misspecification underlying the relationship between local media closure and corporate cash holdings. This is important as it accounts for systematic differences that likely exist between observable firm characteristics located in areas with and without daily local newspaper closures. Furthermore, it tackles the issue of non-random assignment of firms to their respective groups (Chen et al., 2020).

Earlier studies, including Mikkelson and Partch (2003), Drucker and Puri (2005), Aktas et al. (2019), Chen et al. (2020), and Heese et al. (2022), have engaged propensity score matching to conduct robustness sensitivity tests. This technique enables to evaluate the appropriateness of matching procedures for companies affected by local newspaper closures (treatment group). Through this matching, the intention is to establish comparable control groups from areas without such closures, ensuring consistency in firm characteristics. By applying this rigorous approach, the effectiveness of the matching procedure can be assessed, leading to coherent conclusions regarding the influence of newspaper closures on corporate cash holdings behaviour of the treated firms.

For the matching process, the propensity score is computed, following the approach of He and Wintoki (2016), Chen et al. (2020), and Heese et al. (2022). A Probit regression model is applied, regressing **Treatment Firm*Post** on the control variables from baseline Model (1). This estimation produces the propensity score, which signifies the likelihood of firms being situated within a 50-mile radius of a closed newspaper and operating within or after four years of the closure. Estimating the propensity score ensures the comparability of treatment and control groups,

attributing observed effects to newspaper closures rather than confounding factors. Subsequently, each treated firm is matched to a control firm without replacement, using a predefined propensity score caliper of (0.02). This propensity score matching process results in a sample comprising 7,018 firm-year observations, comprising 3,509 treated and 3,509 control observations.

Table (7.1) First Stage (Probit) Regression & PSM - Quality of Matching (Covariate Balance)
The below table shows the findings of a First Stage Probit Regression and Propensity Score Matching (PSM) to evaluate the quality of matching for covariate balance. In this matching process, each treated firm is paired with a control firm without replacement, using a predefined propensity score caliper of (0.02). This matching procedure results in a sample consisting of 7,018 firm-year observations, comprising 3,509 treated and 3,509 control observations.

Control Variables	(1) Treatment Firm*Post		(2) Mean Treated	(3) Mean Control	(4) Mean Difference	(5) T-Stat.
Size (Ln AT)	0.0142 (0.011)		5.752	5.769	-0.018	-0.270
LEV/AT	0.024** (0.010)		0.439	0.422	0.017	0.400
R&D/AT	0.0081 (0.012)		0.476	0.507	-0.031	-0.630
MTB	0.0107 (0.008)		1.480	1.507	-0.026	-0.470
NWC/AT	0.0010* (0.001)		0.088	-0.480	0.567	0.540
CAPEX/AT	-1.455*** (0.483)		0.040	0.042	-0.001	-1.200
FCF/AT	0.0258 (0.035)		-0.109	-0.108	-0.002	-0.100
CFV/AT	0.0021 (0.002)		0.289	0.256	0.032	0.240
ROA	-0.164** (0.069)		0.307	0.306	0.001	0.130
Constant	-0.2095 (0.416)	Target Variable				
Pseudo R-squared	0.3593	Ln(Cash/AT)	-1.808	-2.370	0.562	18.620
Area under ROC curve	0.8821	Ln(Cash/AN)	-1.447	-1.981	0.534	12.750
Observations	21,648		7,018	7,018		

Table (7.2) Propensity Score Estimates – Second Stage Regression Results
The following table reports the second stage of regression analysis, re-estimating the baseline Model (1) utilising a propensity score-matched sample from the first stage to provide more robust and reliable treatment effect estimates. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (1.1) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (1)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	(1) Ln(Cash/AT) Clustered SE Matched	(2) Ln(Cash/AN) Clustered SE Matched	(3) Ln(Cash/AT) Fixed Effect Matched	(4) Ln(Cash/AN) Fixed Effect Matched
Treatment Firm*Post	0.578***	0.558***	0.385***	0.301**
	(0.042)	(0.054)	(0.114)	(0.136)
Size (Ln TA)	-0.116***	-0.166***	-0.124***	-0.111*
	(0.009)	(0.012)	(0.040)	(0.067)
LEV/TA	-0.472***	-0.640***	-0.139***	-0.200**
	(0.056)	(0.076)	(0.054)	(0.079)
R&D/TA	0.120***	0.280***	0.044***	0.155***
	(0.009)	(0.017)	(0.009)	(0.020)
MTB	0.038***	0.053***	0.002	-0.003
	(0.008)	(0.011)	(0.006)	(0.010)
NWC/TA	-0.000	-0.000	-0.001	-0.000
	(0.001)	(0.001)	(0.001)	(0.002)
CAP EXP/TA	-1.276***	-2.311***	-0.747	-1.648***
	(0.446)	(0.561)	(0.481)	(0.613)
FCF/TA	0.064	0.114*	0.038	0.096
	(0.041)	(0.062)	(0.043)	(0.073)
SDCF/TA	0.111	0.102	-0.122	-0.444*
	(0.112)	(0.177)	(0.127)	(0.248)
ROA	-0.146***	-0.387***	0.004	-0.036
	(0.054)	(0.076)	(0.078)	(0.125)
Constant	-1.181*	-0.538	-2.689***	-3.055***
	(0.702)	(0.833)	(0.747)	(0.863)
R-squared	0.339	0.420	0.105	0.121
No. of Firms	2,118	2,118	2,118	2,118
Firm FE	No	No	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes
Firm-Year Observations	7,018	7,018	7,018	7,018

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table (7.1) displays the results of the first-stage Probit regression and propensity score matching (PSM) analysis, evaluating the quality of matching and covariate balance. The analysis concentrates on the control variables and examines the mean differences between the treatment firms and the control group. The findings indicate the effectiveness of the matching procedure in balancing the covariates, as evidenced by the minimal mean differences observed between the treated and control groups for each control variable. This thorough matching process strengthens the reliability of the analysis, enabling to draw more robust conclusions regarding the impact of newspaper closures on the cash holdings behaviour of the treated firms.

Furthermore, re-estimating the baseline Model (1) using both OLS and Fixed Effects models with the matched sample in Table (7.2) provides supplementary confirmation of the primary results. The ***Treatment Firm*Post*** coefficient for both cash holdings measures consistently

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maintains a positive and statistically significant association. This suggests a robust link between local newspaper closures and corporate cash holdings within the matched sample.

In summary, the PSM-DID outcomes reinforce the prior conclusion that the observed increase in corporate cash holdings during the post-closure period is primarily driven by the closures of local daily newspapers. This increase is not influenced by differences in firm characteristics between the treated and control groups. These results emphasise the influence of local newspaper closures on corporate cash holdings and strengthen the credibility and reliability of the results.

3.6.7   Dynamic Effects

A potential concern arises regarding the possible influence of pre-existing trends on the results presented. Therefore, in this section, the objective is to analyse the temporal dynamics of the impact of local newspaper closures on corporate cash holdings to ensure that the findings are not influenced by pre-existing trends. To achieve this, a careful examination of the years preceding and following the closure event is conducted, allowing the observation of any shifts in corporate cash holdings behaviour over time.

Adopting the methodology employed in previous studies (e.g., Bertrand & Mullainathan, 2003; Chen et al., 2020; Heese et al., 2022), ten new dummy variables are generated to replace the $Post_{i,t}$ variable in the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. Through incorporating the above-mentioned dummy variables, it is feasible to track the temporal effects resulting from local newspaper closures on corporate cash holdings within a ten-year timeframe. This approach enables the analysis of changes in corporate cash holdings both prior to and following the closure event. The use of these dummy variables allows for a comparative assessment of outcomes between the treatment group and the control group, whilst accounting for baseline factors that may influence cash holdings.

The control window spans from one to five years before the closure (t_{-5} to t_{-1}), while the treatment window covers up to four years after the closure (t_{+1} to t_{+4}), with the closure year (t_0) serving as the reference point. By estimating the main effect within these distinct windows, it is possible to effectively address potential biases arising from pre-existing trends in corporate cash holdings. This comprehensive analysis of cash fluctuations over an extended period provides valuable insights into the short-term and long-term effects of newspaper closures on firms' cash management strategies.

The following table presents the results from a temporal dynamic effects model, indicating the impact of media closure on corporate cash holdings. It assesses single-year treatment windows from (t_{-5}, t_{-1}) years before newspaper closure to (t_{+1}, t_{+4}) years after the closure, comparing them to the closure year (t_0) as the benchmark. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (1.1) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (1)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	(1) Ln(Cash/AT) Fixed Effects	(2) Ln(Cash/AN) Fixed Effect
Treatment Firm * $Post_{t-5}$	0.005	0.001
	(0.028)	(0.035)
Treatment Firm * $Post_{t-4}$	0.028	0.010
	(0.037)	(0.048)
Treatment Firm * $Post_{t-3}$	0.057	0.035
	(0.041)	(0.033)
Treatment Firm * $Post_{t-2}$	0.017	0.010
	(0.020)	(0.016)
Treatment Firm * $Post_{t-1}$	0.061	0.043
	(0.107)	(0.087)
Treatment Firm * $Post_t$	0.073**	0.056**
	(0.032)	(0.024)
Treatment Firm * $Post_{t+1}$	0.271***	0.202***
	(0.057)	(0.044)
Treatment Firm * $Post_{t+2}$	0.398***	0.295***
	(0.057)	(0.064)
Treatment Firm * $Post_{t+3}$	0.362***	0.244***
	(0.064)	(0.054)
Treatment Firm * $Post_{t+4}$	0.269***	0.196***
	(0.053)	(0.057)
Size (Ln AT)	-0.090***	-0.071**
	(0.019)	(0.031)
LEV/AT	-0.015**	-0.028**
	(0.007)	(0.011)
R&D/AT	0.037***	0.143***
	(0.005)	(0.010)
MTB	0.014***	0.016***
	(0.004)	(0.005)
NWC/AT	-0.001	-0.001
	(0.000)	(0.001)
CAPEX/AT	-0.750***	-1.732***
	(0.243)	(0.310)
FCF/AT	0.083***	0.169***
	(0.023)	(0.039)
CFV/AT	0.003***	0.000
	(0.001)	(0.002)
ROA	-0.104**	-0.103
	(0.046)	(0.070)
Constant	-1.544**	-0.976
	(0.782)	(0.874)
R-squared	0.051	0.065
No. of Firms	2,726	2,726
Firm FE	Yes	Yes
Year FE	Yes	Yes
Year*State FE	Yes	Yes
Firm-Year Observations	25,240	25,240

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
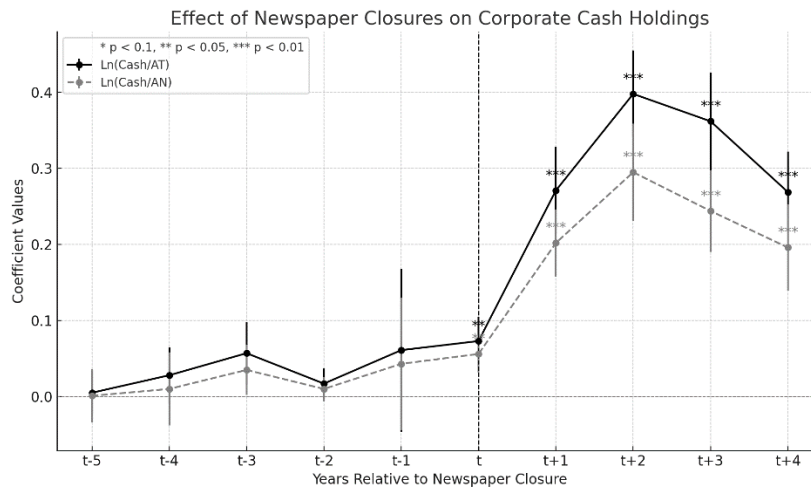
Figure (8) visualises the dynamic impact of newspaper closures on cash holdings over time

Using the baseline equation from Model (1), the regression outcomes are presented in Table 8 and plotted in Figure 8 for both measures of cash holdings. Table (8) reproduces the findings of a temporal dynamic effects model that focuses on the media closure $Treat\_firm_{i,t} * Post_{i,t}$ as the primary independent variable of interest. The analysis examines single-year treatment windows ranging from (t_{-5} to t_{-1}) years before the newspaper closure to (t_{+1} to t_{+4}) years after the closure, comparing them to the year of the closure itself (t_0) as the benchmark year.

The results show that the coefficients associated with $Treat\_firm_{i,t} * Post_{i,t}$ for the pre-closure periods (t_{-5} to t_{-1}) are not statistically significant. This indicates that cash holdings of treated firms and control firms are similar prior to the newspaper closure. However, during and after the closure period (t_0 to t_{+4}), there are positive and statistically significant coefficients for $Treat\_firm_{i,t} * Post_{i,t}$.

Figure (8) plot visualises the dynamic effect of newspaper closures on both cash holdings measures, highlighting the temporal aspect of this relationship. Pre-closure coefficients are near zero. Post-closure, both measures increase, peaking around year t_{+2}, indicating firms raise cash holdings after reduced media oversight.

These findings justify the use of a ten-year window (t_{-5}, t_0, t_{+4}), extending methodologies from Kim et al. (2021) and Heese et al. (2022). This strategy captures pre- and post-event trends around local newspaper closures, enabling the observation of staggered shocks on corporate monitoring. Corporate policies, especially cash management strategies, do not change instantaneously. They take time to adapt to new conditions, and their effects can only be measured accurately over an extended period. This longer window ensures that we capture the gradual implementation and eventual outcomes of these policy changes. Therefore, a ten-year

window provides a rigorous examination of dynamic temporal effects on cash holdings performance (parallel trends) before and after the closures, addressing endogeneity and confounding issues (see Chen et al., 2020). Overall, Table (8), and Figure (8) indicate that the influence of newspaper closures on corporate cash holdings becomes evident after the closure period, while no significant differences are observed in the pre-closure periods.

3.7 Extended Analyses

3.7.1 *Introduction*

To enhance the robustness of the research findings, additional tests are conducted to validate the primary hypotheses. The extended empirical models include two supplementary variables: short-term borrowing and dividend payout. These variables are examined alongside governance mechanisms and institutional ownership to assess their influence on the behaviour of nearby corporate managers. By investigating these interplays, the aim is to provide a comprehensive and coherent understanding of how newspaper closures could impact corporate cash holding policies, accounting for various governance mechanisms.

3.7.2 *Short-term Borrowing (STB)*

Short-term borrowing is a financing strategy used by firms to obtain funds for short durations, typically to meet their immediate working capital needs. Past research suggests that corporate decisions regarding leverage and debt maturity can serve as effective mechanisms to support corporate oversight and mitigate agency conflicts (e.g., Barnea et al., 1980; Jensen, 1986; Stulz, 1990).

Based on the free cash flow hypothesis, shareholders work to lower agency costs by restricting managers' access to surplus funds, preventing funding for projects that could destroy shareholder value. Without a robust control mechanism, persuading self-interested managers to disgorge cash to shareholders becomes challenging (Jensen, 1986; Stulz, 1990). The closure of local newspapers can challenge corporate monitoring mechanisms, raising agency costs and increasing the likelihood of opportunistic managers behaviour (Kim et al., 2021; Heese et al., 2022).

The finance literature has extensively examined the monitoring function of short-term debt (e.g., Myers, 1977; Barnea et al., 1981; Diamond, 1991; Rajan & Winton, 1995). The process of rolling over and renegotiating short-term borrowing not only acts as a means of corporate monitoring for creditors but also operates as a external governance mechanism (Stulz, 1990). In contrast to long-term debt, when firms engage in short-term borrowing, they allow closer scrutiny of their activities and financial health by lenders. This is in turn deters management from misusing funds and safeguarding the interests of lenders and investors (Graham et al., 2008; Park et al., 2000).

Building upon this notion, Rajan and Winton (1995) emphasise the effectiveness of lender monitoring through short-term debt renewals. As short-term debt requires more frequent renewal

compared to long-term debt, lenders have regular opportunities to reassess the borrower's creditworthiness and financial performance. This ongoing monitoring incentivises borrowers to uphold their financial commitments and maintain a strong credit reputation. Consequently, the presence of short-term debt acts as a powerful incentive for management to make prudent decisions and ensures that the company remains accountable to its lenders.

The short-term borrowing (*STB_dum*) variable is defined as a dummy variable that takes the value of 1 if the debt matures within one year and 0 otherwise, using data from *WRDS – Compustat* (Custódio et al., 2013).

3.7.3 Dividend Payout (DIV)

Cash holdings and dividend payments are two key areas of interest for corporate finance researchers and practitioners, as they reflect a company's financial management strategies and goals. The trade-off theory proposes that firms paying dividends tend to maintain lower cash levels, as they remain flexible to cease payout and raise funds for future growth opportunities (Ferreira & Vilela, 2004). However, some corporate managers may engage in opportunistic behaviour, utilising retained earnings to invest in value-decreasing projects or build empires (Harford, 1999; Chen et al., 2020). This behaviour prioritise personal interests over maximising shareholder value, as outlined by agency theory (Fama & Jensen, 1983; Jensen, 1986). Consequently, high cash reserves might be stockpiled for such interests, leading to a negative correlation between corporate cash holdings and dividend payments (Harford et al., 2008; Gao et al., 2013).

In the absence of an active local newspaper as a watchdog, there may be an increased risk of opportunistic behaviour. Therefore, institutional shareholders may act more rigorously to compensate for the lack of corporate monitoring and ensure that retained earnings are being used to maximise shareholder value (Easterbrook, 1984; Myers, 2000).

The dividend payment (*Div_dum*) is a dummy variable, set to 1 if the company pays dividends and 0 otherwise, using data from *WRDS – Compustat* (Opler et al., 1999; Bates et al., 2009; He & Wintoki, 2016).

3.7.4 Short-term Borrowing and Dividend Payouts though Corporate Governance Scores

According to Myers (1977), one of the challenges faced by firms is the tendency of managers to underinvest in profitable projects due to agency problems. However, by utilising short-term debt, lenders can actively monitor the company's performance and ensure that funds are allocated appropriately. The relatively shorter maturity periods of short-term debt mean that lenders have more frequent opportunities to assess the company's financial health and intervene if necessary. This enhanced monitoring capability serves as a safeguard against managerial opportunism and encourages better resource allocation.

Additionally, short-term lenders are driven to carry out thorough monitoring. Their enhanced access to borrowers' confidential information allows them to quickly identify breaches of covenants and subsequently take actions like liquidation or renegotiating credit agreements (Park et al., 2000; Chava et al., 2008). While this vigilant oversight indicates the quality of borrowers' credit and governance, it can also limit the independent decision-making of companies (Diamond, 1991).

Short-term borrowing carries the potential to exert significant influence as a corporate governance mechanism, compelling corporate managers to disgorge their cash holdings through dividend payout to shareholders. By borrowing on a short-term basis, companies subject themselves to close scrutiny and monitoring by lenders and creditors (Graham et al., 2008). This monitoring mechanism serves as a check on management's behaviour and ensures the efficient management of financial resources within the organisation (Harvey et al., 2004).

By taking on debt, a company demonstrates its confidence in its ability to generate future cash flows and meet its repayment obligations. This willingness to assume financial liabilities signals to external stakeholders, such as investors and creditors, that the company is committed to its long-term success. In essence, debt serves as a credible indicator of the company's financial health and prospects (Diamond, 1991).

According to Harford et al. (2014), corporate cash holdings behaviour plays a key role in short-term borrowing decisions. Firms with higher levels of cash reserves are more likely to engage in short-term borrowing, as they are able to secure favourable borrowing terms and avoid the costs associated with longer-term debt. Furthermore, these firms are seen as lower risk by creditors, as they can better meet their financial obligations and are less likely to default on their debt (Acharya et al., 2012).

Creditors, with a vested interest in protecting their investment and maintaining the firm's creditworthiness, exert considerable influence over corporate managers (Rajan, 1992). Through the power of their financial leverage, creditors can influence strategic decisions, including the distribution of dividends. The pressure to repay short-term debt and maintain a positive relationship with creditors motivates corporate managers to disgorge their cash holdings and allocate them to dividend payments, thus satisfying the expectations and demands of these influential stakeholders (Harvey et al., 2004; Graham et al., 2008).

In summary, the closure of a local newspaper exerts an exogenous shock on the corporate monitoring dynamics within a neighbourhood, necessitating alternative mechanisms to support corporate governance. Short-term borrowing emerges as a potent tool to mitigate the impact of media closure on corporate cash holdings. It prompts managers to distribute cash holdings as dividends, ensuring the efficient utilisation of corporate resources. This effect is further reinforced by the vigilant oversight of the market of corporate control and debt covenants, empowering lenders and creditors to influence managerial decisions. Consequently, managers face pressure to actively reduce cash holdings through dividend distributions, driven by the combined pressures of various corporate governance mechanisms.

To comprehensively analyse the impact of short-term borrowing on dividend payout decisions and corporate cash holdings behaviour, it is crucial to enhance Model (2) by incorporating short-term borrowing alongside corporate governance scores. This extension will provide a deeper understanding of how short-term borrowing reinforces corporate governance to absorb the negative monitoring shock in the aftermath of local newspaper closures. By considering these additional factors, valuable insights can be obtained regarding the complex interplay between corporate governance, borrowing practices, and financial strategies adopted by firms following the closure of local newspapers. To enhance model identification, and building upon the methodology proposed by Kim (2018), three- and four-way interaction terms are incorporated into the augmented Model (5) as follows:

$$ln(CASH\_HOLD)_{i,t} = a_0 + a_1 Treat\_firm_{i,t} * Post_{i,t} + a_2 Post_{i,t} + a_3 Treat\_firm_{i,t} +$$
$$a_4 C\_Governance\_Score_{i,t} + a_5 Treat\_firm_{i,t} * Post_{i,t} * C\_Governance\_Score_{i,t} + a_6 STB\_dum_{i,t} +$$
$$a_7 Treat\_firm_{i,t} * Post_{i,t} * C\_Governance\_Score_{i,t} * STB\_dum_{i,t} + a_8 Div\_dum_{i,t} + a_9 Controls_{i,t-1} +$$
$$YearFE + Year * State\,FE + \varepsilon_{i,t} \qquad\qquad (5)$$

The study explores the impact of local newspaper closures on corporate cash holding behaviours using a Difference-in-Differences (DID) analysis. This method involves comparing average changes over time in a particular outcome (corporate cash holdings) between two groups, one that experienced the event of interest (newspaper closure) and one that did not. The DID approach, specifically, adjusts for pre-existing differences between these groups, ensuring that the observed effects are due to the event itself (Callaway & Sant'Anna, 2021). The extended empirical Model (5) used in this research not only considers this relationship but also integrates critical corporate finance and governance elements and the potential moderating effect of corporate governance scores. This analytical strategy effectively addresses potential concerns of endogeneity and dual causality, which might arise from variables that overlap or interact in their effects (Roberts & Whited, 2013). Additional testing, in alignment with previous analyses, employs OLS with clustered standard errors and fixed effects models to validate the findings. Detailed results of these tests can be observed in Table (9).

Table (9) Empirical Results Exploring Different Governance Mechanisms – Part A

The below table presents the results of the Ordinary Least Squares (OLS) regression models with clustered standard errors and fixed-effects models through Corporate Governance Score. The dependent variable is the natural logarithm to the division of cash and cash equivalents scaled by either total assets $ln(Cash/AT)_{i,t}$ or net assets $ln(Cash/AN)_{i,t}$ for firm i at time t. The primary independent (explanatory) variable is the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. This binary variable is set to **1** if the firm is part of the treatment group (i.e., experiencing media closure) during the post-treatment period (i.e., after the media closure) and **0** otherwise. This variable captures the treatment effect of media closure on cash holdings. $Treat\_firm_{i,t}$ is a binary variable that equals **1** if firm i belongs to the treatment group, and **0** otherwise. $Post_{i,t}$ is a binary variable that equals **1** for years after the media closure event, and **0** otherwise. $C\_Governance\_Score_{i,t}$ is proxy for corporate monitoring and measures the governance score for firm i at time t. $Treat\_firm_{i,t} * Post_{i,t} * C\_Governanc\_Score_{i,t}$ is an interaction term between the $Treat\_firm_{i,t} * Post_{i,t}$ and $C\_Governance\_Score_{i,t}$. This triple-interaction term captures the joint effect of the media closure shock and the corporate governance score on the level of corporate cash holdings. The short-term borrowing $STB\_dum_{i,t}$ is defined as a dummy variable that takes the value of 1 if the debt matures within one year and 0 otherwise. $Treat\_firm_{i,t} * Post_{i,t} * C\_Governance\_Score_{i,t} * STB\_dum_{i,t}$ is a four-way interaction term that explores the influence of the interaction between these variables on the natural logarithm of cash holdings, providing nuanced insights into their collective impact. $Div\_dum_{i,t}$ is a dummy variable set to 1 if the firm pays dividends and 0 otherwise for firm i at time t. The model includes fixed effects (***Firm, Year, and Year*State***) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (1.1) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (1)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	(1) Ln(Cash/AT) Clustered SE	(2) Ln(Cash/AN) Clustered SE	(3) Ln(Cash/AT) Clustered SE	(4) Ln(Cash/AN) Clustered SE	(5) Ln(Cash/AT) Fixed Effects	(6) Ln(Cash/AN) Fixed Effects	(7) Ln(Cash/AT) Fixed Effects	(8) Ln(Cash/AN) Fixed Effects
Treatment Firm	0.239***	0.309***	0.227***	0.291***	0.134	0.176	0.161*	0.229**
	(0.044)	(0.056)	(0.042)	(0.055)	(0.094)	(0.115)	(0.083)	(0.101)
Post	-0.143***	-0.201***	-0.133***	-0.186***	-0.192***	-0.247***	-0.189***	-0.243***
	(0.048)	(0.058)	(0.048)	(0.058)	(0.036)	(0.044)	(0.036)	(0.044)
C_Governance Score	0.001	0.002	0.005	0.006	-0.005	0.006	-0.012	-0.013
	(0.011)	(0.015)	(0.012)	(0.016)	(0.012)	(0.014)	(0.008)	(0.010)
Treatment Firm*Post	0.380***	0.305***	0.281***	0.189***	0.360***	0.278***	0.291***	0.176***
	(0.044)	(0.057)	(0.052)	(0.072)	(0.029)	(0.035)	(0.036)	(0.044)
Treatment firm*Post* C_Governance Score			-0.053***	-0.061***			-0.027**	-0.037***
			(0.015)	(0.022)			(0.011)	(0.014)
STB_dum	-0.044***	-0.059***	-0.518***	-0.672***	-0.015***	-0.029***	-0.246***	-0.386***
	(0.012)	(0.018)	(0.042)	(0.057)	(0.005)	(0.006)	(0.021)	(0.026)
Treatment firm*Post* C_Governance Score* STB_dum			-0.114***	-0.158***			-0.060***	-0.073***
			(0.038)	(0.047)			(0.020)	(0.024)
Div_dum	0.018	0.066	-0.089**	-0.128***	-0.086	-0.151	-0.125***	-0.173***
	(0.105)	(0.139)	(0.035)	(0.044)	(0.088)	(0.108)	(0.037)	(0.045)
Size (Ln AT)	-0.115***	-0.165***	-0.105***	-0.150***	-0.089***	-0.064***	-0.109***	-0.082***
	(0.008)	(0.010)	(0.008)	(0.011)	(0.012)	(0.015)	(0.012)	(0.015)
LEV/AT	-0.046***	-0.064***	-0.015***	-0.031***	-0.043***	-0.058***	-0.014***	-0.027***
	(0.012)	(0.018)	(0.005)	(0.006)	(0.012)	(0.018)	(0.005)	(0.006)
R&D/AT	0.127***	0.294***	0.121***	0.285***	0.037***	0.143***	0.035***	0.140***
	(0.006)	(0.011)	(0.006)	(0.011)	(0.005)	(0.006)	(0.005)	(0.006)
MTB	0.055***	0.074***	0.050***	0.068***	0.013***	0.016***	0.010***	0.012***
	(0.005)	(0.007)	(0.005)	(0.007)	(0.003)	(0.004)	(0.003)	(0.004)
NWC/AT	0.000	0.001	0.000	0.001	-0.001***	-0.001**	-0.001***	-0.000
	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
CAPEX/AT	-1.249***	-2.526***	-1.274***	-2.561***	-0.751***	-1.728***	-0.811***	-1.808***
	(0.293)	(0.373)	(0.286)	(0.365)	(0.192)	(0.234)	(0.191)	(0.233)
FCF/AT	0.176***	0.289***	0.027	0.096***	0.083***	0.171***	0.054***	0.130***
	(0.022)	(0.034)	(0.026)	(0.037)	(0.015)	(0.018)	(0.015)	(0.018)
CFV/AT	0.007***	0.007***	0.006***	0.007***	0.003***	0.029	0.002***	0.067***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.020)	(0.001)	(0.020)
ROA	-0.212***	-0.480***	-0.215***	-0.482***	-0.104***	-0.103***	-0.100***	-0.096**
	(0.040)	(0.056)	(0.038)	(0.054)	(0.033)	(0.040)	(0.033)	(0.040)
Constant	-1.279	-0.452	-1.128	-0.257	-1.522***	-0.978	-1.448**	-0.897
	(0.895)	(1.011)	(0.879)	(0.991)	(0.569)	(0.693)	(0.567)	(0.689)
R-squared	0.289	0.384	0.312	0.405	0.050	0.064	0.057	0.074
No. of Firms	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726
Firm FE	No	No	No	No	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240	25,240	25,240	25,240	25,240	25,240

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 9 provides a detailed analysis of the impact of local newspaper closures on corporate cash holdings, examining various governance mechanisms such as corporate governance scores, short-term debt, and dividend payment policies. The analysis employs both Ordinary Least Squares (OLS) with clustered standard errors and fixed effects models. The results consistently demonstrate a significant positive relationship between newspaper closures and increased cash holdings. In the OLS models, the coefficients for *Treatment Firm*Post* range from 0.380 (p<0.01) in Model 1 to 0.189 (p<0.01) in Model 4. These findings suggest that the reduction in media oversight leads firms to increase their cash reserves as a precautionary measure, consistent with the precautionary motive theory outlined by Almeida et al. (2004) and Han and Qiu (2007). The fixed effects models further substantiate this relationship, with coefficients for *Treatment Firm*Post* ranging from 0.360 (p<0.01) in Model 5 to 0.176 (p<0.05) in Model 8. This shows that even after accounting for firm-specific unobserved heterogeneity, the impact of media closures on cash holdings remains significant, reinforcing the robustness of the findings (Wooldridge, 2010; Bell & Jones, 2015).

The Short-term Borrowing (*STB_dum*) variable demonstrates a consistently negative and significant relationship with cash holdings across all specifications. In the OLS models, coefficients range from -0.044 (p<0.01) in Model 1 to -0.672 (p<0.01) in Model 4, indicating that firms with higher short-term borrowing have lower cash reserves. This aligns with the agency cost theory, where short-term borrowing acts as a disciplinary mechanism, reducing the need for managers to hoard cash (Jensen & Meckling, 1976; Myers & Majluf, 1984). The fixed effects models show similar results, with coefficients ranging from -0.015 (p<0.01) in Model 5 to -0.386 (p<0.01) in Model 8, further confirming the role of short-term borrowing in reducing cash holdings (Cheung, 2016).

The interaction term *Treatment firm*Post*C_Governance Score* presents negative and significant coefficients in Models 3 and 4 of both OLS and fixed effects specifications, with values such as -0.053 (p<0.01) in OLS and -0.027 (p<0.05) in fixed effects. These results highlight the mitigating effect of strong corporate governance on the propensity of firms to increase cash holdings following newspaper closures. This is in line with the findings of Fama and Jensen (1983) and Shleifer and Vishny (1997), which emphasise that effective governance reduces agency conflicts and enhances monitoring mechanisms.

Moreover, the negative coefficients for *Treatment firm*Post*C_Governance Score*STB_dum* in Models 3 and 4 across both OLS and fixed effects models, ranging from -0.114 (p<0.01) to -0.073 (p<0.01), further underscore the importance of combining governance with short-term borrowing

to curtail excess cash reserves. This finding aligns with studies by Dittmar and Mahrt-Smith (2007), Yun (2009), and Chen et al. (2012), which suggest that good governance and financial discipline via short-term borrowing can effectively reduce agency costs.

The Dividend Payment (*Div_dum*) variable also shows a negative and significant relationship with cash holdings in Models 3 and 4, with coefficients such as -0.128 (p<0.01) in OLS and -0.173 (p<0.01) in fixed effects models. This suggests that firms with stronger governance are more likely to distribute cash as dividends rather than hoarding it, which is consistent with the findings of La Porta et al. (2002), Farinha (2003), and Harford et al. (2008)..

In summary, the analysis of Table 9 provides robust evidence that local newspaper closures lead to an increase in corporate cash holdings, a trend moderated by strong corporate governance and short-term borrowing. Both OLS and fixed effects models yield consistent results, confirming that media scrutiny plays a critical role in corporate governance by limiting the propensity of managers to hoard cash. These findings are in line with established theories in corporate finance, such as the precautionary motive, agency costs, and the importance of governance mechanisms in controlling managerial discretion (Myers & Majluf, 1984; Jensen, 1986; Opler et al., 1999; Pinkowitz et al., 2006; Harford et al., 2008).

3.7.5   *Short-term Borrowing and Dividend Payouts though Institutional Ownership*

When examining the impact of influential institutional shareholders on corporate actions and financial decisions, particularly in response to the closure of local newspapers, it is important to note that, based on current knowledge, no clear empirical evidence exists. This evidence would investigate how the structure of debt maturity could enhance the corporate monitoring role and address agency problems, by effectively managing cash holdings and dividend payments.

Most institutional investors lean towards active participation as shareholders (Mccahery et al., 2016). Earlier studies support this idea by highlighting how institutional investors' monitoring influence extends across diverse corporate decisions, including fixed asset expenditures, acquisitions, research and development (R&D), leverage, cash holdings, and dividend distributions (Karpoff et al., 1996; Denes et al., 2017).

Institutional shareholders, as influential stakeholders in a company, they aim to employ short-term borrowing as a strategic tool to exert pressure on corporate managers, compelling them to distribute the accumulated cash reserves through dividend payout (Jensen & Meckling, 1976;

Jensen, 1986; Stulz, 1990). These institutional owners, encompassing pension funds, mutual funds, and other prominent investors, possess a vested interest in maximising shareholder value and attaining favourable investment returns (Duggal & Millar, 1999; Cronqvist & Fahlenbrach, 2009). They actively monitor the financial performance and governance practices of the firms in their investment portfolio (Gillan & Starks, 2000; Mccahery et al., 2016).

The closure of local newspapers can compromise corporate monitoring mechanisms, including those mandated by institutional shareholders, which could result in an increase in agency costs (An et al., 2020; Kim et al., 2021). In situations with limited external monitoring, institutional investors might choose a short-term borrowing as a strategy to exert pressure on corporate managers and reduce agency conflicts (Barnea et al., 1980). By closely monitoring the firm's borrowing activities and financial health, institutional shareholders can signal their expectations for cash distributions in the form of dividends (Easterbrook, 1984; Myers, 1977, 2000). The threat of reduced access to short-term financing or increased borrowing costs can motivate managers to align with shareholders' demands for cash disbursement (Harvey et al., 2004).

Institutional investors, who possess a significant portion of the total voting shares in publicly traded companies, as highlighted by Myers (2001), play a role in influencing firms to determine the corporate optimal capital structure and dividend payments. Regular dividend payments might be a strategy to signal potential higher future profits to the market (Bhattacharya, 1979). Conversely, these payments could also serve the purpose of enhancing monitoring by necessitating the company to access the capital market more often, as proposed by Rozeff (1982) and Easterbrook (1984).

Within the same context, short-term creditors often make the choice of whether to extend their claim and provide additional funds to the firm, enabling them to actively oversee corporate behaviour (Calomiris & Kahn, 1991; Diamond & Rajan, 2001). This approach is motivated by the belief that the corporate control market enhances corporate monitoring and promotes good governance while reducing agency costs (Jensen & Ruback, 1983; Jarrell et al., 1988). Institutional investors can leverage the "free-ride monitoring" from the corporate control market to influence firms' dividend strategies and enhance accountability (Grossman & Hart, 1980; Tung, 2009).

In contrast to long-term lenders, short-term lenders actively engage in rigorous screening and monitoring activities by frequently renewing short-term debt contracts and regularly reassessing

borrowers' creditworthiness (Barclay & Smith, 1995). This proactive approach ensures that short-term lenders maintain a close watch on borrowers' financial health and behaviour. By continuously evaluating creditworthiness and closely monitoring short-term debt arrangements, these lenders establish a mechanism for ongoing scrutiny, enhancing the quality of risk assessment and facilitating effective risk management (Rajan & Winton, 1995; Stulz, 2000). This heightened level of scrutiny distinguishes short-term lenders as active participants in the lending process, contributing to improved loan performance and borrower accountability (Park, 2000).

Furthermore, employing short-term debt can greatly improve how firms are monitored, increase transparency of information, and alleviate problems related to agency conflicts. This underscores how short-term debt is more effective than long-term debt in carrying out monitoring functions (Graham et al., 2008; Harford et al., 2008). When it comes to long-term creditors, their intervention is limited to covenant breaches, resulting in reduced monitoring effectiveness (Rajan & Winton, 1995). Conversely, short-term debt provides companies with the opportunity to engage in all projects with positive net present value before a project's completion, resulting in decreased corporate cash holdings (Myers, 1977).

According to the free cash flow hypothesis, the accumulation of substantial cash reserves might encourage managers to favour their personal interests above those of shareholders (Jensen, 1986). This could lead to the pursuit of unprofitable or excessively risky projects, resulting in an overinvestment problem (Richardson, 2006). To address this issue, short-term debt can act as a monitoring mechanism, urging managers to distribute stockpiled cash that would otherwise be allocated to value-destroying projects (Hart & Moore, 1994).

In the aftermath of local media closure, where corporate monitoring is likely to be compromised and uncertainty is high, short-term debt can effectively function as a substitute for other monitoring mechanisms to curb managerial entrenchment behaviour (Myers, 1977; Childs et al., 2005; Datta et al., 2005; Kim et al., 2021). Short-term debt is particularly effective at enhancing information disclosure among firms with poorly disciplined managers, managers who are harder to monitor, and those with greater managerial discretion (Bhojraj & Sengupta, 2003).

The closure of a local newspaper disrupts corporate monitoring, necessitating alternative mechanisms for effective corporate governance. Institutional shareholders strategically utilise short-term borrowing as a monitoring mechanism to deter opportunistic behaviour among managers and promote dividend payout, particularly when firms have surplus cash flow (Harvey

et al., 2004; Gao et al., 2013). Institutional shareholders prefer short-term borrowing for external financing over depleting cash reserves for other purposes, as it allows firms to undertake positive net present value projects while reducing corporate cash holdings (Myers, 1977; Hart & Moore, 1994).

Dividend payments play a crucial role in mitigating agency costs between managers and institutional shareholders (La Porta et al., 2000). When firms distribute dividends, they are compelled to seek additional funds from external capital markets, subjecting them to heightened scrutiny and monitoring by the market (Rozeff, 1982). This alignment of interests reduces the potential for managerial opportunism and enhances overall corporate governance (Easterbrook, 1984).

In line with the above, Model (4) is extended to examine the impact of institutional shareholders, short-term borrowing, and dividend payments on corporate cash holdings in the absence of local media. This extension explores the role of these strategies in addressing agency problems and promoting effective corporate governance. By analysing the interplay between institutional shareholders, borrowing practices, and financial strategies after local newspaper closures, valuable insights can be gained. The objective is to understand the mechanisms that uphold corporate governance and accountability in the face of external shocks. The enhanced Model (6) is presented as follows:

$$ln(CASH\_HOLD)_{i,t} = a_0 + a_1 Treat\_firm_{i,t} * Post_{i,t} + a_2 Post_{i,t} + a_3 Treat\_firm_{i,t} +$$
$$a_4 Institutional\_Ownership_{i,t} + a_5 Treat\_firm_{i,t} * Post_{i,t} * Institutional\ Ownership_{i,t} +$$
$$a_6 STB\_dum_{i,t} + a_7 Treat\_firm_{i,t} * Post_{i,t} * Institutional\ Ownership_{i,t} * STB\_dum_{i,t} +$$
$$a_8 Div\_dum_{i,t} + a_9 Controls_{i,t-1} + YearFE + Year * State\ FE + \varepsilon_{i,t} \qquad (6)$$

Table (10) Empirical Results Exploring Different Governance Mechanisms – Part B
The below table presents the results of the Ordinary Least Squares (OLS) regression models with clustered standard errors and fixed-effects models through Corporate Governance Score. The dependent variable is the natural logarithm to the division of cash and cash equivalents scaled by either total assets $ln(Cash/AT)_{i,t}$ or net assets $ln(Cash/AN)_{i,t}$ for firm i at time t. The primary independent (explanatory) variable is the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. This binary variable is set to **1** if the firm is part of the treatment group (i.e., experiencing media closure) during the post-treatment period (i.e., after the media closure) and **0** otherwise. This variable captures the treatment effect of media closure on cash holdings. $Treat\_firm_{i,t}$ is a binary variable that equals **1** if firm i belongs to the treatment group, and **0** otherwise. $Post_{i,t}$ is a binary variable that equals **1** for years after the media closure event, and **0** otherwise. $Institutional\ Ownership_{i,t}$ denotes for the proportion of the firm's shares held by institutional investors for firm i at time t. $Treat\_firm_{i,t} * Post_{i,t} * Institutional\ Ownership_{i,t}$ is an interaction term between the $Treat\_firm_{i,t} * Post_{i,t}$ and $Institutional\ Ownership_{i,t}$. This triple-interaction term captures the joint effect of the media closure shock and the institutional ownership on the level of corporate cash holdings. The short-term borrowing $STB\_dum_{i,t}$ is defined as a dummy variable period that takes the value of 1 if the debt matures within one year and 0 otherwise. $Treat\_firm_{i,t} * Post_{i,t} * Institutional\ Ownership_{i,t} * STB\_dum_{i,t}$ this four-way interaction term explores the influence of the interaction between these variables on the natural logarithm of cash holdings, providing nuanced insights into their collective impact. $Div\_dum_{i,t}$ is a dummy variable set to 1 if the firm pays dividends and 0 otherwise for firm i at time t. The model includes fixed effects (*Firm, Year, and Year*State*) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (1.1) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (1)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	(1) Ln(Cash/AT) Clustered SE	(2) Ln(Cash/AN) Clustered SE	(3) Ln(Cash/AT) Clustered SE	(4) Ln(Cash/AN) Clustered SE	(5) Ln(Cash/AT) Fixed Effects	(6) Ln(Cash/AN) Fixed Effects	(7) Ln(Cash/AT) Fixed Effects	(8) Ln(Cash/AN) Fixed Effects
Treatment Firm	0.239***	0.308***	0.223***	0.286***	0.132	0.172	0.170**	0.239**
	(0.044)	(0.057)	(0.042)	(0.055)	(0.094)	(0.115)	(0.083)	(0.101)
Post	-0.144***	-0.201***	-0.131***	-0.178***	-0.192***	-0.249***	-0.189***	-0.243***
	(0.048)	(0.058)	(0.048)	(0.058)	(0.036)	(0.044)	(0.036)	(0.044)
Institutional Ownership	-0.094	-0.106	-0.074	-0.078	0.117	0.170	0.010	0.011
	(0.095)	(0.118)	(0.092)	(0.115)	(0.353)	(0.431)	(0.009)	(0.011)
Treatment Firm*Post	0.380***	0.305***	0.332***	0.300***	0.364***	0.278***	0.291***	0.187***
	(0.044)	(0.057)	(0.045)	(0.064)	(0.028)	(0.034)	(0.048)	(0.058)
Treatment Firm*Post*Institutional Ownership			-0.085***	-0.103***			-0.160**	-0.294***
			(0.011)	(0.016)			(0.075)	(0.091)
STB_dum	-0.044***	-0.059***	-0.752***	-0.864***	-0.131	-0.198	-0.236***	-0.350***
	(0.012)	(0.018)	(0.062)	(0.077)	(0.353)	(0.431)	(0.023)	(0.028)
Treatment Firm*Post*Institutional Ownership* STB_dum			-0.131**	-0.424***			-0.215***	-0.320***
			(0.060)	(0.147)			(0.057)	(0.069)
Div_dum	0.015	0.063	-0.153***	-0.213***	-0.086	-0.148	-0.061***	-0.099***
	(0.105)	(0.139)	(0.031)	(0.038)	(0.088)	(0.108)	(0.022)	(0.027)
Size (Ln AT)	-0.112***	-0.162***	-0.102***	-0.149***	-0.089***	-0.067***	-0.115***	-0.100***
	(0.008)	(0.010)	(0.007)	(0.010)	(0.012)	(0.015)	(0.012)	(0.015)
LEV/AT	-0.040***	-0.051**	-0.014***	-0.027***	-0.043***	-0.058***	-0.014***	-0.027***
	(0.014)	(0.020)	(0.005)	(0.006)	(0.012)	(0.018)	(0.005)	(0.006)
R&D/AT	0.128***	0.294***	0.120***	0.283***	0.038***	0.145***	0.036***	0.141***
	(0.006)	(0.011)	(0.006)	(0.011)	(0.005)	(0.006)	(0.005)	(0.006)
MTB	0.055***	0.074***	0.051***	0.070***	0.013***	0.015***	0.010***	0.011***
	(0.005)	(0.007)	(0.005)	(0.007)	(0.003)	(0.004)	(0.003)	(0.004)
NWC/AT	0.000	0.001	0.000	0.001	-0.001***	-0.001**	-0.001***	-0.000*
	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
CAPEX/AT	-1.239***	-2.517***	-1.215***	-2.489***	-0.118*	-0.281***	-0.093	-0.244***
	(0.292)	(0.373)	(0.285)	(0.363)	(0.062)	(0.076)	(0.062)	(0.076)
FCF/AT	0.174***	0.288***	0.018	0.095**	0.084***	0.168***	0.056***	0.123***
	(0.022)	(0.034)	(0.026)	(0.037)	(0.015)	(0.018)	(0.015)	(0.019)
CFV/AT	0.007***	0.007***	0.006***	0.006***	0.003***	0.001	0.002***	0.001*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
ROA	-0.210***	-0.477***	-0.222***	-0.496***	-0.104***	-0.103**	-0.098***	-0.093**
	(0.040)	(0.056)	(0.039)	(0.055)	(0.033)	(0.040)	(0.033)	(0.040)
Constant	-1.265	-0.436	-1.140	-0.295	-1.601***	-1.149*	-1.423**	-0.905
	(0.885)	(1.000)	(0.852)	(0.959)	(0.568)	(0.693)	(0.567)	(0.690)
R-squared	0.289	0.384	0.315	0.408	0.050	0.063	0.056	0.072
No. of Firms	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726
Firm FE	No	No	No	No	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240	25,240	25,240	25,240	25,240	25,240

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table (10) provides a detailed comparison between the Ordinary Least Squares (OLS) models with clustered standard errors (SE) and the fixed effects (FE) models, revealing how local newspaper closures influence corporate cash holdings while accounting for governance mechanisms like institutional ownership, short-term borrowing, and dividend payment behaviour. The balanced comparison between these two modelling approaches highlights the robustness of the findings.

Across all models, the *Treatment Firm*Post* interaction term consistently exhibits positive and statistically significant coefficients. In the OLS models, the coefficient ranges from 0.380 (p<0.01) in Model 1 to 0.189 (p<0.01) in Model 4. These results suggest that firms in regions affected by local newspaper closures tend to increase their cash holdings, corroborating findings from prior studies that indicate firms often stockpile cash as a precautionary measure during periods of increased uncertainty or diminished external oversight (Harford, 1999; Brown & Petersen, 2011). In the FE models, this coefficient remains significant but is slightly reduced, ranging from 0.364 to 0.291 and 0.278 to 0.187, respectively. This reduction suggests that while the impact of media closures on cash holdings is robust, firm-specific factors, controlled in the FE models, also play a significant role.

The analysis of *Institutional Ownership* reveals its complex role in corporate governance, particularly when interacted with the *Treatment Firm*Post* variable. The OLS models show that Institutional Ownership alone is not statistically significant, aligning with studies suggesting it may not directly impact corporate performance (e.g., Agrawal & Knoeber, 1996; Karpoff et al., 1996; Duggal & Millar, 1999; Cornett et al., 2007). However, in Models (3) and (4), the triple interaction term *Treatment Firm*Post*Institutional Ownership* shows a significantly negative coefficient across all models. This finding suggests that institutional investors play a moderating role in reducing the impact of local media closures on cash stockpiling, consistent with prior studies highlighting the active role of institutional investors in corporate governance and agency cost reduction (e.g., Brickley et al., 1988; Gillan & Starks, 2000; Klein & Zur, 2009). Institutional investors are more likely to react and absorb corporate monitoring shocks due to their long-term financial health concerns for the firms they invest in (Cella et al., 2013; Cella, 2020). This includes situations such as the consequences of local newspaper closures (Kim et al., 2021). The FE models, which control for unobserved heterogeneity, further reinforce this conclusion, albeit with slightly lower coefficients, emphasising the vital role of institutional ownership in corporate governance (McConnell & Servaes, 1990; Smith et al., 1996; Wahal, 1996; Guercio & Hawkins, 1999).

Short-term Borrowing (*STB_dum*) plays a critical role as a disciplinary mechanism, with consistently negative and significant coefficients across both OLS and FE models. This finding underscores the importance of short-term debt in constraining managerial behaviour by reducing available cash reserves (Jensen & Meckling, 1976; Myers & Majluf, 1984). The FE models highlight that a 1% increase in short-term borrowing after local newspaper closures leads to a substantial reduction in cash holdings, supporting the idea that short-term debt effectively limits managerial discretion, especially in environments with reduced external oversight (Rajan & Winton, 1995; Stulz, 2000). The negative coefficient of the four-way interaction term ***Treatment Firm*Post*Institutional Ownership*STB_dum*** further suggests that short-term borrowing, when combined with institutional ownership, significantly reduces agency costs by limiting managerial opportunism. This finding aligns with the results of Bhojraj and Sengupta (2003), Brav et al. (2008), and Manconi et al. (2012), who claim that institutional shareholders utilise short-term borrowing as a mechanism to promote financial prudence among entrenched managers and achieve efficient cash management.

These findings are also consistent with the agency theory, which posits that short-term borrowing acts as a disciplinary mechanism to mitigate agency conflicts arising from free cash flow (Myers, 1977; Jensen, 1986; Hart & Moore, 1998; Datta et al., 2005; Brockman et al., 2010). Additionally, they underscore the critical role of debt maturity, particularly in times of crises, for addressing liquidity challenges, ensuring managerial accountability, and promoting robust corporate governance practices (Almeida et al., 2009).

This evidence highlights how the external shock triggers a synergistic interplay among distinct control mechanisms. Specifically, institutional ownership as an internal monitoring mechanism, and the external discipline provided by short-term borrowing. Together, they endorse a more complementary approach to corporate monitoring and governance, effectively curbing agency problems emerging from local media closures while efficiently managing corporate resources (Kim & Sorensen, 1986; Harford, et al., 2008; Gillan, 2006; Klein & Zur, 2009; Kim et al., 2021).

The analysis of Dividend Payments (*Div_dum*) reveals that firms with higher institutional ownership and short-term borrowing are more likely to distribute dividends, thereby reducing cash holdings. The negative and statistically significant coefficients in Models (3) and (4) indicate that dividend payments serve as an additional governance mechanism that curbs managerial entrenchment (Jensen & Meckling, 1976; Shleifer & Vishny, 1986; Gillan, 2006; Cronqvist & Fahlenbrach, 2009; Klein & Zur, 2009; Denes et al., 2017). The FE models confirm

this relationship, showing that even after controlling for firm-specific factors, dividend payments remain a significant tool for reducing excess cash reserves, aligning with agency theory predictions (Easterbrook, 1984; Farinha, 2003; Harford et al., 2008).

The findings provide additional backing for the research question and baseline results, highlighting local media closure as an exogenous shock that increases agency costs and entrenchment behaviour among managers. This aligns with prior research indicating firms' tendency to accumulate cash reserves for protection without effective external monitoring (e.g., Dittmar & Mahrt-Smith, 2007; Bates et al., 2009). Notably, institutional shareholders play a crucial role in mitigating the negative effects of media closure by promoting good governance practices and influencing corporate decisions.

Institutional shareholders exert influence through voting rights, pressuring managers to use short-term borrowing for dividends, reducing entrenchment behaviour and cash hoarding (Cronqvist & Fahlenbrach, 2009). This aligns with literature emphasising institutional shareholders' fosters good governance and enhances firm performance demonstrate how institutional ownership fosters good governance and enhances firm performance (e.g., Shleifer & Vishny, 1997; Wahal, 1996; Guercio & Hawkins, 1999; Gillan & Starks, 2000; Chung et al., 2002).

To summarise, the findings provide strong evidence of the influence of short-term borrowing, effective corporate governance, and influential institutional ownership in exerting pressure on managers to distribute dividends following newspaper closures. The inclusion of interaction terms strengthens these findings and underscores the strategic behaviour of institutional shareholders. These results align with agency theory, emphasising the role of monitoring mechanisms in mitigating conflicts and improving firm performance (Jensen & Meckling, 1976; Kim et al., 1998; Gillan, 2006; Han & Qiu, 2007).

The additional tests further confirm the adverse effects of local media closures on governance practices, leading to increased corporate cash holdings. Shareholders, in response to this external shock, advocate for stronger governance and dividends while leveraging strict short-term borrowing to enhance market monitoring. These findings underline the critical role of institutional ownership as an internal monitoring mechanism, complemented by the external discipline provided by short-term borrowing. Together, these mechanisms create a synergistic approach to corporate governance, effectively addressing agency issues stemming from reduced media oversight and ensuring efficient management of corporate resources.

3.8 Conclusion

The closure of local newspapers has detrimental effects on American communities, as it hampers civic engagement and informed participation in elections, while also creating an environment susceptible to opportunistic behaviour and fraud. Consequently, news deserts emerge, leaving communities without access to reliable accountability journalism and the critical role of the fourth estate. This novel study sheds light on the notable impact of local newspaper closures on corporate cash holdings in the United States, emphasising the vital role played by local media as a corporate watchdog and external governance mechanism. The exogenous shock arising from the absence of local newspapers compromises the corporate monitoring function, prompting entrenched managers to adopt an opportunistic strategy of increasing cash holdings.

This study persistently reveals a positive and significant connection between the closure of local newspapers and a rise in corporate cash holdings, corroborating the study's hypotheses. These findings not only align with prevailing cash holdings and agency theories but also with existing literature, underscoring the pivotal role of local media as robust external governance mechanisms and guardians. Local newspapers act as effective safeguards against potential corporate misconduct, preserving shareholder interests. The clear consistency of these results across different empirical models emphasises the crucial role of local media in examining corporations, serving as watchdogs, and highlighting potential wrongdoings, thereby reinforcing their essential contribution to robust corporate governance framework.

Moreover, this research sheds light on the significant moderating role of corporate governance and institutional shareholders when local newspapers are unavailable, affecting corporate monitoring. Effective corporate governance can mitigate the negative impacts of such unavailability by acting as protectors and ensuring companies align their actions with shareholders' best interests. Additionally, this examination demonstrates the relationship between CEO pay gap and increased corporate cash holdings in environments void of local media scrutiny. It is found that in these settings, CEOs may prioritise their own interests, upsetting the balance of governance and impinging on corporate transparency.

In the absence of local newspapers, institutional shareholders become pivotal, ensuring corporate transparency and responsibility. These findings emphasise their essential role as external guardians, contributing to the maintenance of governance equilibrium. They also underscore the significance of strategies like short-term borrowing and rollover mechanisms, which compel the proper allocation of reserved cash for debt payments and dividends, preserving trust in corporate

performance in the face of reduced external monitoring. These results reinforce the necessity of maintaining a harmonious balance between internal and external mechanisms to preserve corporate integrity and trust in the market.

Furthermore, this study employs four robustness tests to validate the baseline results, highlighting the impact of local newspaper closures on corporate cash holdings. These tests enhance the study's credibility and provide valuable insights, addressing potential concerns of endogeneity effectively. The rigorous validation reinforces the reliability and significance of the findings, offering a deeper understanding of the consequences of the absence of local media on corporate financial choices.

Recognising the importance of local newspapers, it is crucial for policymakers, investors, and citizens to proactively acknowledge their significance in fostering accountability and promoting community engagement. Collaborative efforts are necessary to provide support to local media and encourage transparency in corporate practices. In addition, firms should be mindful of the potential consequences of local newspaper closures on their corporate behaviour and actively explore alternative monitoring mechanisms. By working together, stakeholders can contribute to a more accountable and transparent corporate environment.

In conclusion, this research advances understanding of the complex relationship between media closure, corporate monitoring, cash management, and governance framework. The findings have practical implications for practitioners and policymakers alike, as they provide valuable insights to optimise cash management strategies and enhance governance practices in the context of media disruptions.

This study provides valuable insights into the impact of declining local newspapers on corporate cash holdings. However, there are still areas for future research that can enhance understanding of this phenomenon. One important direction for future exploration is investigating the effects of newspaper decline on other key corporate decisions, such as transparency, accountability, board diversity and structure, as well as environmental and corporate social responsibility. Examining these factors would provide a more comprehensive understanding of the implications of local media closures for corporate governance and overall firm performance.

Appendix (1) Variable Definitions

		Variable	Definition	Previous Studies
Dependent Variable		*Corporate Cash Holdings* *Ln(Cash/AT), Ln(Cash/AN)*	The corporate cash holdings ratio is a financial metric that measures the proportion of cash and cash equivalents held by a company in relation to its assets.	(Harford et al., 2008; Chen et al., 2020)
Independent Variables	**Local Media Closure**	$Treat\_firm_{i,t}$	Dummy variable: 1 if firm i is within a 50-mile radius of a closed newspaper (treatment), 0 otherwise (control).	(Kim et al., 2021)
		$Post_{i,t}$	Dummy variable: represents a ten-year closure window, with a value of 1 for the year of closure and the following four years, and 0 for all other years.	(Kim et al., 2021)
		$Treat\_firm_{i,t} * Post_{i,t}$ *(Local Newspaper Closure)*	The primary independent (explanatory) variable is the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. This binary variable is set to **1** if the firm is part of the treatment group (i.e., experiencing media closure) during the post-treatment period (i.e., after the media closure) and **0** otherwise.	(Feng et al., 2021; Kim et al., 2021)
	Corporate Monitoring Channels	*Corporate Governance Score (CGS)*	A composite measure of corporate governance quality, capturing various governance mechanisms.	(Gompers et al., 2003; Cheng et al., 2013)
		CEO Salary Gap	The CEO pay gap measures the wage difference between the CEO and the average employee, reflecting income and governance disparities in the company.	(Core et al., 1999; Henderson & Fredrickson, 2017)
		Institutional Ownership	Institutional ownership refers to the proportion of a company's shares held by large institutions like mutual funds and pension funds.	(Gillan & Starks, 2000; Chen et al., 2007)
Control Variables		*Firm Size (Size)*	Firm Size refers to the total assets reported by the firm at the end of the fiscal year.	(Opler et al., 1999; Bates et al., 2009)
		Leverage (LEV)	Quantifies a company's debt financing, reflecting the ratio of debt to equity.	(Opler et al., 1999; Harford et al., 2008)
		Research and development expenditures (R&D)	R&D is included as a control variable to assess its impact on cash holdings.	(Dittmar et al., 2003; Bates et al., 2009)
		Market-To-Book (MTB)	MTB ratio assesses market valuation compared to accounting/book value, reflecting investor sentiment, financial health, growth potential, and resource utilisation.	(Opler et al., 1999; Bates et al., 2009)
		Net Working Capital (NWC)	Represents the difference between a company's current assets and liabilities, indicating its short-term liquidity.	(Dittmar et al. 2003; Cheng et al., 2022)
		Capital Expenditure (CAPEX)	CAPEX is the financial investment in acquiring or upgrading fixed assets.	(Opler et al., 1999; (Harford et al., 2008)
		Free Cash Flows (FCF)	Represent the excess cash generated by a company's operations, indicating its ability to accumulate cash holdings.	(Opler et al., 1999; Almeida et al., 2004)
		Cash Flow Volatility (CFV)	Refers to the degree of uncertainty and variability in a company's cash flows.	(Opler et al., 1999; Harford et al., 2008)
		Return on Assets (ROA)	ROA is a financial ratio that evaluates a company's profitability based on its asset utilisation.	(Dittmar & Mahrt-Smith, 2007; Gao et al., 2013)
Additional Variables		*High Media Visibility*	A dummy variable that takes the value of **1** for S&P 500 firms with significant media coverage and **0** for all other firms.	(Harris, 1989)
		News Desert	A dummy variable set to 1 for firms in regions where local newspapers have closed, and 0 for firms in areas still served by at least one local newspaper.	(Gao et al., 2020; Abernathy, 2023)
		Social Media Entry	A dummy variable is assigned a value of 1 starting in 2004, marking the rise of Facebook and the introduction of the term "social media", and is set to 0 for earlier years.	(Kaplan & Haenlein, 2010)

	Description	Reference
American State-level Economic Policy Uncertainty (EPU) Index	This index measures economic policy uncertainty based on news frequency, tax code alterations, and economic forecasts, reflecting its impact on investment and business decisions across states. It is computed by scaling EPU data by 100, obtained from www.policyuncertainty.com	(Baker et al., 2016)
American State-Level Unemployment Rate	Unemployment data is sourced from the U.S. Bureau of Labor Statistics at www.bls.gov, providing comprehensive and up-to-date information on labour market conditions across the U.S.	(Devos & Rahman, 2018; He, 2018)
American State-Level GDP	The total monetary value of all goods and services produced within a state's borders in a given year, reflecting the state's overall economic output. Data for this measure are sourced from the U.S. Bureau of Economic Analysis at www.bea.gov	(Gulen & Ion, 2016; Goodell et al., 2021)
American State-Level GDP Growth	The annual rate at which a state's economy expands or contracts, indicated by the year-over-year change in the value of all goods and services produced within the state. Data are obtained from the U.S. Bureau of Economic Analysis at www.bea.gov	(Gulen & Ion, 2016; Goodell et al., 2021)
Broadband Services Entry	A binary variable coded as 1 if broadband entry occurs within five years before a newspaper's closure and is matched with the ZIP codes of the closed newspaper and affected firms within a 50-mile radius, otherwise coded as 0.	
Craigslist Entry	An instrumental variable (IV) coded as a binary variable: (1) for Craigslist's entry within five years before a newspaper's closure and within a 50-mile radius, and (0) otherwise. The source of Craigslist's entry dates and locations is www.craigslist.org	(Gao et al., 2020; Heese et al., 2022)
Short-term borrowing (STB_dum)	The short-term borrowing $STB\_dum_{i,t}$ is defined as a dummy variable that takes the value of 1 if the debt matures within one year and 0 otherwise.	(Custódio et al., 2013)
Dividend Payment (Div_dum)	Dividend Payment $Div\_dum_{i,t}$ is a dummy variable, set to 1 if the company pays dividends and 0 otherwise.	(Opler et al., 1999; He & Wintoki, 2016).

Chapter Four: The Impact of Local U.S Daily Newspaper Closures on Information Asymmetry and Corporate Cash Holdings

4.1 Introduction

4.1.1 Overview and Background

The role of local newspapers as foundational pillars in American communities is widely recognised, symbolising their resolute commitment as trusted sources for thorough coverage of local news, events, and matters (Atwood et al., 1978). However, the advent of new technologies has significantly altered the way information is disseminated in the financial landscape (Hess, 2012). Various research works have explored the impact and effectiveness of transmitting information through cutting-edge digital outlets (e.g., Mathews, 2020). These includes social media platforms like Twitter (Kane et al., 2014; Blankespoor et al., 2018), corporate websites and press release (Tsileponis et al., 2020), mobile phones (Grant, 2020), as well as online webpages (Ashbaugh et al., 1999; Ettredge et al., 2001).

The decline of print newspapers and the rise of digital media platforms have led to the closure and reduction of local newspapers, resulting in significant implications for communities (Abernathy, 2018). Extensive research has examined the consequences of these closures, including decreased voter turnout and increased polarisation due to reduced access to information sources (e.g., Starr, 2012; Gentzkow et al., 2011; Darr et al., 2018; Hayes & Lawless, 2018; Moskowitz, 2021). According to the report by Pew Research Center (2022), the combined circulation of locally targeted U.S. daily newspapers in 2020 stood at 8.3 million on weekdays and 15.4 million on Sundays. Although these figures showed minimal change compared to the previous year, they represent some of the lowest reported circulation numbers. Notably, weekday circulation has declined by 40% since 2015, while Sunday circulation has fallen by 45% during the same period. These findings underscore the challenges faced by local newspapers and highlight the ongoing shift in readership patterns towards digital media.

This lack of news coverage can have detrimental effects on the performance of local government, education, health, and business sectors, as important local issues receive less public attention (Schulhofer-Wohl & Garrido, 2013; Hayes & Lawless, 2015; Napoli et al., 2016). Moreover, the decline in local newspapers can lead to a significant decrease in political and democratic engagement, as voters lack information about candidates and their election programs, resulting in the re-election of incumbents or the election of unqualified individuals (Mondak, 1995; Moy et al., 2004; Darr et al., 2018; Chapp & Aehl, 2021). These findings underscore the urgent need for a robust local press that provides ample information and closely investigate critical matters of public interest (Bushman et al., 2017; Kim et al., 2021; Heese et al., 2022).

The relationship between corporate cash holdings and agency problems, as well as information asymmetry, has garnered considerable attention from both scholars and practitioners (e.g., Opler et al., 1999; Pinowitz et al., 2006; Dittmar & Mahrt-Smith, 2007; Harford et al., 2008; Chung et al., 2015; Couzoff et al., 2022). While current body of literature has provided valuable insights into the determinants and outcomes of corporate cash holdings, it has largely overlooked the potential influence of local newspapers on corporate information.

To bridge this gap in knowledge, this study aims to explore the impact of local newspaper closures on corporate cash holdings policies. Drawing on the foundations of cash holdings, agency theory, information asymmetry, and existing media closure literature, this study proposes a hypothesis that links the closure of local newspapers to changes in corporate cash holdings. Specifically, it is posited that companies situated in regions with fewer local newspapers are more likely to retain excess cash due to the reduced information distribution activities of these newspapers.

Motivated by the aim to underline the pivotal function of local media in corporate governance and cash management, the study makes meaningful contributions across various strands of research. This involves recognising how media, serving as a channel of corporate information, helps to mitigate market information frictions and asymmetry. When local newspapers cease operations, the role of information dissemination can be affected, triggering information asymmetry and agency conflicts. Given the changing trends in news consumption, these factors could potentially exert an adverse impact on corporate cash holdings, investment decisions, and governance mechanisms. The research offers practical insights with significance for policymakers, investors, and fellow researchers.

4.1.2   *Research Question and Motivations*

This research centres around the pivotal role of local newspapers as a risk-communication tool (Dudo et al., 2007; Wakefield & Elliott, 2008). Offering authentic information to the community, these newspapers foster informed decision-making, thus enhancing resilience within communities and financial markets (Peress, 2014; Nielsen, 2015). The primary aim of the study is to investigate the influence of local media on corporate behaviour, with a specific focus on the consequences of the closure of local U.S. daily newspapers on neighbouring corporate cash holdings policy. In performing this examination, the research seeks to bridge existing gaps in the literature related to the controversial agency problems and information asymmetry facing publicly listed companies in the U.S. market.

The implications of local media closure on corporate cash holdings behaviour remain notably understudied. Consequently, it becomes essential to undertake empirical investigations to explore how the closure of local newspapers impacts both the information environment and corporate cash holdings. This line of research is significant for several reasons.

To begin with, local media closure can exert profound effects on the communities they serve (Adserà et al., 2003; Waldman, 2011; Shaker, 2014; Hayes & Lawless, 2015; Darr et al., 2018). For instance, Schulhofer-Wohl and Garrido (2013) illustrated that closing local newspapers can lead to decreased news coverage, which may result in a reduction in civic engagement and limited access to information about local businesses and events. These changes have the potential to impact corporate cash holdings behaviour and trigger chain reactions in local economies.

Furthermore, corporate cash holdings behaviour is a critical area of study, influencing various financial aspects including investment choices, capital structure, debt maturity, and dividend policies (Dittmar et al., 2003; Mikkelson & Partch, 2003; Kalcheva & Lins, 2007; Harford et al., 2014; Nikolov & Whited, 2014). Therefore, exploring the factors shaping cash holdings policies emerges as an essential research domain. Ultimately, the connection between shutting down local media outlets and corporate cash holdings behaviour is relevant to policymakers, who may need to consider interventions to mitigate any effects of media closures on corporate policy. Broadly, investigating this connection may shed light on how alterations in local media landscapes influence corporate decision-making processes.

The absence of reliable news sources can leave residents feeling isolated and stressed, adversely affecting their well-being and social connections (Davidson & Cotter, 1997; Jeffres et al., 2007). This underscores the critical role that local newspapers play in fostering a sense of community and identity among local residents (McLeod et al., 1996; Paek et al., 2005). Additionally, the lack of local media coverage can limit accountability and investigative journalism, potentially leading to local wrongdoing and corruption (Waldman, 2011; Norris, 2014). In light of these factors, local newspapers are indispensable in promoting transparency and holding corporations responsible for their conduct (Aharonson & Bort, 2015; Hamilton, 2016; Jia et al., 2016). As a result, it is crucial to investigate the impact of local newspaper closures on corporate behaviour, making this area of research of the utmost importance.

Local newspapers play a crucial role in producing and disseminating important information that is essential for civic engagement, democratic life, and economic policies (Hayes & Lawless,

2015). The authors note that the volume of news coverage about US House races varied widely across districts, with some receiving very little coverage at all. The issues covered in news stories also varied widely across districts, with some issues receiving much more attention than others. Overall, these findings highlight the importance of a strong local news environment for promoting civic engagement and informed participation in U.S. House elections.

Gentzkow et al. (2011) indicate that newspaper closures in the U.S. led to lower political participation and increased political polarisation. Voters became less likely to vote in elections and donate money to political campaigns when a newspaper closed. The closure of newspapers with more moderate political views led to an increase in the vote share of the party that was ideologically closer to the newspaper that closed. The findings suggest that newspapers play an important role in providing information to voters and shaping their political behaviour, especially for those with lower levels of education and income. The study highlights the potential risks associated with a decline in local news coverage and the importance of media diversity and independence for maintaining a healthy democracy.

Gao et al. (2020) provide compelling evidence that the closure of local newspapers has persistent detrimental effects on municipal bonds. Their research reveals that municipal borrowing costs experience a notable upswing of up to 11 basis points subsequent to a newspaper closure. The authors attribute this phenomenon to heightened default risk for local governments and a diminished flow of information for investors. The study underscores the substantial impact of local newspaper loss on government efficiency outcomes. As such, the authors highlight the imperative for policymakers to prioritise the support of local journalism as a means to foster transparency and accountability within local governance.

Kim et al. (2021) find that the closure or layoffs of local newspapers have significant consequences for firms. It weakens the information environment and exacerbates agency problems, especially for firms with weaker governance structures and those located in areas with limited internet access. The study highlights dividend policy as a tool for addressing agency problems due to its reliance on real cash flows and lower susceptibility to manipulation compared to other control measures. The research underscores the need for regulatory support to ensure the continued existence of local newspapers, recognising their role in maintaining transparency and accountability within firms.

The existing body of research on corporate governance and cash hoardings has addressed various aspects of these subjects. However, there remains a gap in the literature regarding the interconnections between media closures, governance mechanisms, information asymmetry, agency problems, and corporate cash holdings behaviour. This paper seeks to bridge such a gap by exploring the relationships among these topics.

The primary objective is to empirically examine the potential causal effect of local media closures, viewed as reliable sources of information, on corporate cash holdings policy. Specifically, the influence of the closure of local U.S. daily newspapers on the information landscape and the cash accumulation practices of corporations will be investigated. Through this inquiry, the research aims to illuminate the crucial role played by media coverage in mitigating information asymmetry and deterring corporate misconduct.

This study holds significant importance, contributing to a deeper understanding of the complex dynamics among media coverage, governance mechanisms, information asymmetry, agency problems, and corporate cash holdings behaviour. The research represents a pivotal step towards advancing knowledge in the field, stressing the significance of media coverage in corporate governance and financial practices.

The incorporation of the information asymmetry channel to assess the potential impact of local newspaper closures on the cash-hoarding behaviour of nearby firms is central in this exploration. The media plays a crucial role in reducing information asymmetry by providing investors with valuable corporate information, according to a significant body of research in accounting and finance. Healy and Palepu (2001), Tetlock (2007), Peress (2014), and Bushman et al. (2017) have all argued that media coverage increases corporate visibility and diminishes the information advantage of managers over shareholders. Moreover, Diamond and Verrecchia, (1991), Miller (2006), Dyck et al. (2008), Fang and Peress (2009), and Tetlock (2010) suggest that the intermediary role enacted by media helps disseminate corporate information to a broad group of investors, thereby alleviating information asymmetry and reducing the advantage of the informed group.

Additionally, a study by Bushee et al. (2010) indicates that newspapers shape the corporate information climate by furnishing credible information, which mitigates adverse selection and moral hazard issues surrounding earnings announcements. A compromised information environment might amplify agency costs and information asymmetry challenges between

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corporate managers, shareholders, and other stakeholders. Accordingly, this can prompt managers to exploit available free cash flow and accumulate more cash (Jensen, 1986; Stulz, 1990).

The closure of local newspapers can be viewed as a potential catalyst for the problem of information asymmetry, serving as a plausible mechanism that influences corporate cash holdings policy. This research argues that the absence of local newspapers eliminates an external system that serves as a crucial check and balance, ensuring that corporate managers are held accountable for their decisions.

Media, including local newspapers, has traditionally played a vital role in corporate finance by offering essential corporate information to the community (Tetlock, 2007, 2010). This empowers stakeholders to make well-informed decisions about a company's future prospects (Engelberg & Parsons, 2011; Peress, 2014). The reduction in access to such information resulting from local newspaper closures can lead to information asymmetry, creating an advantage for managers over other stakeholders. This asymmetry can encourage managers to take actions that serve their own interests, such as hoarding cash, at the expense of shareholders' interests (Myers & Majluf, 1984).

Overall, the rise in information asymmetry creates a situation where managers can trigger agency costs, leading to increased corporate cash holdings. This phenomenon may ultimately harm shareholder interests by reducing investment opportunities and the value of the firm. As such, there is a need for further research to better understand the intricate relationships between media coverage, governance mechanisms, agency problems, and corporate cash holdings behaviour. By delving deeper into these relationships, researchers and policymakers can gain valuable insights into how media coverage and information dissemination can effectively function as pivotal governance mechanisms for corporate practices.

4.1.3   Structure of the Study

This study employs a methodical approach to address the research objectives. The introductory section provides an overview, background information, research question, and motivations. Section two conducts a critical review of the literature, highlighting the strategic role of media, especially local newspapers, as crucial sources of corporate information. Additionally, it explores the impacts of newspaper closures on information asymmetry and explores various theories and seminal studies related to corporate cash holdings. Section three formulates hypotheses based on the literature review and research objectives. Section four outlines the sample and data collection

process, describes the variables used, and presents descriptive statistics and pairwise correlations. In section five, empirical analysis is conducted, accompanied by methodological insights and a comprehensive discussion of the findings, including their implications and engagement with academic debates. Section six validates the results through robustness tests, while section eight enhances the analysis by introducing supplementary variables to strengthen the research findings' reliability. Finally, the last section offers a conceptual conclusion, providing recommendations and identifying potential areas for future research.

4.2 Literature Review

4.2.1 Local Newspapers Closure Impact on Information Asymmetry

Newspapers play a crucial role in information dissemination in two distinct ways. Firstly, they act as intermediaries, gathering and redistributing information from various sources to the broader community (Metzgar et al., 2011). Secondly, they undertake original investigative journalism, offering in-depth and detailed reports to their audience (Miller, 2006).

Resilient and independent newspapers have been highlighted by scholars as key drivers for positive national political outcomes, such as higher voter turnout and fewer corruption incidents (e.g., Adserà et al., 2003; Gentzkow et al., 2011; Baekgaard et al., 2014; Moskowitz, 2021). This influence extends to local communities (Stamm et al., 1997). For instance, suburban residents of Los Angeles with access to a daily newspaper were more likely to vote than those without such access (Filla & Johnson, 2010). While, in Bell, California, limited newspaper coverage was linked to a corruption event (Hogen-Esch, 2011). Broadly, local newspapers crucially foster greater political awareness and encourage sound municipal financial practices (Mondak, 1995; Gao et al., 2020).

Furthermore, local newspapers play an important role in engaging and informing communities that may not be covered by state or national media outlets (Shaker, 2014; Miller & Skinner, 2015). Compared to other media forms, local papers are better positioned to bridge the information gap between less and more informed investors by providing meaningful updates on local developments (Darr et al., 2018; Kim et al., 2021). This is particularly significant in areas where there are limited or no credible alternative sources of information, highlighting the potential impact of local media on local investment decisions and outcomes (Dyck & Zingales, 2002).

The incorporation of local news coverage holds substantial influence in shedding light on essential concerns for the attention of local authorities, thereby motivating them to address these matters effectively and ethically (Francke, 1995; Schudson, 2001). Serving as vigilant defenders of democracy, community-based newspapers assume a pivotal responsibility in maintaining and safeguarding accountable journalism within local societies (Hamilton, 2016).

In recent times, newspapers have faced challenges due to declining readership and reduced advertising revenue (Schulhofer-Wohl & Garrido, 2013). This decline is attributed to the

revolutionary rise of digital media, online news sources, and the overwhelming volume of available information (Kirchhoff, 2009; Hess & Waller, 2017; ShuKai et al., 2017). Such changes suggest that the weakening newspaper industry has caused a concerning reduction in the quality of original news content produced and shared in the U.S. (Pew Research Center, 2021; Mathews, 2020). This trend has resulted in newspaper closures, staff layoffs, and significant changes in how many newspapers distribute information and address topics like public corruption, electoral participation, social injustice, local governance and corporate behaviour (Heath, 1984; Nielsen, 2015b; Chapp & Aehl, 2021). This evolving landscape has prompted scholars to advocate for more in-depth research in this crucial area (Gao et al., 2020; Kim et al., 2021; Heese et al., 2022).

This decline is evident in various towns and cities in the U.S., where the number of local newspapers has significantly decreased (Meyer, 2009; Nielsen, 2015). As the closure of a local newspaper results in an information void in the community. While national media tends to overlook local issues because of their wider audience, online platforms often circulate content without producing original investigative journalism like traditional newspapers (Waldman, 2011; Miller & Skinner, 2015).

Abernathy (2020) sheds light on the concerning transformation occurring in the U.S. local newspaper industry. This significant decline has resulted in a scarcity of accessible information channels that offer valuable insights to local investors. Since 2004, approximately 2,100 newspapers have vanished, leaving nearly half of all U.S. counties with only one newspaper and over 200 "newspaper deserts" where no newspapers are available. This decline poses potential challenges to information availability, impacting community engagement, transparency, and equitable information distribution, all of which are critical functions served by local media.

In 2009, the *Rocky Mountain News*, a major American publication with a circulation of 210,000, ceased its operations, leaving a significant void in the community (Shaker, 2014). The closure notably impacted investigative journalism, with several ongoing investigations by its reporters left unfinished. Similarly, with the closure of *The Cincinnati Post*, both communities lost a vital watchdog that once kept local governments accountable (Schulhofer-Wohl & Garrido, 2013; Gao et al., 2020).

On a different note, corporate finance plays a vital role in maximising shareholder value through efficient allocation of financial resources within a company (Cornell & Shapiro, 1987).

Nevertheless, a crucial concern that can hinder this objective is information asymmetry, where one party involved in a transaction possesses more information than the other (Healy & Palepu, 2001). This information disparity may result in resources being misallocated and can trigger conflicts between managers and shareholders (Chemmanur et al., 2009).

In the context of corporate cash holdings, high levels of information asymmetry can worsen the free cash flow problem by making it difficult for outsiders to monitor and interpret managerial actions (Jensen, 1986). Additionally, it may cause managers to be more concerned about the firm's future capital needs, as it may increase the likelihood of under-priced equity offerings (Myers & Majluf, 1984).

In recent years, the interplay between media and corporate governance has garnered substantial academic attention (Dyck & Zingales, 2002; Bednar, 2012; Liu & McConnell, 2013). Scholars have explored how media coverage can serve as a critical tool for informing investors about significant events and developments within companies (Bushman et al., 2017). A body of research has demonstrated that media reporting offers valuable insights into various aspects of corporate activity, including financial performance, instances of corporate misconduct, and major accomplishments (Engelberg & Parsons, 2011; Hendershott et al., 2015).

By providing trustworthy information for informed investment decisions, the media can assist in mitigating information frictions and asymmetry between firms and investors (Healy & Palepu, 2001; Gao et al., 2020). Furthermore, newspapers and media coverage can act as corporate watchdogs, exposing managers' opportunistic behaviours and increasing transparency, thereby mitigating agency costs and information asymmetry (Miller, 2006; Dyck et al., 2008; Bushee et al., 2010; Chen et al., 2020).

The absence of local media outlets can have detrimental effects on the corporate information environment, exacerbating information asymmetry and leading to agency conflicts between managers and shareholders. In the absence of a reliable information channel such as a local media outlet, managers may prioritise their personal gain over the long-term performance of the company (Kim et al., 2021). A decline in transparency can promote rent-seeking behaviour and reduce clarity in decision-making process (Jensen, 1986). In an environment with unequal access to information, corporate managers may engage in over-investment, cut dividend payouts, and accumulate excessive cash reserves (Miller & Rock, 1985; Noe & Rebello, 1996; Dittmar et al., 2003; Blau & Fuller, 2008). Such actions could lead to a misallocation of corporate resources,

trigger agency conflicts and ultimately decrease shareholder value (Jensen & Meckling, 1976; Fama & Jensen, 1983; Nikolov & Whited, 2014).

Overall, the closure of local media outlets can have significant implications for corporate finance and investor behaviour. As information asymmetry increases, agency conflicts become more prevalent, potentially leading to a misallocation of resources and other self-serving practices including corporate cash stockpiling. It is crucial to have effective mechanisms in place to alleviate the impact of information asymmetry and ensure the long-term health and performance of the firm.

4.2.2   Corporate Cash Holdings: Literature Review

4.2.2.1 Cash Holdings - Introduction

Corporate cash holdings have emerged as a critical focus in corporate finance research, reflecting the strategic importance of cash management in a firm's overall financial strategy. This area of study explores how companies manage their liquid assets to support operational needs, pursue investment opportunities, and mitigate risks, all of which are essential for sustaining long-term corporate health and competitiveness (Opler et al., 1999; Bates et al., 2009; Chang et al., 2024). The intricacies of cash management policies are crucial for understanding broader corporate finance issues such as value creation, risk management, and investment decision-making (Chowdhury et al., 2021). By delving into the determinants and outcomes of corporate cash reserves, researchers contribute to a deeper comprehension of how firms navigate financial challenges and capitalise on opportunities, thereby enriching the overall field of corporate finance (Dittmar & Mahrt-Smith, 2007; Harford et al., 2008; Clarkson et al., 2020). This growing body of literature underscores the strategic role that cash holdings play in corporate governance and financial planning, particularly in environments characterized by high levels of uncertainty or information asymmetry (Chen et al., 2020; Sun et al., 2023).

In recent years, the increasing trend of corporate cash holdings among U.S. firms has remained a focal point in corporate finance research, particularly as companies navigate periods of economic uncertainty (He & Wintoki, 2016; Duong et al., 2020; Gounopoulos & Zhang, 2024). This trend, which gained significant attention following the Great Recession and was further highlighted during the COVID-19 pandemic, reflects a strategic shift in how firms manage liquidity (Elamer & Utham, 2024; Jung & Choi, 2024). Bates et al. (2009) initially brought substantial attention to the rise in cash holdings, noting an increase from 10.5% of total assets in

1980 to over 23% by 2006. This phenomenon has persisted, with recent studies indicating that corporate cash reserves now constitute more than 45% of financial assets and 23% of total firm assets (Harford et al., 2008; Hoberg et al., 2014; Duchin et al., 2017).

The upward trend in corporate cash stockpiling has been attributed to various factors, building on foundational theories dating back to the early 20th century. Keynes (1936) was among the first to suggest that firms hoard cash as a precautionary measure to meet operational needs and safeguard against future uncertainties. This concept has been expanded in modern finance literature, particularly by Almeida et al. (2004) and Chowdhury et al. (2016), who emphasise the critical relationship between cash holdings and cash flows, especially for financially constrained firms. These firms tend to accumulate excess free cash flow to ensure their financial security, particularly during economic downturns when access to external financing may be limited (Lee et al., 2023; Lin et al., 2023).

The strategic accumulation of cash reserves by firms serves multiple purposes, including the ability to capitalise on profitable investment opportunities and minimise reliance on external financing (Tut, 2024). This approach is particularly effective in addressing issues related to information asymmetry and adverse selection, as highlighted by Myers and Majluf (1984). When a company holds substantial cash reserves, it can finance new investments internally, thereby avoiding the potential undervaluation of its equity that could arise if it had to issue new shares under conditions of information asymmetry (Friberg et al., 2024).

Furthermore, the decision to hoard cash is often influenced by a firm's anticipation of future liquidity needs, particularly in relation to financing new investment opportunities. Almeida et al. (2004), Acharya et al. (2007) underscore that the level and significance of cash holdings are contingent on whether a firm expects a liquidity shortfall. Firms that foresee the need to finance new projects or investments tend to maintain higher cash balances as a precautionary measure (Cortes, 2021). This strategy not only ensures that they can act swiftly when opportunities arise but also reduces their vulnerability to external financing conditions, which may be unfavourable due to information asymmetry or market volatility (Denis & Sibilkov, 2010).

Keynesian theory fundamentally shifts the classical perspective on cash holdings by highlighting liquidity as a strategic asset rather than a mere opportunity cost (Marwick et al., 2020). This concept of liquidity preference, first introduced by Keynes (1936), contrasts sharply with earlier views that equated holding cash with foregone interest income, as noted by classical and neo-

classical theorists like Dittmar and Mahrt-Smith (2007). Keynes argued that the value of cash lies in its ability to provide firms with the flexibility to navigate financial uncertainties, a concept later expanded upon by Tobin (1958), who suggested that liquidity serves as a crucial tool for risk management and investment readiness.

Modigliani and Miller (1958) argue that in an ideal capital market with no frictions, cash holdings are irrelevant since firms can raise capital without incurring additional costs. In contrast, Myers and Majluf (1984) underline that information asymmetry leads to adverse selection in equity markets, making external financing costly and thereby increasing the value of internal funds. This divergence highlights the impact of market imperfections on financial strategy (Ascioglu et al., 2008; Clarkson et al., 2020).

Moreover, while Modigliani and Miller's framework suggests that cash holdings should have no effect on firm value, real-world observations show otherwise. For instance, Jensen (1986) argues that excess cash can exacerbate agency problems by allowing managers to invest in projects that benefit them personally but do not necessarily align with shareholders' interests. This view is supported by Dittmar and Mahrt-Smith (2007), who find that effective corporate governance can mitigate these agency problems by ensuring that cash is used in ways that enhance firm value.

The finance literature has extensively debated the determinants of cash holdings, aiming to understand and predict corporate cash hoarding behaviour. Previous studies have examined firm-level factors, such as executive pay (e.g., Liu & Mauer, 2011; Cheng et al., 2022), firm size (Bigelli & Sánchez-Vidal, 2012; Dang et al., 2018), and debt levels (Ferreira & Vilela, 2004; Anderson & Carverhill, 2012). Industry-level determinants, including governance mechanisms (Dittmar & Mahrt-Smith, 2007; Kusnadi, 2011; Schauten et al., 2013), tax implications (Fritz Foley et al., 2007), crisis and exogenous shocks studies (Campello et al., 2010, 2011; Song & Lee, 2012), have also been explored.

The determinants of corporate cash holdings have been a focal point in finance literature, with numerous studies delving into both firm-level and industry-level factors that drive cash hoarding behaviour. At the firm level, executive compensation structures have been shown to influence cash reserves, as higher levels of managerial pay may align managers' interests with those of shareholders, potentially reducing the need for excessive cash holdings (Liu & Mauer, 2011; Cheng et al., 2022). Firm size is another critical determinant, with research suggesting that larger firms tend to hold less cash relative to their smaller counterparts, likely due to their greater access

to capital markets and economies of scale (Bigelli & Sánchez-Vidal, 2012; Dang et al., 2018). Debt levels also play a significant role, as higher leverage can lead to lower cash reserves due to increased financial constraints and the disciplining effect of debt (Ferreira & Vilela, 2004; Anderson & Carverhill, 2012).

Industry-level determinants have also been extensively explored. Governance mechanisms, for instance, have been found to significantly affect cash holdings. Firms with stronger governance tend to maintain lower cash balances, as effective oversight reduces the need for precautionary cash hoarding to mitigate agency risks (Dittmar & Mahrt-Smith, 2007; Kusnadi, 2011; Schauten et al., 2013). Tax considerations further influence cash policies, particularly for multinational firms that may stockpile cash in low-tax jurisdictions to avoid repatriation taxes, as highlighted by Fritz Foley et al. (2007). Additionally, the impact of external shocks, such as financial crises, has been a topic of investigation, with studies like those by Campello et al. (2010, 2011) and Song and Lee (2012) demonstrating that firms tend to increase their cash holdings in response to heightened uncertainty and restricted access to external capital during such periods.

The exploration of cash stockpiling has extended beyond basic cash management theories to include various financial strategies and their implications. Pioneering work by Opler et al. (1999) emphasised the relationship between cash holdings and shareholder payouts, arguing that firms with higher cash reserves are more likely to engage in dividend payments or stock repurchases, which align managerial interests with those of shareholders. Subsequent studies have built on this foundation, examining how cash reserves influence share repurchase programs. Research by Haw et al. (2011) and Lee and Suh (2011) found that firms with substantial cash holdings are more inclined to repurchase shares, a strategy often employed to return excess cash to shareholders and signal confidence in the firm's future performance. Almeida et al. (2016) further demonstrated that during periods of financial constraint, firms prioritise repurchase programs as a means of utilising their cash reserves efficiently.

Acquisitions represent another key area where cash holdings play a significant role (Gao, 2011). Harford (1999) argued that firms with higher cash reserves are more likely to engage in acquisition activities, using their liquidity to seize growth opportunities and achieve strategic objectives. Almeida et al. (2011) and Pinkowitz et al. (2013) supported this view, showing that cash-rich firms often engage in acquisitions to enhance their competitive positioning and expand their market share. This research suggests that cash holdings are not merely a buffer against uncertainty but also a strategic asset that firms deploy to optimise their financial and operational performance.

Understanding corporate cash holdings requires examining key theoretical frameworks that offer distinct perspectives on why firms accumulate cash. The Agency Costs–Free Cash Flow Theory highlights the role of managerial discretion in hoarding cash, potentially leading to inefficiencies. The Trade-Off Theory suggests firms balance the benefits of holding cash against its opportunity costs to achieve an optimal level. Meanwhile, the Pecking Order Theory highlights the preference for internal financing over external options, using cash reserves to mitigate information asymmetry and adverse selection problems. Each theory addresses different aspects of corporate finance and governance.

4.2.2.2 Cash Holdings - Theoretical Background

Interest in corporate cash holdings has been a focal point of economic research since Keynes (1936) introduced the precautionary motive for holding cash, arguing that firms maintain liquid assets to safeguard against future uncertainties. Subsequent studies have expanded on this idea, identifying additional factors that influence cash reserves, such as agency costs, leverage, and market frictions (Meltzer, 1963; Miller & Orr, 1966; Schmitt-Grohé & Uribe, 2007). These findings have given rise to several theoretical models, including the agency theory, trade-off theory, and pecking-order theory, which offer different explanations for cash hoarding behaviours.

For instance, agency theory underscores the role of cash in mitigating conflicts between managers and shareholders (Jensen & Meckling, 1976; Jensen, 1986), while trade-off theory considers the balance between the benefits and costs of holding cash (Opler et al., 1999; Almeida et al., 2004). Pecking-order theory, on the other hand, suggests that firms prefer internal financing to avoid the costs associated with external financing, leading to higher cash reserves (Myers, 1984; Dittmar et al., 2003). These frameworks collectively provide a comprehensive view of the diverse factors that drive corporate cash holdings, reflecting the complex interplay of operational needs, governance issues, and market dynamics.

4.2.2.2.1 Agency Costs – Free Cash Flow Theory

Agency theory, a concept central to corporate governance, explores the inherent conflicts arising from the separation of ownership and control within organisations (Smith, 1937). This theory, first articulated by Berle and Means (1932) and later formalised by Jensen and Meckling (1976), addresses the potential divergence between the interests of shareholders (principals) and managers (agents). In scenarios where managers prioritise personal agendas over those of the

shareholders, agency costs can escalate, particularly in the form of excess cash reserves (Restrepo & Uribe, 2023).

The role of cash holdings within agency theory is complex (Dittmar et al., 2003; Amess et al., 2015). On one hand, managers might hoard cash to avoid the scrutiny that comes with external financing, preserving their autonomy and discretion over corporate decisions (Jensen, 1986). This behaviour can lead to suboptimal investment decisions, such as overinvestment in projects with questionable returns, ultimately harming shareholder value (Colquitt et al., 1999). This viewpoint suggests that large cash reserves may exacerbate agency problems by enabling managerial entrenchment and reducing the pressure to return excess funds to shareholders (Tran, 2020).

On the other hand, the accumulation of cash can also be seen as a prudent strategy, particularly for risk-averse managers who seek to buffer the company against future uncertainties and financial distress (Miller & Orr, 1966). This aspect of agency theory acknowledges that cash reserves provide flexibility, allowing managers to swiftly capitalise on emerging opportunities without the delays or costs associated with raising external capital (Opler et al., 1999). However, this must be balanced against the potential for cash hoarding to dilute shareholder value through inefficient capital allocation (Anderson & Carverhill, 2012; Hu et al., 2019).

In agency theory, the accumulation of high cash reserves within a firm is often linked to potential agency problems, particularly when these reserves are not deployed into profitable ventures. This situation can lead to increased agency conflicts, as managers may hoard cash to enhance their discretionary power rather than prioritising shareholder value (Fama, 1980; Fama & Jensen, 1983; Jensen, 1986; Eisenhardt, 1989). The theory suggests that managers might act in self-serving ways, favouring projects or strategies that secure their position or benefits over those that maximise shareholder wealth (Myers & Rajan, 1998; Chung et al., 2015).

When managers control excess cash, they may become insulated from market discipline, reducing the pressure to distribute funds to shareholders or invest in high-return opportunities. This insulation can lead to suboptimal decision-making and increased agency costs, which are the costs incurred due to conflicts of interest between shareholders and management (Dittmar & Mahrt-Smith, 2007; Harford et al., 2008). These issues underscore the importance of effective governance mechanisms that can mitigate such agency problems by aligning the interests of managers with those of the shareholders (Ahn et al., 2020).

Information asymmetry plays a central role in exacerbating agency dilemmas within corporate cash holdings. In environments where information flow between managers and shareholders is restricted or imperfect, managers may exploit their informational advantage to pursue personal objectives rather than those aligned with shareholder interests (Akerlof, 1970; Clarkson et al., 2020). This asymmetry allows managers to hoard cash under the guise of precautionary motives or future investment opportunities, while in reality, they may be shielding themselves from external scrutiny and enhancing their own control over the firm (Jensen, 1986; Stulz, 1990).

The high liquidity of cash makes it an ideal resource for managers to utilize in ways that are not easily monitored by shareholders, such as financing projects that primarily serve to entrench managerial positions rather than to increase firm value (Myers & Rajan, 1998; Elyasiani & Zhang, 2015). In the absence of transparent and timely information, shareholders are left with limited means to assess whether cash reserves are being managed effectively or are being used to further managerial self-interest (Myers & Majluf, 1984; Lee et al., 2023). This information gap allows managers to justify their cash management strategies with claims of risk management or future opportunities, while potentially engaging in value-destroying activities (Jiang & Lie, 2016).

Research has consistently shown that the level of corporate cash holdings can be influenced by various factors related to the legal environment, governance quality, and ownership structure (Ozkan & Ozkan, 2004; Kusnadi & Wei, 2011; Nguyen et al., 2018). For instance, Ozkan and Ozkan (2004) found that firms in countries with stronger shareholder protection and legal frameworks tend to hold less cash, as these mechanisms reduce the agency costs associated with excess cash holdings. Similarly, Kusnadi and Wei (2011) observed that in environments where shareholders are better protected, managers have fewer opportunities to hoard cash for self-serving purposes.

Gao et al. (2013) further explore this dynamic by examining a sample of U.S. public and private companies from 1995 to 2011. Their findings reveal that public companies generally maintain higher levels of excess cash compared to private firms, largely due to agency problems inherent in publicly traded firms. The study suggests that well-governed public firms with surplus cash tend to reduce their leverage by paying down debt, thereby returning value to shareholders. In contrast, poorly governed firms are more prone to holding large cash reserves, which they may dissipate through overinvestment or acquisitions of tangible assets, often leading to suboptimal use of resources and reduced shareholder value.

Arnold (2014) investigation into managerial cash hoarding highlights a critical intersection of agency theory, precautionary motives, and the role of information asymmetry in shaping corporate financial strategies. This study underscores the complexity of managerial decision-making, particularly under conditions of economic uncertainty, where the accumulation of cash reserves becomes a protective measure against potential financial distress. The research aligns with earlier findings by Tut (2024), who suggest that information asymmetry between managers and shareholders can lead managers to prefer internal financing, thereby justifying the retention of excess cash.

The agency perspective posits that corporate payout and repurchase strategies serve as critical mechanisms to curb managerial tendencies to misallocate free cash flow into projects or acquisitions that do not necessarily enhance shareholder value (Jensen, 1986; Lee & Suh, 2011; Ahmad et al., 2023). Kalcheva and Lins (2007) further expand on this by conducting a cross-country analysis that examines the net impact of cash stockpiling in over 5,000 firms across various legal and regulatory environments. Their study reveals that in countries with weak investor protections and high agency conflicts, the value of excess cash is often discounted by potential outside investors. This discount arises from the perceived risk that entrenched managers may prioritise their own interests over those of shareholders, leading to inefficient capital allocation or the retention of cash for personal empire-building rather than returning it to shareholders (Spiropoulos & Zhao, 2023).

Aligning managerial incentives with shareholder interests through performance-based compensation is a critical strategy for mitigating agency conflicts, as it encourages managers to make decisions that enhance shareholder value (Jensen & Meckling, 1976). Jensen (1986) posits that reducing these agency issues can positively impact corporate cash holdings by deterring managers from hoarding cash for personal gain and instead directing it toward value-maximising investments. This alignment of interests not only reduces the likelihood of cash being wasted on unproductive projects but also enhances overall firm value by ensuring that cash reserves are used efficiently (Lin et al., 2023).

Furthermore, the presence of governance mechanisms, such as those highlighted by Han and Qiu (2007), promotes more prudent financing decisions. When managerial incentives are closely tied to firm performance, managers are less inclined to engage in over-investment or under-investment. This alignment fosters a more optimal balance between maintaining sufficient cash reserves for operational needs and returning excess cash to shareholders, thereby improving

corporate governance and financial efficiency. By implementing these governance structures, firms can create a more disciplined environment where cash is managed strategically, ultimately benefiting both managers and shareholders.

Corporate governance remarkably depends on external mechanisms, with media coverage playing a crucial role in enhancing transparency and reducing information asymmetry (Hutchinson & Gul, 2004; Cremers et al., 2005). This transparency is essential in holding managers accountable and curbing potential self-serving behaviour that might otherwise go unchecked. By providing independent and objective reporting, the media acts as a vital watchdog that monitors corporate actions, thereby mitigating agency conflicts and ensuring that managerial decisions align more closely with shareholder interests (Gillan, 2006; Bednar, 2012).

The media's ability to disseminate critical information makes it an essential component of external governance. It not only informs shareholders but also pressures managers to act in ways that are in the best interest of the firm, thus reducing the likelihood of agency problems (Miller, 2006; Dyck et al., 2008). Furthermore, studies by Gao et al. (2020) and Giuli & Laux (2022) emphasize that by bridging the information gap, the media strengthens the overall governance framework and discourages managerial opportunism, contributing to better corporate practices. In summary, the agency-free cash flow theory underscores the risks associated with excess corporate cash holdings, particularly the potential for managers to engage in self-serving behaviours that do not align with shareholder interests. By implementing robust governance mechanisms, such as performance-based incentives and external oversight, firms can mitigate these agency conflicts, ensuring that cash reserves are directed towards value-enhancing activities rather than inefficient expenditures (Jensen, 1986; Harford et al., 2008). Effective alignment of managerial actions with shareholder goals is crucial for maximising firm value.

4.2.2.2.2 *Trade-off Theory*

The trade-off theory of corporate cash holdings posits that firms balance the costs and benefits of holding cash to determine their optimal cash reserves (Almeida et al., 2004). The costs of holding cash include the opportunity cost of not investing in higher-return projects and the potential for agency conflicts, while the benefits involve maintaining liquidity to cover unexpected expenses, avoid financial distress, and capitalise on investment opportunities without relying on external financing (Kim et al., 1998; Lin et al., 2023). According to this theory, firms aim to hold an optimal level of cash that minimises the total cost of financial distress and opportunity loss while maximising the firm's value (Myers, 1984; Opler et al., 1999). This

balancing act is especially critical in environments characterised by high information asymmetry, where external financing can be more expensive or difficult to obtain due to the lack of transparent information about the firm's financial health and prospects (Graham et al., 2008; Harford et al., 2008).

According to several studies (e.g., Opler et al., 1999; Dittmar et al., 2003; Bates et al., 2009), firms hold cash for three primary reasons: transactional, precautionary, and speculative motives. The transactional motive refers to the need for cash to support regular business operations, while the precautionary motive arises from the need to maintain cash reserves to deal with unexpected events. Lastly, speculative motives arise from potential investment opportunities that firms may want to capitalise on. These motives align with the views of Keynes (1936) on why firms hold cash.

The trade-off theory posits that firms hold cash by balancing the benefits of liquidity against the opportunity costs of holding idle cash (Faulkender et al., 2006). This approach identifies three primary motives for cash holdings: transactional, precautionary, and speculative. The transactional motive is rooted in the need for cash to facilitate daily operations, ensuring smooth business continuity without relying excessively on external financing (Opler et al., 1999; Ferreira & Vilela, 2004). The precautionary motive is driven by the desire to maintain a buffer against unforeseen contingencies, such as economic downturns or unexpected expenditures, thereby reducing financial distress risks (Bates et al., 2009; Kim et al., 2011). The speculative motive emerges from the anticipation of profitable investment opportunities that firms may want to capitalize on quickly, reflecting the flexibility that cash reserves provide (Keynes, 1936; Almeida et al., 2004). This theoretical framework underscores the importance of strategic cash management, where firms aim to optimise their cash holdings by carefully weighing the benefits of liquidity against the costs of foregone investment opportunities (Dittmar et al., 2003; Acharya et al., 2007).

Kim et al. (1998) underline that holding cash provides firms with strategic advantages, such as minimizing the need for costly external financing and ensuring the availability of funds for valuable investment opportunities. However, the accumulation of cash is not without its downsides. One of the key drawbacks is the carrying cost, which occurs when the returns on liquid assets fall below those of alternative investments with comparable risk profiles (Elyasiani & Movaghari, 2022). Moreover, the necessity to hold cash also stems from the transaction costs associated with securing external funding, particularly under conditions of information asymmetry, where investors may demand higher returns due to perceived risks and uncertainties (Myers & Majluf, 1984; Faulkender et al., 2006). This scenario underlines the importance of the

trade-off theory, which posits that firms must carefully balance the benefits of liquidity against the costs of holding excess cash (He & Wintoki, 2016). This balance is critical for maintaining operational flexibility, seizing investment opportunities, and mitigating the impact of information asymmetry on financing costs (Bates et al., 2009; Chung et al., 2015).

Building on Opler et al. (1999), research suggests that increased cash reserves can result in a higher marginal tax rate for corporations due to the potential for double taxation on capital gains, which affects both the firm and its shareholders. Firms often accumulate cash as a precautionary measure to hedge against unpredictable cash flows and the significant costs associated with securing external financing, particularly during periods of financial instability (Kling et al., 2014). Additionally, firms are more likely to hoard cash when favourable investment opportunities arise, using these reserves as a safeguard against financial disruptions and market volatility (Faulkender et al., 2006; Bates et al., 2009). This strategic approach aligns with the trade-off theory, underscoring the importance of balancing the costs and benefits of liquidity to maintain financial stability and capitalise on future investment opportunities (Luo & Tian, 2022).

Almeida et al. (2004) examine the liquidity management strategies of firms operating in markets where capital is not perfectly accessible, placing particular emphasis on how information asymmetry impacts these decisions. Their research suggests that firms facing significant financial constraints, often due to heightened information asymmetry, are more inclined to hold substantial cash reserves. This approach allows them to finance future investments independently of external funding, which may be costly or unavailable. In contrast, firms with better access to capital, and thus less impacted by information asymmetry, demonstrate less consistent patterns in cash management. The study, covering U.S. manufacturing firms from 1971 to 2000, utilises various proxies for financial constraints, finding that constrained firms strategically accumulate cash, highlighting the importance of liquidity in contexts where external financing is challenged by information asymmetries (Clarkson et al., 2020; Izhakian et al., 2022).

Riddick and Whited (2009) introduce a dynamic trade-off model that underlines the strategic balance firms must achieve in managing their cash holdings, particularly in environments characterized by high costs of external financing or significant income uncertainty. Their model predicts that firms will maintain higher levels of liquid cash as a precautionary measure under these conditions. This contrasts with the findings of Almeida et al. (2004), who suggest that firms facing financial constraints typically exhibit a positive sensitivity of cash holdings to cash flow. Riddick and Whited (2009), however, argue that a negative relationship exists between cash flow

and cash holdings when controlling for Tobin's Q, especially in firms where cash flow shocks are prevalent. They further highlight that positive productivity shocks can exacerbate this negative sensitivity, thereby increasing the absolute value of cash holdings and the marginal product of capital. This dynamic approach underscores the critical role that cash flow volatility and the cost of external financing play in shaping corporate cash management policies, particularly under conditions of high information asymmetry and financial constraints (Eskandari & Zamanian, 2022).

Anderson and Carverhill (2012) offer a distinct perspective on cash management, arguing that profitable firms generally maintain lower cash reserves, which contrasts with the conventional belief that higher profits lead to greater cash holdings. They highlight that the relationship between investment and cash reserves becomes path-dependent when profitability is low, suggesting that firms with diminished profitability may accumulate cash to safeguard against uncertainties, especially under conditions of information asymmetry. Furthermore, their study finds a negative relationship between corporate leverage and cash holdings, underscoring that higher debt levels limit a firm's capacity to retain substantial reserves, particularly when accessing external capital is costly and complex due to information asymmetry (Almeida et al., 2004; Karpuz et al., 2020; Floros et al., 2024).

Han and Qiu (2007) highlight that financially constrained firms, facing greater cash flow volatility, adjust their cash reserves as a precautionary measure, a finding that complements earlier research by Almeida et al. (2004) and Opler et al. (1999). While Almeida et al. (2004) similarly note that constrained firms hoard cash to fund future investments, Han and Qiu's work diverges by emphasising a positive correlation between cash hoarding and cash flow volatility specifically in these firms. This contrasts with Riddick and Whited (2009) dynamic trade-off model, which predicts a negative relationship between cash holdings and cash flows under certain conditions. Bates et al. (2009) further expand on this by linking cash accumulation to broader economic uncertainty, rather than just financial constraints. Together, these studies illustrate the complex interplay between cash flow volatility, financial constraints, and cash management practices across varying economic conditions.

Gamba and Triantis (2008) offer a detailed examination of how financial flexibility influences corporate cash policies, focusing on the dynamic relationships among external funding costs, tax considerations, and investment opportunities. Their research reveals that the marginal value of cash reserves diminishes as liquidity increases, while it rises with greater investment opportunities and

financial constraints. This study aligns with recent findings by Elamer and Utham (2024) and Jung and Choi (2024), which underscore the critical importance of cash management in navigating economic uncertainties and taking advantage of strategic opportunities. The focus on financial flexibility reflects a broader trend in corporate finance, highlighting the need for firms to continuously adjust their cash management strategies in response to evolving market conditions and potential investment prospects (Dittmar & Mahrt-Smith, 2007).

Bao et al. (2012) explored the relationship between financial constraints, income shocks, and corporate cash management, revealing that firms facing financial difficulties tend to adopt a defensive strategy that includes reducing capital expenditures and increasing short-term leverage. This approach often results in higher cash holdings, allowing companies to navigate economic uncertainty and protect against future income shocks. The study identified a non-linear relationship between changes in cash reserves and cash flows, suggesting that firms adjust their cash hoarding behaviour depending on their financial health. Specifically, firms with negative cash flows generally maintain lower cash reserves, while those with positive cash flows tend to accumulate more cash. These findings align with broader discussions in the literature that highlight the importance of maintaining liquidity under financial constraints (e.g., Campello et al., 2011; Hoberg et al., 2014; Duchin et al., 2017).

Faulkender et al. (2006) find that the marginal value of cash decreases as firms accumulate more cash and leverage, indicating diminishing returns on additional cash reserves. However, this negative relationship is moderated by factors such as investment opportunities, financial constraints, and strategic decisions like share buybacks. These findings suggest that the value firms place on cash holdings is influenced by a combination of firm-specific characteristics and broader financial strategies, highlighting the complexity of cash management practices (Couzoff et al., 2022).

Arslan et al. (2006) and Bigelli and Sánchez-Vidal (2012) both affirm the trade-off theory by showing that smaller, financially constrained, and newer firms typically maintain larger cash reserves as a safeguard against financial instability and limited access to external capital. Arslan et al.'s study of Turkish firms underscores the need for cash reserves to buffer capital expenditure risks, while Bigelli and Sánchez-Vidal's research on Italian firms corroborates that higher risk exposure and lower effective tax rates drive firms to hoard more cash. These findings underscore the importance of firm size, financial constraints, and risk in shaping cash holding behaviours.

Opler et al. (1999) and Ferreira and Vilela (2004) find that cash reserves in U.S. and EU firms are negatively influenced by the presence of liquid asset substitutes and high leverage, yet positively affected by strong cash flows. Conversely, Duchin (2010) argues that firms with lower cash reserves adopt a more cautious approach, focusing on the alignment between cash flow and long-term investments. This underscores the intricate dynamics between cash reserves, investment opportunities, and the availability of liquid assets, highlighting variations in corporate cash management strategies across different markets and contexts.

In summary, the trade-off theory posits that firms carefully manage cash reserves by balancing liquidity benefits against the costs of holding excess cash, particularly under conditions of information asymmetry. This approach underscores how cash reserves help mitigate financial constraints while addressing the risks associated with asymmetric information, thereby optimising firm value.

4.2.2.2.3 *Pecking Order Theory*

The Pecking Order Theory, articulated by Myers (1984), asserts that companies do not actively pursue an optimal cash balance. Instead, cash holdings are a byproduct of a firm's hierarchy in financing decisions. Initially, firms uses internal funds, such as retained earnings, to finance investment opportunities. When internal funds are insufficient, companies drain their cash reserves before turning to external debt, beginning with the safest options. Only as a last resort, when safer financing is unavailable, do firms consider riskier debt or equity issuance. This sequential financing approach highlights the prioritisation of internal funds over external options, highlighting the firm's desire to minimise costs associated with information asymmetry and market signals (Myers & Majluf, 1984; Shyam-Sunder & Myers, 1999; Anderson & Carverhill, 2012).

The Pecking Order Theory proposes that firms prefer to finance investments first with internal funds, like retained earnings, due to the lower costs and reduced information asymmetry associated with these sources (Myers, 1984; Graham & Harvey, 2001). Managers, who possess more knowledge about the firm's value and prospects than external investors, aim to avoid the high costs of external financing that arise from asymmetric information (Bharath et al., 2009). However, when internal funds are insufficient to finance profitable projects, firms turn to external financing options, starting with debt and only considering equity issuance as a last resort (Chung et al., 2015). This reliance on external funds can exacerbate the costs associated with information asymmetry, as disclosing financial details to the market may lead to adverse selection, where the issuance of equity

is perceived negatively by investors, thereby increasing the firm's cost of capital (Frank & Goyal, 2003; Leary & Roberts, 2010).

Dittmar et al. (2003) highlight the difficulties that firms with high information asymmetry encounter when attempting to secure external funding. These companies often face undervaluation of their assets and future growth potential, making it challenging to raise capital. In response to these difficulties, firms may accumulate excess cash reserves as a safeguard against the high costs or inaccessibility of external funds (Leary & Roberts, 2010b). The role of transparency and effective information dissemination, such as media coverage, becomes critical in reducing information asymmetry (Gao et al., 2021). By ensuring investors have access to high-quality information, firms can improve their ability to secure external financing at more favourable terms, thereby reducing their reliance on large cash reserves (Gao et al., 2020). This dynamic underscores the interplay between information asymmetry, external financing challenges, and corporate cash management strategies (Drobetz et al., 2010; Chowdhury et al., 2021).

Frank and Goyal (2003) support the notion that firms facing high information asymmetry tend to accumulate cash reserves as a precautionary measure, which reduces their reliance on external capital. This underscores the relationship between cash management, information asymmetry, and the preference for internal financing. Further research by Leary and Roberts (2010) and Lemmon and Zender (2010) supports the Pecking Order Theory by demonstrating that firms with significant information asymmetry are more judicious in seeking external financing, preferring to retain cash reserves to mitigate the uncertainties of the capital markets. These studies collectively highlight how information asymmetry influences firms' cash management strategies and financing decisions, validating the sequential financing hierarchy proposed by the Pecking Order Theory.

The Pecking Order Theory outlines a hierarchical approach in firms' cash management. Excess funds are either retained or used for debt repayment, while deficits drive firms to external financing. Opler et al. (1999) established a strong connection between year-end cash balances and corporate earnings, suggesting that firms with higher cash flow tend to hold excess cash reserves. This aligns with the Pecking Order Theory, which posits that companies prefer internal financing, especially when facing high information asymmetry. Supporting this perspective, research by Myers (2003) and Harford et al. (2014) illustrates that firms experiencing greater uncertainty in external capital markets are more inclined to conserve cash to reduce reliance on external funding. Additionally, Frank and Goyal (2003) demonstrate that firms prioritise

retaining internal funds to maintain financial flexibility, thus avoiding the costs associated with information asymmetry and external financing.

Drobetz et al. (2010) examine how asymmetric information influences the market value of cash holdings among international firms from 1995 to 2005. Their research reveals that during periods of heightened uncertainty and analyst forecast dispersion, the value attributed to cash reserves by the market increases. This suggests that cash holdings serve as a protective mechanism against the adverse selection costs associated with external financing. Furthermore, the study affirms that maintaining higher cash reserves under conditions of significant information asymmetry can enhance corporate value, highlighting the strategic importance of cash management in navigating complex and uncertain business environments. These findings align with broader theories in corporate finance, which argue that effective cash management is crucial for mitigating the risks posed by information asymmetry (e.g., Dittmar et al., 2003; Bao et al., 2012, Gao et al., 2013).

Ferreira and Vilela (2004) findings align with research by Kim et al. (1998) and Acharya et al. (2007), which also suggest that firms manage cash reserves strategically in response to leverage and investment opportunities. Kim et al. (1998) highlight the dual benefits of holding cash, such as reducing reliance on expensive external financing and supporting investment opportunities, while Acharya et al. (2007) underline the precautionary motives, especially in firms with higher financial constraints. However, unlike Ferreira and Vilela, who spotlight the impact of favourable investment climates, Pinkowitz et al. (2006) and Frésard Laurent and Salva (2010) explore how firm-specific factors like governance structures also influence cash holdings. Together, these studies offer a comprehensive view of how leverage, investment conditions, and governance factors interplay in corporate cash management practices across different economic environments.

D'Mello et al. (2008) conducted a detailed study on 154 spin-off companies between 1996 and 2000, highlighting that firms with high growth potential and significant information asymmetry often deviate from their optimal cash holding ratios, accumulating larger cash reserves. This finding aligns with results from Bates et al. (2009) and Jayakody et al. (2023), who similarly observed that firms in industries with greater growth opportunities and market uncertainties are more likely to retain higher cash reserves. These studies collectively underscore the importance of firm-specific factors like growth prospects and the level of information asymmetry in shaping cash management strategies.

While Dittmar et al. (2003) highlight the challenges of integrating the pecking order theory with agency and trade-off theories in understanding cash holdings, other studies such as those by Almeida et al. (2004) and Harford et al. (2008) elaborate on the implications of these theories individually. Almeida et al. (2004) focus on the sensitivity of cash flow to cash holdings, particularly in financially constrained firms, demonstrating how these firms prioritise internal funding over external options, a core tenet of the pecking order theory. Harford et al. (2008) explore agency costs and find that firms with high free cash flow and weak governance tend to hold excessive cash, which contrasts with the pecking order's implication that firms use cash reserves prudently. These comparative perspectives underscore the need for a holistic approach that considers multiple theoretical frameworks to fully understand the determinants of corporate cash management.

In summary, the Agency-Free Cash Flow, Trade-Off, and Pecking Order theories provide valuable frameworks for understanding corporate cash holdings, particularly under conditions of heightened information asymmetry. These theories collectively demonstrate that firms' cash management strategies are closely tied to the availability and reliability of information. This study focusing on the impact of U.S. local newspaper closures, highlights how reductions in accessible and timely information can exacerbate information asymmetry, thereby influencing corporate cash policies. As firms navigate with the uncertainty resulting from diminished information flow, these theories underscore the complexities involved in their decision-making processes regarding cash reserves, investment opportunities, and financing choices. Understanding these dynamics is crucial for comprehending how shifts in information availability, such as those caused by newspaper closures, can alter corporate financial behaviour.

4.3 Hypothesis Development

4.3.1 Introduction and Overview

Through a comprehensive review of existing literature, several underlying factors have been uncovered. These factors contribute to the connection between the closure of local print media and its impact across governmental, economic, corporate, and societal realms (Miller & Skinner, 2015). Previous studies have revealed consequences of newspaper disappearance on various aspects. These aspects include municipal borrowing costs, private syndicated loans, organisational structure, and workforce reductions. However, they have not delivered conclusive evidence regarding the role of local newspapers. These newspapers, as reliable sources of information, possess the potential to shape corporate behaviour (Gao et al., 2020; Kim et al., 2021). Interestingly, research conducted by Heese et al. (2022) suggests that the closure of local newspapers can indeed influence corporate misconduct, highlighting the need for further investigation to bridge the gaps in the existing literature.

The Great Depression of the 1930s resolved the roles of owners and managers, giving rise to a distinct class known as "managers" that continues to shape corporate structure and governance (Berle & Means, 1932). Agency Theory, alternatively known as principal-agent theory, was formulated by the pioneering work of Jensen and Meckling (1976). This theory posits that an employment contract involves two primary entities: the agent (manager) and the principal (or shareholder). The core challenge in this relationship stems from informational discrepancies. Given that managers typically possess more information than shareholders, it creates an information asymmetry, potentially leading to adverse selection and moral hazards issues.

However, it is essential to acknowledge the various factors that can influence the effectiveness of agency relationships within a company. To ensure appropriate management and governance, controls and standards must be established to achieve long-term sustainability and success. Without these measures, conflicts of interest can arise, negatively affecting corporate performance (Nicholson & Kiel, 2007). Therefore, robust governance mechanisms are crucial to mitigate the adverse effects of agency problems.

Brennan and Solomon (2008) suggest that corporate governance can be viewed as a combination of internal and external checks and balances. These checks and balances are designed to ensure that the company operates responsibly and with due diligence towards all stakeholders. This is particularly important given the potential for corporate collapses, fraud, and collusion among

managers, which can result in the violation of stakeholder rights, especially for vulnerable individuals. To mitigate these risks, it is essential to establish strong governance mechanisms that prioritise accurate reporting and the generation of adequate information to stakeholders. Arjoon (2005) underscores the importance of these mechanisms in promoting corporate sustainability and preventing undesirable consequences.

In the present study, the objective is to analyse the impact of daily local newspaper closures, recognised as an exogenous shock, on the accessibility of relevant information and the subsequent consequences on corporate cash holding behaviour of nearby firms. Building on prior research Kim et al. (2021) and Heese et al. (2022), local newspapers are viewed as a pivotal external mechanism for corporate governance. Local print media emerges as a trustworthy and credible source of information, capable of scrutinising the performance of local companies, uncovering managerial misconduct, and addressing issues of information asymmetry. The closure of local newspapers could lead to the loss of a reliable governance mechanism, thereby negatively impacting the general public, the market, and the investment environment.

Gao et al. (2020) employ multivariate regressions to demonstrate the financial and political implications arising from local governmental inefficiencies following the loss of local monitoring and information dissemination through newspapers. Firstly, they find that municipal borrowing costs, measured by bond yield spreads, experience a significant increase of five to eleven basis points following the closure of local papers. Additionally, they highlight the presence of excess government salaries and negotiated sales as a result of these shutdowns. Secondly, the authors emphasise the crucial role played by local print press in the electoral process at the county level. Local newspapers provide essential information about political candidates to voters before and during local elections. Therefore, the absence of local newspapers negatively impacts the electoral process, depriving voters of vital information.

Bushman et al. (2017) provide insights into the influence of media on loan syndicate structures. Their research highlights two key findings. Firstly, they demonstrate that positive news sentiment can mitigate information asymmetry among loan syndicate participants. This implies that favourable media coverage helps to bridge the gap in information between borrowers and lenders in syndicated loan transactions. Secondly, the authors explore how optimistic media coverage can contribute to borrowers securing lower loan interest rates. This suggests that positive media portrayal can act as a supportive factor for borrowers, leading to more favourable lending terms.

Contrary to previous findings, Kim et al. (2021) present a contrasting viewpoint. Their research suggests that in the face of heightened information demand resulting from the closure of a local newspaper, nearby firms adopt measures to address agency problems. Specifically, these firms reinforce their voluntary disclosure practices and increase dividend payouts. These actions serve as strategies to mitigate the difficulties arising from reduced information flow caused by the absence of local media. By adopting a proactive approach, firms aim to mitigate potential conflicts of interest and provide more comprehensive information, thereby upholding transparency in their corporate practices.

On the other hand, Dyck et al. (2008) present contrasting findings that challenge the idea of domestic Russian media's impact on corporate discipline in Russia and similar developing countries. Their empirical study suggests that state-owned media dominates the landscape, resulting in restricted free public opinion. Consequently, the role of domestic Russian media coverage does not seem to have a credible influence on corporate discipline. In contrast, the study highlights the economically significant influence of reputable foreign media outlets like the *Financial Times* or the *Wall Street Journal*. These foreign media sources exert intense pressure, particularly when Russian firms seek access to international capital markets, driving improvements in corporate governance practices. The findings suggest that foreign media has a pronounced influence and is instrumental in advancing corporate governance in developing markets.

Cash holds a prominent and indispensable position in academia and the practice of finance, shaping a broad spectrum of business decisions from operations to boardroom strategies. Its liquidity significantly impacts a firm's value, guiding investment choices, risk management, and dividend policies (Opler et al., 1999). Chen et al. (2020) reinforce the importance of cash in sustaining everyday operations and in optimising a firm's capital structure and investment plan. As a result, corporate cash holding is a central topic that receives substantial attention in the domain of corporate finance.

As outlined by Keynes (1936), corporate cash holdings have two primary functions. First, they are fundamental in formulating a firm's leverage strategy, emphasising the advantages of maintaining debt-free cash reserves. This strategic allocation aids in the effective management of the firm's capital structure. Second, excess cash act as a financial buffer, offering the liquidity required to manage unexpected operational challenges and shortfalls in investment, thereby reducing financial risk.

Prior literature in finance has indeed highlighted that cash holdings can create incentives for corporate managers to exploit those reserves for personal gain (e.g., Pinkowitz et al., 2006). This behaviour, as explained by the Agency Theory (Jensen & Meckling, 1976), gives rise to a conflict of interest between managers and shareholders. Managers may accumulate cash and utilise their privileged access to information to invest in projects that primarily benefit themselves, thereby increasing their personal wealth at the expense of shareholders (Stulz, 1990).

The free cash flow hypothesis, proposed by Jensen (1986), suggests that shareholders strive to minimise agency costs by limiting managers' unrestricted access to free cash flow. According to this hypothesis, there is a delicate balance between providing managers with sufficient capital to invest in profitable projects and avoiding the provision of excess cash that may be misused for self-interested purposes. By constraining managers' access to surplus cash, shareholders aim to prevent them from using the funds for non-value-creating activities. These activities may include financing projects with negative net present value (NPV), engaging in excessive acquisitions, or pursuing discretionary expenditures that primarily benefit managers rather than shareholders. This approach helps align the incentives of managers with the interests of shareholders, alleviating the potential for value-destroying behaviour (Fama, 1980; Stulz, 1990).

The arguments presented above reinforce the notion that the media exerts considerable influence over a range of corporate behaviours, especially concerning cash holding policies. As a result, the absence of local newspapers results in the irreversible loss of an information channel that rigorously holds companies accountable. Nevertheless, this study brings a novel perspective on the influence of media closures on corporate behaviour. It offers the first empirical evidence that the absence of local journalism can intensify information asymmetry and significantly impact corporate cash management.

Incorporating the earlier discussions, the baseline/first hypothesis of this investigation can be formulated as follows:

H_1 *The closure of local U.S. newspapers leads managers of nearby firms to increase corporate cash holdings.*

4.3.2   Media Closure-Information Asymmetry and Corporate Cash Holdings

Previous research suggests that media coverage significantly aids in keeping investors informed about a company's developments by providing valuable insights into key performance indicators,

wrongdoing, and achieved milestones (e.g., Bushman et al., 2017; Wu et al., 2022). Newspapers can provide valuable original and relevant information that enlightens various stakeholders, including current and potential investors, employees, and creditors, by developing, validating, packaging, and disseminating such content (Fang & Peress, 2009; Bushee et al., 2010). According to scholars, the use of print media can assist companies in mitigating information frictions and asymmetry, thereby helping to manage information-related risks (e.g., Healy & Palepu, 2001; Gao et al., 2020).

Scholars such as Miller (2006), Dyck et al. (2008), Wiesenfeld et al. (2008), and Di Giuli and Petit-Romec (2019) have argued that the media can serve as a corporate watchdog by uncovering managers' opportunistic behaviours, thereby reducing information asymmetry and deterring reputation damage. In his work, Tetlock (2010) demonstrates that the media can serve as a valuable information source for investors, especially when it effectively addresses the issue of asymmetric information that arises from liquidity concerns. As a result, Tetlock (2007), Chung et al. (2010), and Cormier et al. (2010) argue that an improved corporate information environment can lead to the expansion of the investor base and enhance the maximisation of shareholders' value, ultimately contributing to the long-term success and sustainability of the firm.

As indicated by prior studies, local media plays an instrumental role in reducing corporate information asymmetry (e.g., Fang & Peress, 2009; Bushee et al., 2010; An et al., 2020). This is achieved through the provision of timely and relevant information to outsiders that may otherwise be uninformed, thereby promoting corporate transparency and enabling shareholders to hold companies accountable (Dyck & Zingales, 2002; Miller, 2006). Furthermore, local newspapers contribute to a more robust information ecosystem by exposing managerial inefficiencies (Kim et al., 2021; Heese et al., 2022). Consequently, the absence of local press is expected to negatively affect agency conflicts and information asymmetry, potentially leading managers to hold more cash.

On the other hand, it is worth considering that local print media might not always provide comprehensive information about local firms. Mullainathan and Shleifer (2005) argue that local newspapers often prioritise pleasing their readership to ensure consistent circulation and profitability. Consequently, they may hesitate to criticise local businesses, as doing so could lead to discontent among community members who rely on those businesses for employment. This caution in reporting negative aspects could potentially compromise the local media's financial stability (Shapira & Zingales, 2017).

Moreover, the ability of the local press to effectively gather and distribute pertinent news concerning local firms is hindered by resource constraints and a scarcity of skilled journalists (Van Nieuwerburgh & Veldkamp, 2009). Therefore, even in the absence of local newspapers, the improvement of information asymmetry may not be substantial if the local media lacks the capacity to generate original and relevant information. These factors collectively undermine the local media's capacity to thoroughly scrutinise a wide range of firms and effectively enforce discipline upon corporate managers involved in fraudulent practices (Gurun & Butler, 2012).

The study seeks to empirically investigate the potential impact of the disappearance of local U.S. newspapers on corporate cash holdings. This inquiry is motivated by the need to address ambiguous findings from previous studies that have examined the relationship between local media closures and firms' behaviour (e.g., Kim et al., 2021; Heese et al., 2022; Jiang & Kong, 2023). These prior works have produced limited and inconclusive results, underscoring the importance of further research in this domain and calling for a more thorough examination.

Local newspapers play a critical role in supplying timely and reliable information to local communities, especially in areas with limited access to alternative credible sources of information (Shaker, 2014). In fact, local newspapers have been found to outperform other media forms in reaching and supplying meaningful updates to bridge the information gap between less and more informed investors (Darr et al., 2018; Kim et al., 2021). Local businesses also rely heavily on the coverage provided by local newspapers to stay informed (Gao et al., 2020).

The absence of local media, specifically local U.S. newspapers, diminishes the reporting function they provide, potentially leading to increased information asymmetry and a lack of timely information for external stakeholders. In response, managers may increase their cash holdings to mitigate uncertainties. The research focuses on local U.S. newspapers and aims to contribute valuable insights to the existing literature through rigorous empirical analysis, enhancing understanding of the implications of local media decline on firm behaviour and financial decisions.

The agency problem between shareholders and managers is influenced by asymmetric information and improper use of free cash flow (Harford, 1999; Drobetz et al., 2010). Jensen (1986) links agency costs to firms that generate surplus cash in excess of what is required to finance positive net present value (NPV) investments. According to Mikkelson and Partch (2003), Yun (2009), and Kusnadi (2011), entrenched managers would rather stockpile excessive cash to extract self-financial benefits or invest it in wasteful projects than pay it out to

shareholders. If information asymmetry is high, it may worsen the free cash flow problem by making it difficult for outsiders to have accessible and relevant information that allows to interpret managerial actions (Jensen, 1986; Richardson, 2006).

Consequently, the closure of local newspapers is likely to cause a negative shock in several local US geographies, particularly those depending on a single press with limited access to other online sources, leaving affected communities and businesses to live in a news desert (Abernathy, 2020; Mathews, 2020). The closure of local newspaper coverage can exacerbate the problem of information asymmetry in local firms (Kim et al., 2021). Asymmetric information can increase agency costs due to relevant information supply deficiency (Stulz, 1990; Krishnaswami et al., 1999). Managers can use their information advantage to pursue personal objectives at the expense of shareholders' interests, especially in firms with weak monitoring and information channels (Heese et al., 2022).

Overall, local newspapers fulfill a pivotal role in disseminating information to both investors and businesses, and their closure can detrimentally impact the local demographic and investment context. The scarcity of high-quality information from reliable sources such as local newspapers can exacerbate the problem of information asymmetry, which in turn can increase agency costs. This agency dilemma is further influenced by asymmetric information and improper allocation of free cash flow, which can lead to the stockpiling of surplus cash by entrenched managers for their self-interest, rather than paying out to shareholders.

To assess information asymmetry, two proxy variables are adopted in this study: **Bid-Ask Spread** and **Number of Analysts** following a firm, as suggested by Chung et al. (1995). These variables have been widely recognised in the academic literature as reliable indicators for evaluating information asymmetry within firms (e.g., Easley et al., 1996; Thomas, 2002; Chae, 2005; Hasbrouck, 2009; Crego, 2020). Utilising these established proxies enhances the robustness of the analysis and contributes to the existing body of knowledge on this topic.

4.3.2.1 Media Closure-Information Asymmetry (Bis-Ask Spread) and Corporate Cash Holdings

The Bid-Ask Spread (**BAS**) reveals the gap between the maximum price buyers are willing to pay and the minimum sellers are willing to accept, acting as a critical marker for information asymmetry in financial markets (Copeland & Galai, 1983; Corwin & Schultz, 2012). When this spread widens, it can indicate that buyers and sellers do not have equal access to crucial information about a security's true value, signifying heightened information asymmetry problem (Chung et al., 1995; Easley et al., 1996).

Newspapers, by delivering reliable and comprehensive information, enhance the investment landscape, assisting in making informed decisions (Healy & Palepu, 2001; Gao et al., 2020). Their role extends to serving as corporate watchdogs, ensuring transparency and spotlighting any managerial misbehaviours, thus mitigating agency costs by enforcing accountability (Miller, 2006; Dyck et al., 2008; Di Giuli & Petit-Romec, 2019). These attributes underscore the critical role of newspapers as external governance mechanisms, curbing information asymmetry, and supporting investor confidence (Frankel & Li, 2004; Gillan, 2006; Bushee et al., 2010).

Significantly, newspapers influence financial metrics, notably the Bid-Ask Spread (**BAS**), by disseminating detailed financial information and thus potentially mitigating information asymmetry among investors (Fang & Peress, 2009; Peress, 2014). Moreover, comprehensive media coverage has been linked to influencing trading volumes and the **BAS** (Engelberg & Parsons, 2011; Tetlock, 2010). Conversely, a deficiency in information, often resulting from the closure of local newspapers, typically leads to an elevated **BAS**, reflecting increased information asymmetry and investor uncertainty (Shive, 2012; Kim et al., 2021). Consequently, newspapers inherently stabilise financial markets, reducing information disparities and directly affecting key financial variables (Sankaraguruswamy et al., 2013).

The closure of local newspapers disrupts the flow of corporate information, leading to increased information asymmetry among local and nearby firms (Kim et al., 2021). This gap in information, often reflected in a wider bid-ask spread (George et al., 1991), negatively impacts firms' ability to efficiently raise capital (Hasbrouck, 2009). The wider bid-ask spread results in higher trading costs, deterring trading activities (Lof & van Bommel, 2023) and restricting firms' capacity to raise external capital (Cheng et al., 2020). This underscores the importance of local newspapers in mitigating information asymmetry and its consequences on firms' financing capabilities and corporate wrongdoings (Engelberg & Parsons, 2011; Heese et al., 2022).

Firms encountering higher capital costs and a volatile financial climate, may adopt a prudent strategy, accumulating larger cash reserves as a protective measure against emerging uncertainties (Opler et al., 1999; Han & Qiu, 2007). This approach is consistent with the free cash flow theory, which posits that companies with surplus cash may direct investments towards projects that serve managerial objectives, potentially at the expense of shareholder interests (Jensen, 1986; Bates et al., 2009; Drobetz et al., 2010; Chowdhury et al., 2021).

In summary, when local newspapers close, a chain reaction ensues where information becomes scarce, information asymmetry increases, potential agency conflicts emerge, and cash holdings rise. This sequence of events provides a basis for the second hypothesis:

H_2 *The impact of local newspaper closures on corporate cash holdings will be more pronounced for firms experiencing higher levels of information asymmetry, as measured by the Bid-Ask Spread.*

4.3.2.2 Media Closure-Information Asymmetry (Number of Analysts) and Corporate Cash Holdings

In this study, the Number of Analysts (*NOA*) following a firm serves as a robust proxy for addressing concerns related to information asymmetry (Bhushan, 1989; Brennan & Subrahmanyam, 1995; Chung et al., 1995). Analysts heightened coverage translates to reduced information asymmetry, signifying increased attention and scrutiny from the investment community (Guo et al., 2019). Analysts play a pivotal role in the collecting, processing, and dissemination of firm information, making it accessible to a broader spectrum of investors (Chae, 2005; Ellul & Panayides, 2018). This perspective aligns with the findings of Thomas (2002) and To et al. (2018), indicating that a greater number of analysts can alleviate information asymmetry by enhancing the public availability of company information.

Moreover, comprehensive analyst coverage is not only instrumental in reducing information asymmetry but also acts as a valuable channel for disseminating essential firm insights within the market (Givoly & Lakonishok, 1979; Frankel & Li, 2004; Brochet et al., 2014). Analysts, equipped with their specialised skills and in-depth understanding of corporate performance and future prospects, thereby enhance the quality of information accessible to investors (Lys & Sohn, 1990; Chang et al., 2006). This dual role makes analyst coverage a critical element in the corporate information landscape (Barber et al., 2001).

By diligently scrutinising firm activities and financials, analysts can uncover pivotal information, facilitating a more transparent and informed trading environment which is pivotal for efficient

market functioning (Jegadeesh & Kim, 2010; To et al., 2018). Furthermore, analysts' forecasts and recommendations often shape investor sentiment and can influence investment decisions by providing a more robust, accurate picture of a company's financial health and strategic positioning (Chung et al., 2015; Healy & Palepu, 2001).

Graham et al. (2005) highlighted the substantial role analysts play in shaping investor decisions in their research. Managers view analysts as a key group, exerting significant influence over their firms' stock values. Analysts, with their financial knowledge and detailed industry understanding, carefully review corporate financial documents routinely (Lang & Lundholm, 1996). Engaging directly with management, they seize the chance to explore different dimensions of the company (Bushman et al., 2005).

Jensen (1986) highlights the potential risks associated with excessive cash holdings when not managed rigorously, as it can lead to increased agency costs, tempting managerial opportunism and actions that may not align with optimising shareholder value. Furthermore, the author emphasises the influential role of security analysts in providing essential information to stakeholders, which contributes to reduced agency costs and improved information efficiency within security markets. This notion is further reinforced by the empirical findings documented in Moyer et al. (1989), which highlight the effectiveness of analyst monitoring in addressing agency-related costs for both debt and equity, while also meeting the information needs of investors.

Givoly and Lakonishok (1979) suggest that increased analyst coverage facilitates the uncovering and sharing of additional information, thereby mitigating information asymmetry. Analysts, by thoroughly evaluating companies, often discover crucial insights about their operational performance and future outlook (Kothari et al., 2009). This, in turn, provides investors with precise and up-to-date information, as well as perceptive interpretations of corporate data, thereby enabling them to make more informed investment decisions (Rubin et al., 2017).

When an exogenous shock disrupts corporate information, like the closure of local newspapers, analysts become more vital as information bridges for investors and nearby firms (Derrien & Kecskés, 2013; Chen et al., 2015). Analyst coverage helps shape company decisions, possibly influencing their policies and agency costs (Kim et al., 2021). Prior research indicates that media coverage affects both manager actions and investor behaviour (Conrad et al., 2006; Fang & Peress, 2009; Bushee et al., 2010). A lack of media scrutiny could heighten agency costs, with

managers possibly making decisions that benefit themselves over shareholders (Jensen & Meckling, 1976; Fama & Jensen, 1983).

A decline in media attention may intensify information asymmetry, which, in turn, could lead to delayed or weakened market responses to suboptimal firm performance and critical corporate announcements (Dyck & Zingales, 2002; Miller, 2006; Tetlock, 2010). In these circumstances, analysts become pivotal, proffering vital insights to both firms and investors and aiding in mitigating any uptick in agency costs (Adhikari, 2016).

In an environment lacking a dependable information provider, such as local newspapers, analysts emerge as essential intermediaries, competently navigating the complexities of corporate dynamics and providing indispensable information to both investors and corporations to tackle information asymmetry (Chae, 2005; Chang et al., 2006). The absence of a robust media presence can reshape the communication landscape around firms, potentially influencing their policies and affecting managerial decisions regarding cash holdings (Kim et al., 2021; Fang & Peress, 2009).

Chen et al. (2015) highlight the dual nature of analyst coverage, serving not only as a valuable information source for investors but also as a governance mechanism. This mechanism, strengthened by extensive analyst coverage, exerts pressure on firm management and effectively moderates agency costs. It acts as a safeguard against potential opportunistic behaviors by promoting the prudent utilisation of accumulated cash reserves.

Given the aforementioned points, the third research hypothesis is formulated as follows:

H_3 *The impact of local newspaper closures on corporate cash holdings will be moderated by the level of information asymmetry, as measured by the Number of Analysts covering nearby firms.*

4.4 Employed Variables

4.4.1 Introduction

This section details the dependent, independent, and control variables used in Essay Two, including their definitions, measurement methods, and data sources. These variables are essential for empirically examining how local newspaper closures affect corporate cash holdings, employing proxies for two channels of information asymmetry: Bid-Ask Spread (**BAS**) as the first channel and Number of Analysts (**NOA**) covering the firm as the second. Descriptive statistics and pairwise correlations are also provided to offer initial insights into the data and relationships among the variables.

4.4.2 Dependent Variable – Cash Holdings Ratio: Ln(Cash_Hold)

The empirical model in this research adopts the cash holdings ratio as the dependent variable. To ensure methodological credibility, this study follows established approaches from prior research on cash holdings, as evidenced by studies including Opler et al. (1999), Mikkelson and Partch (2003), Almeida et al. (2004), Han and Qiu (2007), Bates et al. (2009), Tong (2010), Liu and Mauer (2011), Palazzo (2012), Schauten et al. (2013), and Chen et al. (2015). Consistent with the methodologies of Opler et al. (1999), Dittmar et al. (2003), Drobetz and Grüninger (2007), Gao et al. (2013), Hill et al. (2014), and Chen et al. (2014), this study employs the natural logarithm of the cash ratio. This involves taking the natural logarithm of the ratio of cash and cash equivalents to total assets. This approach serves a dual purpose: it standardises the data distribution and addresses potential concerns associated with extreme outliers in panel data models.

To accurately assess the impact of assets in place, this study calculates net assets by deducting cash and cash equivalents from total assets, a method endorsed by Opler et al. (1999), Dittmar et al. (2003), Haushalter et al. (2007), and Qiu and Wan (2015). Additionally, the study explores an alternative metric for cash holdings, specifically the ratio of cash and cash equivalents to total assets, as advocated by Harford et al. (2008), Fresard (2010), and Gao et al. (2013). Incorporating this alternative measure enhances the robustness of the study's findings (Chen et al., 2020).

4.4.3 Independent Variables

4.4.3.1 Variable of Interest – Local Media Closure

Based on the empirical framework introduced by Kim et al. (2021), the primary independent variable is the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. This two-way term captures the difference in the average changes in corporate cash holdings between treatment and control firms before and after the local newspaper closure event. The $Treat\_firm_{i,t}$ dummy variable is a binary variable that takes a value of (1) if a firm is headquartered within a 50-mile radius of a closed newspaper (treatment), and (0) otherwise (control). The $Post_{i,t}$ dummy variable is also a binary variable that captures the ten-year closure window observations, up to five years before (control) and up to five years (treatment) during and after the local newspaper closure, centered on the year of closure. Specifically, the year of closure and the following four years are assigned a value of (1), while all other years are assigned a value of (0).

4.4.3.2 Information Asymmetry Channels

Agency theory addresses the potential issues that arise when managers, who are appointed to run a firm, are given control over the firm by shareholders. This separation of ownership from control can cause problems as managers and shareholders may have divergent goals, and managers usually have more information about the firm and their own activities (Jensen & Meckling, 1976; Fama, 1980; Fama & Jensen, 1983). Information asymmetry, in this context, refers to the discrepancy in the amount of information between shareholders and managers (Noe & Rebello, 1996). This theory has been extensively studied since it highlights how the principal-agent problem can lead to conflicts between the interests of shareholders and managers, potentially resulting in agency costs, and how to mitigate these costs (Eisenhardt, 1989; Healy & Palepu, 2001).

The pivotal role of media in disseminating information is instrumental in alleviating information asymmetry (Dyck & Zingales, 2002; Miller, 2006; Bushee et al., 2010). Conversely, the absence of local newspaper coverage can exacerbate information asymmetry, making it more challenging for stakeholders to accurately assess a company's operations and financial standing (Kim et al., 2021). In such a setting, shareholders may be concerned about managerial behaviour and the use of excess cash (Chung et al., 2015). This scenario arises due to the lack of transparency in the corporate information landscape can make it both challenging and expensive for shareholders to hold management accountable, thereby intensifying the agency dilemma (Jensen, 1986).

To evaluate the impact of local media closures on corporate cash holdings, this analysis utilises two proxy variables for information asymmetry: **Bid-Ask Spread** and **Number of Analysts** following a firm, as proposed by (Chung et al., 1995).

4.4.3.2.1 Bid-Ask Spread (BAS)

The **Bid-Ask Spread (BAS)** serves as the first proxy for information asymmetry. It is a widely accepted metric that measures the disparity between the highest price a buyer is willing to pay (**Bid**) and the lowest price a seller is willing to accept (**Ask**) for an asset. While **BAS** primarily reflects liquidity and transaction expenses, it also acts as an indicator of information asymmetry between those with insider knowledge and those without (Glosten & Milgrom, 1985; Kim & Verrecchia, 1994). A wider **BAS** implies higher perceived information asymmetry, potentially leading to adverse selection issues (Glosten & Harris, 1988). When buyers and sellers possess different information about the value of a security, it results in a broader **BAS**. Conversely, when they share similar information about the security's value, it results in a narrower **BAS** (Amihud & Mendelson, 1986; Venkatesh & Chiang, 1986; Stoll, 1989; Affleck-Graves et al., 1994; Easley et al., 1996; Krinsky & Lee, 1996; Chae, 2005; Corwin & Schultz, 2012).

Local newspapers are an essential source of information for local investors to gain insights into the performance and behaviour of nearby firms (Engelberg & Parsons, 2011). However, when local newspapers close, it creates an exogenous shock to corporate information, leading to increased uncertainty and information asymmetry for facilities and firms in the vicinity (Kim et al., 2021; Heese et al., 2022). This reduction in information flow may result in a wider bid-ask spread, indicating a higher level of information asymmetry and making it more challenging for firms to raise capital. As a result, firms may face higher costs of capital and increased uncertainty, prompting them to accumulate more cash as a precautionary measure (Opler et al., 1999; Han & Qiu, 2007). This ultimately supports the free cash flow theory (Jensen, 1986; Bates et al., 2009; Drobetz et al., 2010), which suggests that firms with more cash holdings may be more likely to engage in empire building or pursue investments that are not in the best interests of shareholders.

Local newspapers play a crucial role as a source of information for local investors, providing valuable insights into the performance and behaviour of nearby firms (Engelberg & Parsons, 2011). However, the closure of local newspapers has a significant impact, causing an exogenous shock to corporate information. This leads to heightened uncertainty and information asymmetry for both local facilities and firms in the area (Kim et al., 2021; Heese et al., 2022).

This reduced flow of information can result in a broader bid-ask spread, indicating a higher degree of information asymmetry and creating difficulties for firms in raising capital (Healy & Palepu, 2001). Consequently, firms may encounter increased capital costs and heightened uncertainty, driving them to accumulate more cash as a precautionary measure (Opler et al., 1999; Han & Qiu, 2007). This phenomenon aligns with the free cash flow theory (Jensen, 1986; Bates et al., 2009; Drobetz et al., 2010), which suggests that firms holding more cash may be more inclined to engage in empire building or pursue investments that are not in the best interests of shareholders.

The *Bid-Ask Spread (BAS)* variable is measured on a logarithmic scale using data sourced from *Refinitiv-Eikon (Screener)*, enabling normalisation and enhancing the analysis in the study.

4.4.3.2.2 *The Number of Analysts (NOA)*

The second measure used in this study is the natural logarithm of the total *Number of Analysts (NOA)* following a firm, which can serve as a proxy for information asymmetry, as proposed by Bhushan (1989), and Brennan and Subrahmanyam (1995). A higher number of analysts following a firm can reduce information asymmetry between insiders and outsiders as more information becomes available to the public about the company (Thomas, 2002; Chae, 2005). As per Givoly and Lakonishok (1979), and Frankel and Li (2004), an increase in the number of analysts covering a company can reveal and disseminate more information, thus limiting the degree of information asymmetry. Analysts following a company are more likely to uncover valuable insights into corporate performance and prospects, which in turn provides investors with more accurate and up-to-date information about the company, enabling them to make better-informed decisions (Lys & Sohn, 1990; Chang et al., 2006; To et al., 2018).

Furthermore, as highlighted by Brennan and Subrahmanyam (1995), a higher presence of analysts covering a company can effectively reduce adverse selection costs. Adverse selection occurs when investors with superior information selectively participate in the market, leading to information asymmetry. Jensen and Meckling (1976) highlight the crucial role of security analysts in providing relevant information to bondholders and stockholders, reducing agency costs, and improving the information efficiency of security markets.

Numerous studies have explored the accuracy and significance of security analysts' earnings and dividend forecasts (e.g., Griffin, 1976; Ofer et al., 1987). Increasing the number of analysts closely monitoring a firm's activities enhances market efficiency and information flow,

supplying investors with a more comprehensive understanding of corproate true value (Moyer et al., 1989; Chung & Jo, 1996). Conversely, companies with limited analyst coverage experience greater information asymmetry, resulting in heightened uncertainty regarding their future prospects and financial stability (Derrien & Kecskés, 2013; Derrien et al., 2016).

Chen et al. (2015) use exogenous shocks, such as broker closures and mergers, to study the effect of reduced analyst coverage on corporate governance. The study finds that a decline in analyst coverage results in shareholders placing less value on a firm's cash holdings. Additionally, CEOs not only receive higher compensation, but their pay also becomes less tied to firm performance. These negative outcomes are particularly evident in firms with low analyst coverage and limited market competition. The authors underscore the critical role of financial analysts in improving governance and reducing agency problems, compelling managers to release stockpiled cash.

Media serves a pivotal role in mitigating information asymmetry by circulating various types of relevant analysis to uninformed and unsophisticated investors (Miller, 2006; Dyck et al., 2008; Dai et al., 2015). In the absence of local media, the role of financial analysts becomes even more pronounced. They step in to fill this informational void and offer valuable insights to investors (Fang & Peress, 2009; Kim et al., 2021). Under these circumstances, the *Number of Analysts* (*NOA*) covering a company emerges as a crucial factor in tackling information asymmetry (Chae, 2005; Chang et al., 2006).

The *Number of Analysts* (*NOA*) variable is obtained from *Refinitiv-Eikon (Screener)* and measured as a continuous variable. It is transformed to a logarithmic scale for normalisation and improved analysis in the study (Brennan & Subrahmanyam, 1995; Chung & Jo, 1996).

4.4.4   Control Variables

To address potential endogeneity concerns and enhance the robustness of the findings, this study incorporates a comprehensive set of control variables. Essay Two employs the same controls as Essay One to ensure consistency. These variables are carefully selected to capture diverse aspects of firm behaviour and characteristics, such as size, leverage, profitability, liquidity, and growth opportunities, which are pivotal in shaping corporate cash holdings. The nine firm-specific variables included are based on influential studies by Opler et al. (1999), Almeida et al. (2004), Ferreira and Vilela (2004), Acharya et al. (2007), Harford et al. (2008), Bao et al. (2012), and Gao et al. (2013). By controlling for these factors, the study aims to mitigate potential

endogeneity issues, and address omitted and confounding variables, thereby reinforcing the credibility of the findings.

All variables used in the empirical models are defined in *Appendix (2)*, providing a comprehensive understanding of their definitions and measurements. The sample period for this study spans from 1986 to 2021, allowing for a robust examination of the data over a significant time frame. To mitigate the influence of extreme values, all continuous variables are winsorised at the 1st and 99th percentiles.

4.4.5 Descriptive Statistics

Table (11) displays the descriptive statistics for the variables employed in the empirical analyses, divided into two parts: Panel A and Panel B.

Panel A: Univariate Statistics and Covariate Balance for Local Newspaper Closure (Treatment: N=5276, Control: N=19964)								
Variable	Treatment Group		Control Group		Differences		Test	
	Mean	Median	Mean	Median	Mean Difference	Median Difference	T-test Mean (p-value)	MW U-Test Median (p-value)
Cash/AT	0.288	0.178	0.197	0.196	0.091	0.018	0.001	0.002
Cash/AN	1.095	0.136	0.660	0.675	0.435	-0.539	0.000	0.000
Bid-Ask Spread	1.862	1.876	1.747	1.740	0.115	0.136	0.000	0.000
Number of Analysts	1.635	1.630	1.524	1.510	0.111	0.120	0.000	0.000
Short-term Borrowing Dummy	0.398	0.000	0.389	0.000	0.008	-0.276	0.699	0.001
Dividend Payment Dummy	0.517	1.000	0.514	1.000	0.003	0.000	0.008	0.009
Size	5.766	5.972	5.694	5.952	0.072	0.020	0.001	0.001
Leverage/AT	0.423	0.194	0.345	0.199	0.078	-0.005	0.012	0.015
R&D/AT	0.608	0.007	0.482	0.007	0.126	0.000	0.003	0.004
MTB	1.586	0.727	1.491	0.727	0.095	0.000	0.005	0.007
NWC/AT	0.061	0.228	-0.726	0.241	0.787	-0.013	0.002	0.003
CAPEX/AT	0.04	0.025	0.045	0.031	-0.005	-0.006	0.015	0.017
FCF/AT	0.042	0.000	0.041	0.000	0.001	0.000	0.014	0.016
CFV/AT	0.042	0.000	0.036	0.000	0.006	0.000	0.003	0.005
ROA	0.095	0.132	0.075	0.112	0.020	0.02	0.011	0.013
State-Level EPU Index	79.555	70.931	77.555	68.931	2.000	2.000	0.005	0.007
State-Level Unemployment Rate	6.627	6.117	6.163	5.742	0.464	0.375	0.001	0.002
State-Level GDP	13.154	13.177	13.003	13.087	0.151	0.09	0.003	0.004
State-Level GDP Growth	3.616	3.734	4.035	3.973	-0.419	-0.239	0.005	0.007
Panel B: Descriptive Statistics for Full Sample (N = 25,240)								
	Mean		Median		St. Dev.		P5	P95
Cash/AT	0.216		0.112		0.255		0.007	0.832
Cash/AN	0.763		0.104		2.723		0.005	3.049
Bid-Ask Spread	1.748		1.743		0.8		0.441	3.062
Number of Analysts	1.605		1.571		1.038		0	3.394
Short-term Borrowing Dummy	0.391		0		0.488		0	1
Dividend Payment Dummy	0.427		0		0.495		0	1
Size	5.709		5.957		2.679		0.961	9.681
Leverage/AT	0.362		0.198		1.529		0	0.727
R&D/AT	0.202		0.02		0.787		0	0.689
MTB	1.511		0.727		2.348		0.004	5.875
NWC/AT	0.120		0.239		1.123		-0.214	0.78
CAPEX/AT	0.044		0.03		0.048		0.001	0.141
FCF/AT	0.195		0.146		0.181		0.023	0.660
CFV/AT	0.098		0.036		0.163		0.003	0.358
ROA	0.085		0.122		0.090		-0.028	0.273
State-Level EPU Index	78.555		69.931		47.796		33.988	140.795
State-Level Unemployment Rate	6.26		5.767		2.074		3.475	10.192
State-Level GDP	13.034		13.097		0.725		11.663	14.255
State-Level GDP Growth Rate	3.947		3.931		2.718		-1.817	8.69

The analysis of descriptive statistics in Table 11, Panel A, provides a comparative view of the treatment group (5,276 observations) and the control group (19,964 observations), focusing on the impact of U.S. local newspaper closures on information asymmetry and corporate cash holdings. This analysis is vital for understanding how the reduction in local news coverage influences the degree of information asymmetry and its subsequent effects on corporate financial behaviour, particularly in terms of cash management.

Corporate cash holdings measures show a clear distinction between the two groups. Firms in the treatment group, affected by local newspaper closures, hold higher cash reserves, with *Cash/AT* averaging 0.288 compared to 0.197 in the control group. Similarly, *Cash/AN* is higher in the treatment group, averaging 1.095 versus 0.660 in the control group. This suggests that the increased information asymmetry resulting from reduced local media coverage may drive firms to accumulate cash as a precautionary measure against the uncertainties arising from insufficient information. This observation aligns with the findings of Pinowitz et al. (2006), Drobetz et al. (2010), and Couzoff et al. (2022), who demonstrated that firms tend to hold more cash in environments characterised by higher information asymmetry to safeguard against potential financial risks.

The *Bid-Ask Spread*, a key measure of information asymmetry, is notably higher in the treatment group, with a mean of 1.862 compared to 1.747 in the control group. This wider spread reflects the increased transaction costs and risks that occur in markets with greater information asymmetry, where investors find it more challenging to accurately assess firm value. These results are consistent with Chung et al. (1995) and Huang and Stoll (2001), who identified information asymmetry as a major factor contributing to bid-ask spreads, indicating that investors demand a premium to compensate for the lack of reliable information.

The *Number of Analysts* covering firms is slightly higher in the treatment group, with an average of 1.635 compared to 1.524 in the control group. While the difference is modest, it suggests that analyst coverage may be more concentrated in areas where local newspapers are still active, potentially filling the gap left by diminished local news coverage. This observation supports the idea presented by Frankel and Li (2004) and To et al. (2018), who argued that increased analyst coverage can help reduce the effects of information asymmetry by providing more detailed and frequent evaluations of firms.

For the **Short-term Borrowing Dummy**, the negligible mean difference of 0.008 between the treatment and control groups, with a p-value of 0.699, suggests a similar approach to short-term debt across both groups. This aligns with the broader literature that highlights the complexity of debt structuring and its role in liquidity management (Graham et al., 2008; Carrizosa & Ryan, 2017). Although not statistically significant, the slightly higher short-term borrowing in the treatment group might hint at precautionary measures in response to increased uncertainty, as noted by (Berger et al., 2005; Goodell et al., 2021).

The **Dividend Payment Dummy** reveals a slight but significant increase in the likelihood of dividend payments in the treatment group, with a mean difference of 0.003 and a p-value of 0.008. This could indicate that firms in the treatment group are more inclined to pay dividends as a means of signalling financial stability and managing investor perceptions, a strategy supported by agency theory and dividend signalling models (Bhattacharya, 1979; Deshmukh, 2005; Driver et al., 2020). These findings are consistent with the broader literature that associates dividend payments with efforts to mitigate agency problems and reduce information asymmetry (DeAngelo et al., 2006; Kuo et al., 2013; Michaely & Moin, 2022).

The control variables exhibit notable differences between the treatment and control groups, starting with firm size (**Size**). The treatment group shows a slightly larger average firm size (mean of 5.766) compared to the control group (mean of 5.694), with this difference being statistically significant (p=0.001). This suggests that even larger firms, which typically have better access to external capital, may increase their cash holdings in response to heightened information asymmetry, contrasting with studies like Opler et al. (1999) and Bates et al. (2009) that typically associate larger firms with lower cash holdings due to economies of scale and more efficient access to financing. This deviation underscores the complex nature of corporate financial behaviour, particularly in environments where information asymmetry is more pronounced.

Additionally, leverage (**Leverage/AT**) is higher in the treatment group, averaging 0.423 compared to 0.345 in the control group, suggesting that firms in areas with greater information asymmetry may rely more on debt financing due to the higher costs of equity associated with these environments. This finding is in line with Myers and Majluf (1984) and Flannery (1986), who explained how information asymmetry can lead firms to prefer debt over equity to avoid adverse selection costs. Similarly, R&D intensity (**R&D/AT**) is higher in the treatment group, with an average of 0.608 compared to 0.482 in the control group, indicating that firms might invest more

in innovation as a strategy to differentiate themselves in a more opaque market, aligning with insights from Chen et al. (2020).

The market-to-book ratio (**MTB**) shows a slight difference between the groups, with the treatment group averaging 1.586 compared to 1.491 in the control group. This suggests that firms in regions with reduced media coverage may be perceived as having higher growth potential or may face greater perceived risks, reflecting the challenges posed by higher information asymmetry. This aligns with the findings of Fama and French (1992), who noted that firms with higher MTB ratios often face higher levels of risk or are perceived as having greater growth opportunities, a situation likely exacerbated by reduced information flow.

The net working capital (**NWC/AT**) metric reveals a stark contrast, with the treatment group showing an average of 0.061 compared to a significantly negative average of -0.726 in the control group. This difference indicates that firms in the treatment group may be managing their liquidity more conservatively, possibly in response to the heightened uncertainty and risks associated with greater information asymmetry. This observation is supported by studies like those of D'Mello et al. (2008) and Kieschnick et al. (2013), which suggest that firms with higher NWC ratios tend to be more cautious in managing their liquidity, particularly in uncertain environments.
Capital expenditures (**CAPEX/AT**) are slightly lower in the treatment group, averaging 0.04 compared to 0.045 in the control group, suggesting that firms in regions with higher information asymmetry may adopt more conservative investment strategies. This aligns with findings from studies such as Almeida et al. (2004) and Locorotondo et al. (2014), which suggest that firms tend to scale back on investments when external monitoring or information flow is limited.

Free cash flow *(FCF/AT)* shows minimal differences between the groups, with the treatment group averaging 0.042 compared to 0.041 in the control group. However, the slight increase in the treatment group may indicate a more cautious approach to cash management in the face of increased information asymmetry. This observation aligns with the findings of Jensen (1986), who argued that firms with higher free cash flow in environments with higher information asymmetry may hoard cash to avoid the risks associated with uncertain external conditions. Similarly, cash flow volatility *(CFV/AT)* is higher in the treatment group, with an average of 0.042 compared to 0.036 in the control group, suggesting that firms in regions with reduced media coverage experience greater fluctuations in cash flow, likely due to the higher uncertainty and risks they face. Minton and Schrand (1999) and Han and Qiu (2007) support this observation

by demonstrating that firms in uncertain environments often exhibit greater cash flow volatility as they navigate the challenges posed by higher information asymmetry.

The return on assets (**ROA**) is also higher in the treatment group, averaging 0.095 compared to 0.075 in the control group. This suggests that firms in regions with higher information asymmetry may focus on improving asset efficiency to maintain profitability despite the challenges posed by reduced transparency. Chen et al. (2007) noted that firms in environments with higher information asymmetry often adopt more conservative financial practices, which could explain the higher ROA observed in the treatment group.

State-level economic variables provide further context for these findings. The State-Level Economic Policy Uncertainty (**EPU**) Index is slightly higher in the treatment group, averaging 79.555 compared to 77.555 in the control group, suggesting that newspaper closures may contribute to broader economic uncertainty. Additionally, the state-level **unemployment rate** is higher in the treatment group, averaging 6.627 compared to 6.163 in the control group, indicating that regions with reduced local media coverage may experience more significant economic stress. Furthermore, the state-level **GDP** is slightly higher in the treatment group, averaging 13.154 compared to 13.003 in the control group, while state-level **GDP growth** is lower at 3.616 versus 4.035, suggesting that while the economic size remains stable, growth prospects are more hindered in areas affected by reduced media coverage. These results are consistent with Hong et al. (2022), who demonstrated that media coverage significantly influences economic uncertainty and decision-making processes.

The full sample analysis in Panel B, which includes all 25,240 observations, offers a broader perspective on the impact of information asymmetry on corporate behaviour. The variability in cash holdings, with **Cash/AT** averaging 0.216 and **Cash/AN** averaging 0.763, reflects the diverse strategies firms employ to manage liquidity in environments with varying levels of information asymmetry. These findings are consistent with Bates et al. (2009) and Clarkson et al. (2020), who highlighted that firms tend to hold more cash as a protective measure against the risks associated with higher information asymmetry.

The **Bid-Ask Spread** in the full sample, averaging 1.748, underscores the widespread presence of information asymmetry across firms. Higher bid-ask spreads suggest that investors face challenges in obtaining reliable information, leading to increased transaction costs. This observation aligns with Amihud and Mendelson (1986) and Corwin and Schultz (2012), who

found that liquidity, as reflected in the bid-ask spread, is negatively impacted by information asymmetry.

The *Number of Analysts*, averaging 1.605 across the full sample, further highlights the importance of analyst coverage in mitigating information asymmetry. Analysts play a crucial role in providing more accurate and timely information, helping to reduce the information gap, as supported by Barth et al. (2001) and Chang et al. (2006).

In Panel B, both the *Short-term Borrowing Dummy* and *Dividend Payment Dummy* have mean values around 0.4, suggesting that these strategies are widely employed by firms. The reliance on short-term borrowing supports Flannery (1986) and Morellec and Schürhoff (2011) view that short-term debt can enhance financial discipline by necessitating frequent refinancing, thereby mitigating the risks associated with long-term debt (Shyam-Sunder & Myers, 1999; Anderson & Carverhill, 2012). Similarly, the commonality of dividend payments aligns with the agency theory as articulated by Jensen et al. (1992), where dividends serve to reduce excess cash and limit managerial discretion, thereby curbing agency costs and promoting efficient resource allocation (Farinha, 2003; Lin et al., 2017).

The full sample analysis also includes a range of firm characteristics control variables that offer insights into the broader financial and operational profiles of these firms. Firm size *(Size)*, with an average of 5.709, illustrates the diversity in company scales, while leverage (*Leverage/AT*) (0.362) highlights the extent to which firms rely on debt financing. R&D intensity (*R&D/AT*) (0.202) points to the varying degrees of investment in innovation, and capital expenditures (*CAPEX/AT*) (0.044) suggest a conservative approach to investments. Net working capital (*NWC/AT*) (0.120) reflects firms' liquidity management strategies. Free cash flow (*FCF/AT*) (0.195) indicates the cash available after essential expenditures, while cash flow volatility (*CFV/AT*) (0.098) underscores the financial uncertainty across firms. The market-to-book ratio (*MTB*) averaging 1.511 suggests firms' growth potential and perceived risks, aligning with Fama and French (1992) and Gross et al. (2024), who highlighted MTB's role in growth opportunities and risk assessment. Additionally, return on assets (*ROA*) averaging 0.085 reflects firms' efficiency in utilising their assets to generate earnings, resonating with studies by Harford (1999) and Chen et al. (2007), who associated higher ROA with better management performance. These characteristics are crucial for understanding how firms navigate information asymmetry, as highlighted by studies like Dittmar et al. (2003), Han and Qiu, (2007), Lins et al. (2010), Leary and Roberts (2010), Chung et al. (2015), and Chen et al. (2024).

Finally, the state-level economic indicators in Panel B, including the *EPU* index, *unemployment rates*, *GDP* and *GDP growth rate*, provide a broader economic context for understanding the effects of information asymmetry. The variability across these indicators suggests that information asymmetry can significantly impact economic stability and growth, aligning with the findings of Roll (1988), Tetlock (2007), and Bushman et al. (2017), who studied the influence of media and information flow on economic outcomes.

Overall, the analysis of Panels A and B from Table (11) reveals that firms affected by local newspaper closures tend to adjust their cash holdings and other financial strategies in response to increased information asymmetry. The univariate statistics show significant differences between the treatment and control groups, highlighting the impact of media closures on corporate behaviour. The full sample descriptive statistics provide additional context, illustrating the broader financial landscape in which these firms operate. The findings underscore the importance of information availability in shaping corporate financial decisions, particularly in environments characterised by uncertainty and risk. These insights contribute to the broader literature on cash holdings, information asymmetry, and corporate governance.

4.4.6 Pairwise Correlations

Table (12) Pairwise Correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Treatment Firm*Post	1.000															
Cash/Total Assets	0.146*	1.000														
Cash/Net Assets	0.040*	0.665*	1.000													
Bid-Ask Spread	0.025*	0.223*	0.155*	1.000												
Number of Analysts	-0.053*	-0.035*	-0.011*	-0.150*	1.000											
Short-term Borrowing	-0.032*	-0.114*	-0.045*	-0.268*	-0.032*	1.000										
Dividend Payment	-0.063*	-0.299*	-0.174*	-0.032*	-0.095*	-0.150*	1.000									
Size	-0.011*	-0.355*	-0.233*	-0.187*	0.438*	0.739*	-0.235*	1.000								
Leverage/TA	-0.025*	-0.514*	-0.637*	0.029*	-0.169*	-0.173*	0.014*	-0.264*	1.000							
R&D/TA	0.021*	0.001	0.015*	0.691*	-0.066*	-0.201*	-0.005*	-0.195*	0.054*	1.000						
MTB	0.024*	0.233*	0.098*	0.008*	-0.015*	0.083*	-0.100*	0.008*	0.128*	0.002	1.000					
NWC/TA	-0.021*	0.076*	0.040*	-0.661*	0.065*	0.322*	0.012*	0.292*	-0.092*	-0.579*	0.001	1.000				
CAPEX/TA	-0.044*	-0.206*	-0.160*	0.000	0.050*	0.121*	-0.049*	0.081*	-0.112*	-0.018*	0.009*	-0.019*	1.000			
Free Cash Flow	0.001	0.141*	0.127*	0.410*	-0.130*	-0.391*	0.026*	-0.437*	0.167*	0.395*	0.042*	-0.689*	-0.045*	1.000		
Cash Flow Volatility	0.010*	0.138*	0.115*	0.403*	-0.132*	-0.357*	0.011*	-0.397*	0.171*	0.410*	0.034*	-0.681*	-0.034*	0.780*	1.000	
ROA	-0.060*	-0.286*	-0.283*	-0.068*	0.097*	0.111*	0.018*	0.073*	-0.314*	-0.043*	0.003	0.051*	0.068*	-0.081*	-0.086*	1.000

* Indicate statistical significance at p<0.05

Table (12) displays the pairwise correlation coefficients between the variables. The results reveal that cash holdings are positively correlated with the bid-ask spread but negatively correlated with the number of analysts, short-term borrowing, and dividend payments. Additionally, the control variables exhibit a positive correlation with cash holdings for Market-to-Book Ratio, Free Cash Flow, and Cash Flow Volatility, while displaying a negative correlation for Size, Leverage, Working Capital, Capital Expenditure, and ROA.

However, it is essential to note that correlation coefficients only offer insights into the linear relationship between variables and do not establish causality. To establish a causal relationship between cash holdings and other variables, further analysis and testing are required. Additionally, there may be other interactions could play a crucial role in explaining the relationships between the examined variables. Therefore, a more in-depth empirical analysis is essential to arrive at conclusive interpretations.

4.5 Empirical Analysis

4.5.1 Baseline Model - Hypothesis (1) Empirical Testing:

To examine the research hypotheses, a staggered difference-in-differences (DID) approach is employed to empirically assess the effect of local newspaper closures on the cash holdings behaviour of neighbouring firms over the sample period. This method is particularly well-suited for evaluating the causal impact of staggered events, such as newspaper closures, across different times and locations. The analysis begins with the baseline regression Model (7) and addresses the first hypothesis H_1, which posits that the closure of local newspapers leads to an increase in the cash holdings of nearby firms due to heightened information asymmetry. This approach enables a robust examination of temporal and spatial variations in corporate cash management, effectively isolating the impact of newspaper closures from other confounding factors. The baseline regression Model (7) can be written as follows:

$$ln(CASH\_HOLD)_{i,t} = a_0 + a_1 Treat\_firm_{i,t} * Post_{i,t} + a_2 Post_{i,t} + a_3 Treat\_firm_{i,t} + a_4 Size_{i,t-1} +$$
$$a_5 LEV_{i,t-1} + a_6 R\&D_{i,t-1} + a_7 MTB_{i,t-1} + a_8 NWC_{i,t-1} + a_9 Capex_{i,t-1} + a_{10} FCF_{i,t-1} + a_{11} CFV_{i,t-1} +$$
$$a_{12} ROA_{i,t-1} + Year\ FE + Year * State\ FE + \varepsilon_{i,t} \tag{7}$$

Table (13) H_1 Baseline Empirical Results

The following table reports the baseline results of the Ordinary Least Squares (OLS) regression models with clustered standard errors and fixed-effects models. The dependent variable is the natural logarithm to the division of cash and cash equivalents scaled by either total assets $ln(Cash/AT)_{i,t}$ or net assets $ln(Cash/AN)_{i,t}$ for firm i at time t. The primary independent (explanatory) variable is the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. This binary variable is set to **1** if the firm is part of the treatment group (i.e., experiencing media closure) during the post-treatment period (i.e., after the media closure) and **0** otherwise. This variable captures the treatment effect of media closure on cash holdings. $Treat\_firm_{i,t}$ is a binary variable that equals **1** if firm i belongs to the treatment group, and **0** otherwise. $Post_{i,t}$ is a binary variable that equals **1** for years after the media closure event, and **0** otherwise. Control variables are also incorporated to capture other firm-specific characteristics, including firm $Size_{i,t-1}$ a continuous variable that measures the log of total assets of firm i in period t_{-1}, used as a proxy for firm size. $LEV_{i,t-1}$ is a continuous variable that measures a firm's i total debt level relative to its total assets in period t_{-1}. Research and development expenditures $R\&D_{i,t-1}$ is a continuous variable that measures a firm's i research and development expenses relative to its total assets in period t_{-1}. Market-to-book ratio $MTB_{i,t-1}$ is a continuous variable that measures a firm's i market-to-book ratio in period t_{-1}. $NWC_{i,t-1}$ is a continuous variable that measures a firm's i net working capital relative to its total assets in period t_{-1}. Capital expenditures to total assets. $Capex_{i,t-1}$ is a continuous variable that measures a firm's i capital expenditures relative to its total assets in period t_{-1}. Free cash flow $FCF_{i,t-1}$ is a continuous variable that measures a firm's i free cash flow relative to its assets in period t_{-1}. Cash flow volatility $CFV_{i,t-1}$ is continuous variable that measures a firm's i cash flow volatility in period t_{-1}. Return on assets $ROA_{i,t-1}$ is a continuous variable that measures a firm's i return on assets in period t_{-1}. The model incorporates fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time-varying effects, and location-specific influences, enhancing the robustness of the estimates and reducing potential biases in the analysis of corporate cash holdings. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (2)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	(1) Ln(Cash/AT) Clustered SE	(2) Ln(Cash/AN) Clustered SE	(3) Ln(Cash/AT) Clustered SE	(4) Ln(Cash/AN) Clustered SE	(5) Ln(Cash/AT) Fixed Effects	(6) Ln(Cash/AN) Fixed Effects	(7) Ln(Cash/AT) Fixed Effects	(8) Ln(Cash/AN) Fixed Effects
Treatment Firm	0.347***	0.288***	0.239***	0.302***	0.211***	0.207***	0.177**	0.252**
	(0.045)	(0.064)	(0.044)	(0.056)	(0.065)	(0.080)	(0.083)	(0.101)
Post	-0.022	-0.033	-0.143***	-0.201***	-0.075***	-0.135***	-0.191***	-0.247***
	(0.028)	(0.036)	(0.048)	(0.058)	(0.015)	(0.018)	(0.036)	(0.044)
Treatment Firm*Post	0.376***	0.526***	0.379***	0.309***	0.328***	0.242***	0.368***	0.283***
	(0.038)	(0.052)	(0.043)	(0.056)	(0.024)	(0.029)	(0.028)	(0.034)
Size (Ln AT)			-0.115***	-0.166***			-0.089***	-0.070***
			(0.007)	(0.009)			(0.012)	(0.015)
LEV/AT			-0.044***	-0.059***			-0.015***	-0.028***
			(0.012)	(0.018)			(0.005)	(0.006)
R&D/AT			0.127***	0.293***			0.037***	0.144***
			(0.006)	(0.011)			(0.005)	(0.006)
MTB			0.055***	0.074***			0.013***	0.016***
			(0.005)	(0.007)			(0.003)	(0.004)
NWC/AT			0.000	0.001			-0.001***	-0.001***
			(0.000)	(0.001)			(0.000)	(0.000)
CAPEX/AT			-1.251***	-2.532***			-0.749***	-1.733***
			(0.293)	(0.373)			(0.192)	(0.234)
FCF/AT			0.176***	0.289***			0.083***	0.168***
			(0.022)	(0.034)			(0.015)	(0.018)
CFV/AT			0.007***	0.007***			0.003***	0.000
			(0.001)	(0.001)			(0.001)	(0.001)
ROA			-0.212***	-0.480***			-0.104***	-0.105***
			(0.040)	(0.056)			(0.033)	(0.040)
Constant	-2.399***	-2.033***	-1.278	-0.450	-2.302***	-1.844***	-1.539***	-0.984
	(0.031)	(0.041)	(0.895)	(1.011)	(0.027)	(0.033)	(0.568)	(0.692)
R-squared	0.044	0.033	0.289	0.384	0.011	0.004	0.050	0.064
No. of Firms	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726
Firm FE	No	No	No	No	Yes	Yes	Yes	Yes
Year FE	No	No	Yes	Yes	No	No	Yes	Yes
Year*State FE	No	No	Yes	Yes	No	No	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240	25,240	25,240	25,240	25,240	25,240

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table (13) presents the baseline empirical results testing the first hypothesis of this essay, which examines the impact of U.S. local newspaper closures on corporate cash holdings through the lens of information asymmetry. The table provides a comprehensive comparison between the outcomes of Ordinary Least Squares (OLS) regression models with clustered standard errors and fixed effects models, illustrating how newspaper closures across different locations and time periods influence corporate cash management. The staggered difference-in-differences (DID) approach, applied in this study, is particularly effective in capturing the causal effects of staggered events like newspaper closures on corporate behaviour. This research, based on a robust dataset encompassing 25,240 firm-year observations across 2,726 firms from 1986 to 2021, elaborate on how the reduction in the availability of timely and relevant information due to local newspaper closures impacts firms' strategies for managing cash holdings.

The first four columns of Table (13) present the results from the OLS regression models with clustered standard errors. Columns (1) and (2) offer baseline estimates without control variables, while Columns (3) and (4) incorporate a comprehensive set of controls. Concurrently, Columns (5) through (8) display the results from the fixed-effects models, with Columns (5) and (6) excluding controls and Columns (7) and (8) including them. Comparing these two modelling approaches provides insights into the impact of newspaper closures on cash holdings while accounting for firm-specific unobserved heterogeneity and other covariates.

In the OLS models, the interaction term **Treatment Firm*Post** is consistently positive and statistically significant, with coefficients ranging from 0.376 to 0.526. This suggests that firms in areas affected by newspaper closures increase their cash reserves, supporting the agency theory which posits that reduced external monitoring results in greater managerial discretion, heightened information asymmetry, and consequently, increased cash hoarding (Jensen & Meckling, 1976; Jensen, 1986). The modest reduction in coefficients when control variables are added (Columns 3 and 4) implies that the increase in cash holdings is not solely attributable to firm-specific characteristics but also reflects the diminished availability of timely and relevant information. This finding aligns with prior studies by Myers (1984), Opler et al. (1999), Han and Qiu (2007), and Bates et al. (2009), which observed that firms typically boost cash reserves under conditions of heightened uncertainty and reduced access to external financing.

The fixed-effects models, presented in Columns (5) through (8), further validate these results. Although the coefficients are slightly lower, ranging from 0.242 to 0.368, they remain positive

and significant, underscoring the robustness of the findings. Fixed-effects models are designed to control for unobserved firm-specific characteristics that do not vary over time (Allison, 2009; Baltagi, 2021) . This is crucial because it addresses biases related to omitted variables that are constant within firms but could influence the dependent variable (cash holdings). By focusing on within-firm variation, these models provide a more precise estimate of the impact of newspaper closures on cash holdings, isolating the effect of the treatment from other stable firm-specific factors. This control enhances the robustness of the results by mitigating potential biases due to unobserved heterogeneity (Wooldridge, 2010; Bell & Jones, 2015).

The persistent positive coefficients across both OLS and fixed-effects models suggest that the increase in cash holdings is driven more by the broader effects of reduced information availability than by specific firm characteristics. The closure of local newspapers intensifies information asymmetry, making it challenging for firms to rely on external market signals and thereby encouraging a precautionary increase in cash reserves (Han & Qiu, 2007; Gao et al., 2013; Friberg & Seiler, 2017; Clarkson et al., 2020). The higher coefficients in the OLS clustered SE models indicate that unobserved firm-specific factors may amplify the relationship between media closures and cash holdings, consistent with agency theory, where reduced external monitoring heightens managerial discretion and potentially leads to increased cash retention (Jensen, 1986; Dittmar & Mahrt-Smith, 2007; Harford et al., 2008). Additionally, the results resonate with the pecking order theory (Myers & Majluf, 1984), which posits that firms Favor internal financing over external sources to mitigate the adverse effects of information asymmetry on financing costs.

These findings are corroborated by research indicating that reduced media coverage can weaken external governance mechanisms, leading to increased managerial discretion and heightened information asymmetry (Kim et al., 2021; Heese et al., 2022; Jiang & Kong, 2023), which, in turn, could result in higher cash reserves. The positive relationship between cash flow volatility and cash holdings, particularly in the fixed-effects models, highlights the crucial role of media as an information provider in mitigating the adverse effects of information asymmetry on corporate decision-making (Bednar, 2012; Gao et al., 2020). Furthermore, Dyck and Zingales (2002) and Miller (2006) underscore the importance of media coverage in holding managers accountable and reducing agency costs. Liu and McConnell (2013) similarly argue that media scrutiny mitigates managerial opportunism by providing timely and relevant information to investors. The significant coefficients in the OLS models suggest that the

absence of local newspapers exacerbates information asymmetry, compelling firms to increase their cash reserves as a precautionary measure against potential risks and uncertainties.

In the empirical analysis presented in Table (13), several control variables were incorporated to ensure the robustness of the findings and to account for firm-specific characteristics that could influence corporate cash holdings. These control variables include firm size, leverage, R&D expenditures, market-to-book ratio, net working capital, capital expenditures, free cash flow, cash flow volatility, and return on assets.

Firm size *(Size)* shows a consistent negative relationship with cash holdings across all models. Larger firms, as indicated by a lower coefficient, generally hold less cash relative to their assets. This pattern supports the trade-off theory, which suggests that larger firms benefit from superior access to capital markets and lower transaction costs, thus reducing their need for precautionary cash reserves (Palazzo, 2012; Magerakis et al., 2022). This finding is corroborated by Opler et al. (1999) and Bates et al. (2009), who similarly observed that larger firms maintain smaller cash buffers due to their enhanced external financing capabilities. Importantly, the fixed-effects models reveal a more pronounced negative relationship, reinforcing the trade-off theory's predictions by accounting for firm-specific factors (D'Mello et al., 2008; Jayakody et al., 2023).

Turning to leverage *(LEV/AT)*, the analysis demonstrates a negative and significant relationship with cash holdings across both OLS and fixed-effects models. This outcome reflects a tendency for firms with higher debt levels to prioritise debt servicing over accumulating cash (Frank & Goyal, 2008; Lee et al., 2023). This observation aligns with the pecking order theory (Myers & Majluf, 1984), which posits that firms with greater leverage prefer debt over equity to avoid adverse selection costs. Supporting this view, studies by Flannery (1986), Almeida et al. (2004), and Leary and Roberts (2010) highlight how information asymmetry influences firms' financing choices, further underscoring the negative relationship between leverage and cash holdings.

In contrast, R&D expenditures *(R&D/AT)* exhibit a positive and significant association with cash holdings. Firms with high R&D intensity tend to maintain larger cash reserves, likely to buffer against liquidity risks. This aligns with the findings of Chen et al. (2020) and Magerakis et al. (2022), who underline the strategic importance of cash retention for innovation-driven firms. The higher coefficients in the fixed-effects models suggest that, when accounting for firm-specific factors, the impact of R&D intensity on cash holdings is more pronounced, reinforcing the precautionary motive for cash retention (Brown & Petersen, 2011; Fulghieri et al., 2020).

The market-to-book ratio *(MTB)*, on the other hand, shows a positive correlation with cash holdings across all models. Firms with higher growth opportunities are more inclined to retain cash, consistent with the trade-off theory. This theory suggests that firms with valuable growth options hold cash to avoid underinvestment (Magerakis et al., 2023). The findings are supported by Fama and French (1998) and Denis and Osobov (2008), who observed that firms with higher MTB ratios accumulate more cash, particularly when external financing is less accessible. The observed positive relationship suggests that firms with high growth potential respond to local newspaper closures by increasing cash reserves, reflecting a heightened precautionary approach (Nyborg & Wang, 2021; Sun et al., 2023).

Net working capital *(NWC/AT)* reveals a mixed relationship with cash holdings. While the OLS models show statistically insignificant coefficients, the fixed-effects models indicate a negative and significant relationship. This suggests that firms with higher net working capital hold less cash, which aligns with the precautionary motive theory (Ferreira & Vilela, 2004; Clarkson et al., 2020). Specifically, firms with ample working capital are less inclined to increase cash reserves. This finding is consistent with studies by D'Mello et al. (2008) and Kieschnick et al. (2013), who suggest that firms with higher NWC ratios manage liquidity more conservatively in uncertain environments.

Similarly, capital expenditures *(CAPEX/AT)* exhibit a negative and significant relationship with cash holdings. Firms with higher capital spending are less likely to retain cash, reflecting the free cash flow hypothesis (Jensen, 1986; Guney et al., 2007). This hypothesis asserts that managers allocate excess cash to investments that enhance firm value rather than hoarding it (Harford et al., 2008; Iskandar-Datta & Jia, 2012). The observed negative relationship, consistent across OLS and fixed-effects models, supports this view and aligns with findings from Almeida et al. (2004), Locorotondo et al. (2014), and Zhang and Zhou (2022), who noted that firms with significant capital expenditures prioritise long-term investments over short-term cash accumulation.

Regarding free cash flow *(FCF/AT)*, the analysis shows a positive and significant relationship with cash holdings. Firms with higher free cash flow tend to hoard more cash, consistent with Jensen (1986) agency theory. This theory posits that managers may retain excess cash to maintain control over firm resources (Chen et al., 2020; Root & Yung, 2022). The robust positive relationship observed in both OLS and fixed-effects models emphasises the role of

free cash flow in driving cash retention strategies, particularly following local newspaper closures (Dittmar et al., 2003; Ozkan & Ozkan, 2004; Kim et al., 2021).

Cash flow volatility *(CVF/AT)* also demonstrates a positive and significant relationship with cash holdings. Firms with more unpredictable cash flows are likely to maintain larger cash buffers to manage financial risks and uncertainty, especially in the absence of local media as a reliable information source. This finding aligns with Minton and Schrand (1999), Han and Qiu (2007), and Spiropoulos and Zhao (2023), who observed that firms with higher cash flow volatility tend to increase cash reserves as a safeguard against financial instability.

In summary, Table (13) reveals that the closure of local newspapers significantly affects corporate cash holdings, leading firms to increase their cash reserves. This response challenges the conventional view that larger firms, typically having better capital access, maintain lower cash levels (Opler et al., 1999; Harford et al., 2008; Bates et al., 2009). Increased cash holdings are observed in firms with higher leverage (Myers & Majluf, 1984) and those with substantial R&D investments (Chen et al., 2020). The positive correlation between market-to-book ratios and cash reserves underscores the precautionary motive behind this behaviour (Fama & French, 1992). Overall, the findings highlight the critical role of external information sources in shaping corporate financial strategies. As local media declines, firms adopt more conservative cash management practices, reflecting the significant impact of information asymmetry on financial decision-making.

4.5.2 *Hypothesis (2) Empirical Testing through Bid-Ask Spread*

To test H_2, which suggests that the closure of local U.S. newspapers increases information asymmetry, measured by the *Bid-Ask Spread*, leading to increased corporate cash holdings of nearby firms, the following empirical Model (8) is estimated:

$ln(CASH\_HOLD)_{i,t} = a_0 + a_1 Treat\_firm_{i,t} * Post_{i,t} + a_2 Post_{i,t} + a_3 Treat\_firm_{i,t} +$
$a_4 Bid\_Ask\_Spread_{i,t} + a_5 Treat\_firm_{i,t} * Post_{i,t} * Bid\_Ask\_Spread_{i,t} + a_6 Size_{i,t-1} + a_7 LEV_{i,t-1} +$
$a_8 R\&D_{i,t-1} + a_9 MTB_{i,t-1} + a_{10} NWC_{i,t-1} + a_{11} Capex_{i,t-1} + a_{12} FCF_{i,t-1} + a_{13} CFV_{i,t-1} + a_{14} ROA_{i,t-1} +$
$Year\ FE + Year * State\ FE + \varepsilon_{i,t}$ $\hspace{2cm} (8)$

Table (14) H₂ Empirical Results through Bid-Ask Spread

The below table presents the results of the Ordinary Least Squares (OLS) regression models with clustered standard errors and fixed-effects models through Corporate Governance Score. The dependent variable is the natural logarithm to the division of cash and cash equivalents scaled by either total assets $ln(Cash/AT)_{i,t}$ or net assets $ln(Cash/AN)_{i,t}$ for firm i at time t. The primary independent (explanatory) variable is the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. This binary variable is set to **1** if the firm is part of the treatment group (i.e., experiencing media closure) during the post-treatment period (i.e., after the media closure) and **0** otherwise. This variable captures the treatment effect of media closure on cash holdings. $Treat\_firm_{i,t}$ is a binary variable that equals **1** if firm i belongs to the treatment group, and **0** otherwise. $Post_{i,t}$ is a binary variable that equals **1** for years after the media closure event, and **0** otherwise. $Bid\_Ask\_Spread_{i,t}$ is a proxy of information asymmetry and is expected to have a positive effect on cash holdings for firm i at time t. $Treat\_firm_{i,t} * Post_{i,t} * Bid\_Ask\_Spread_{i,t}$ is an interaction term between the $Treat\_firm_{i,t} * Post_{i,t}$ and $Bid\_Ask\_Spread_{i,t}$. This triple-interaction term captures the combined effect of media closures and the bid-ask spread on the level of corporate cash holdings. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (13) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (2)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	(1) Ln(Cash/AT) Clustered SE	(2) Ln(Cash/AN) Clustered SE	(3) Ln(Cash/AT) Fixed Effects	(4) Ln(Cash/AN) Fixed Effects
Treatment Firm	0.241***	0.314***	0.154*	0.221**
	(0.042)	(0.055)	(0.083)	(0.101)
Post	-0.138***	-0.192***	-0.185***	-0.237***
	(0.048)	(0.058)	(0.036)	(0.044)
Bid-Ask Spread	0.050***	0.058***	0.035***	0.035***
	(0.015)	(0.020)	(0.010)	(0.013)
Treatment Firm*Post	0.436***	0.383***	0.400***	0.332***
	(0.044)	(0.056)	(0.028)	(0.035)
Treatment Firm*Post*Bid-Ask Spread	0.067***	0.098***	0.049***	0.057***
	(0.018)	(0.026)	(0.012)	(0.015)
Size (Ln AT)	-0.146***	-0.205***	-0.121***	-0.110***
	(0.009)	(0.013)	(0.013)	(0.016)
LEV/AT	-0.480***	-0.621***	-0.252***	-0.362***
	(0.041)	(0.057)	(0.021)	(0.026)
R&D/AT	0.121***	0.287***	0.033***	0.139***
	(0.006)	(0.011)	(0.005)	(0.006)
MTB	0.050***	0.068***	0.009***	0.009**
	(0.005)	(0.007)	(0.003)	(0.004)
NWC/AT	0.000	0.001	-0.001***	-0.001*
	(0.000)	(0.001)	(0.000)	(0.000)
CAPEX/AT	-0.180	-0.426	-0.103*	-0.250***
	(0.208)	(0.387)	(0.062)	(0.076)
FCF/AT	0.044*	0.122***	0.048***	0.123***
	(0.025)	(0.036)	(0.015)	(0.019)
CFV/AT	0.006***	0.007***	0.002***	0.001**
	(0.001)	(0.001)	(0.001)	(0.001)
ROA	-0.254***	-0.536***	-0.096***	-0.096**
	(0.039)	(0.055)	(0.033)	(0.040)
Constant	-1.139	-0.341	-1.405**	-0.894
	(0.900)	(1.019)	(0.566)	(0.689)
R-squared	0.310	0.402	0.057	0.072
No. of Firms	2,726	2,726	2,726	2,726
Firm FE	No	No	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240	25,240

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table (14) presents the results of H_2, examining the impact of media closure on corporate cash holdings through the lens of the bid-ask spread, utilised as a proxy for information asymmetry while controlling for various firm characteristics. The models are estimated using the OLS (Clustered SE) and Fixed-effects approaches, with *Ln(Cash/TAS)* and *Ln(Cash/NAS)* as dependent variables.

The results show that the interaction term between ***Treatment Firm*Post*** has a positive and significant effect on corporate cash holdings. This suggests that firms tend to increase their cash

reserves following a media closure event, which is consistent with the precautionary motive of holding cash (Opler et al., 1999; Han & Qiu, 2007; Bates et al., 2009). Moreover, the coefficients of the triple-interaction term *Treatment Firm*Post*Bid-Ask Spread* are also significant in all models (OLS 0.067, 0.098, Fixed-effects 0.049, 0.057). This indicates that the effect of media closure on cash holdings is more pronounced for firms with a higher bid-ask spread. This suggests that media closure exacerbates information asymmetry and increases uncertainty, leading firms to hold more cash as a precautionary measure to mitigate adverse effects of transaction costs associated with wider bid-ask spreads (Myers & Majluf, 1984; Chung et al., 2015).

The findings are consistent with corporate cash theories that shed light on the reasons behind firms' cash holdings in the presence of information asymmetry and their proactive approach to reducing reliance on expensive external financing by increasing cash reserves (Drobetz et al., 2010; Leary & Roberts, 2010). Specifically, the pecking order theory emphasises that firms prioritise the use of internal funds, including cash, over external financing due to the negative impact of information asymmetry on the costs associated with obtaining external funds (Myers, 1984; Bharath et al., 2009).

Furthermore, the free cash flow theory offers further insights into the behaviour of firms facing significant information asymmetry, particularly in the context of local media closure. In such circumstances, firms may accumulate excess cash, which can be attributed to heightened agency problems stemming from managers' potential opportunistic behaviour, including investments in projects with negative net present value (Jensen, 1986).

The results of H_2 align with the argument that media coverage helps to mitigate information asymmetry and frictions by providing investors with accurate and timely information about firms (Chan, 2003; Frankel & Li, 2004; Tetlock, 2010). This finding is also consistent with the idea that wider bid-ask spreads signal greater information asymmetry and potentially more adverse selection problems (Glosten & Harris, 1988; Huang & Stoll, 1997). In response to the negative information shock resulting from local newspaper closures, firms experience increased information asymmetry, as noted by Kim et al. (2021). This heightened asymmetry may prompt corporate managers to increase their cash reserves. Such a strategy serves as a buffer against the high costs of external financing, aligning with the findings of Dittmar et al. (2003).

The results also corroborate the conclusions of D'Mello et al. (2008), which indicate that firms facing substantial information asymmetry between managers and investors incur higher

adverse selection costs when seeking external funding. To address this dilemma, these firms tend to maintain larger cash reserves as a strategic measure to reduce their reliance on issuing new securities, thus ensuring a more stable financial path with less dependence on external financing sources.

The study findings suggest that media closures can lead to a reduction in the flow of information, which can increase uncertainty and have an impact on corporate cash holdings attitude (Duong et al., 2020). Furthermore, the outcomes are consistent with the notion that higher bid-ask spreads signal greater information asymmetry and increased transaction costs, which can reduce liquidity and motivate firms to stockpile cash (Opler et al., 1999; Almeida et al., 2004; Han & Qiu, 2007). Thus, the results imply that media closures can have a significant impact on firms' financial decisions and highlight the importance of timely and accurate information in corporate decision-making.

Table (14) outlines various control variables affecting corporate cash holdings. In line with Opler et al. (1999) findings, the leverage ratio, firm size, and return on assets are negatively related to cash holdings. On the other hand, Pinkowitz et al. (2006) inclined that factors such as research expenses, the market-to-book ratio, free cash flow, and cash flow volatility have a positive impact, further supporting the study outcomes. These control variables collectively yield insights into the different factors influencing a company's decisions on cash holdings.

It is important to note that OLS (Clustered SE) models may be more susceptible to omitted variable bias compared to Fixed-effects models. While Fixed-effects models typically exhibit lower R-squared values, suggesting they explain less variation in corporate cash holdings, they offer the advantage of controlling for time-invariant firm-specific factors that could influence the relationship between media closure and cash holdings. Therefore, in this specific case, Fixed-effects models are likely to provide more robust results (Wooldridge, 2010).

In summary, the results in Table (14) support H_2, which suggests that media closures increase uncertainty and exacerbate information asymmetry, leading to potential impacts on corporate cash holdings. Firms may respond to this situation by holding more cash as a precautionary measure to mitigate the adverse effects of information asymmetry and transaction costs associated with wider bid-ask spreads. This is particularly important given the agency dilemma and the risk of opportunistic behaviour by managers who may invest in value-destroying projects (Harford et al., 2008; Kim et al., 2021). The findings highlight the importance of timely

and accurate information in corporate decision-making and suggest that media closures can have a significant impact on firms' financial decisions.

4.5.3   Hypothesis (3) Empirical Testing through Number of Analysts

To support the research argument and enhance the initial findings, H_3 propose utilising the total number of analysts following a firm as an alternative measure for information asymmetry. Previous research suggests that the total number of analysts covering a firm can act as a surrogate measure for information asymmetry. This is because the greater the number of analysts monitoring a company, the more information is available to the public, thereby decreasing the information asymmetry between insiders and outsiders (Frankel & Li, 2004; Chae, 2005).

Chang et al. (2006) found that an increase in the number of analysts following a company can disclose and disseminate additional information to the public, thereby lessening the level of information asymmetry. This is because a higher number of analysts following a firm increases the likelihood of discovering valuable insights into the company's performance and future prospects. Consequently, investors can access more precise and up-to-date information about the firm, which can help them make better-informed investment decisions.

To examine H_3, a multiple regression model is employed, incorporating a triple-interaction term to capture the joint impact of media closure shock and the total number of analysts following a firm on the corporate cash holdings level. Additionally, controls for various firm characteristics, including leverage, size, R&D, and year fixed effects, are integrated. The representation of Model (9) is as follows:

$$ln(CASH\_HOLD)_{i,t} = a_0 + a_1 Treat\_firm_{i,t} * Post_{i,t} + a_2 Post_{i,t} + a_3 Treat\_firm_{i,t} +$$
$$a_4 No\_of\_Analysts_{i,t} + a_5 Treat\_firm_{i,t} * Post_{i,t} * No\_of\_Analysts_{i,t} + a_6 Size_{i,t-1} + a_7 LEV_{i,t-1} +$$
$$a_8 R\&D_{i,t-1} + a_9 MTB_{i,t-1} + a_{10} NWC_{i,t-1} + a_{11} Capex_{i,t-1} + a_{12} FCF_{i,t-1} + a_{13} CFV_{i,t-1} + a_{14} ROA_{i,t-1} +$$
$$Year\ FE + Year * State\ FE + \varepsilon_{i,t} \qquad\qquad (9)$$

Table (15) H_3 Empirical Results through Number of Analysts
The below table presents the results of the Ordinary Least Squares (OLS) regression models with clustered standard errors and fixed-effects models through Corporate Governance Score. The dependent variable is the natural logarithm to the division of cash and cash equivalents scaled by either total assets $ln(Cash/AT)_{i,t}$ or net assets $ln(Cash/AN)_{i,t}$ for firm i at time t. The primary independent (explanatory) variable is the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. This binary variable is set to **1** if the firm is part of the treatment group (i.e., experiencing media closure) during the post-treatment period (i.e., after the media closure) and **0** otherwise. This variable captures the treatment effect of media closure on cash holdings. $Treat\_firm_{i,t}$ is a binary variable that equals **1** if firm i belongs to the treatment group, and **0** otherwise. $Post_{i,t}$ is a binary variable that equals **1** for years after the media closure event, and **0** otherwise. $No\_of\_Analysts_{i,t}$ is a proxy of information asymmetry denoting for the number of analysts following the firm i and is expected to have a negative effect on cash holdings at time t. $Treat\_firm_{i,t} * Post_{i,t} * No\_of\_Analysts_{i,t}$ is an interaction term between the $Treat\_firm_{i,t} * Post_{i,t}$ and $Number\_of\_Analysts_{i,t}$. This triple-interaction term captures the joint effect of the media closure and the number of analysts following the firm on the level of corporate cash holdings. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (13) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (2)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	(1) Ln(Cash/AT) Clustered SE	(2) Ln(Cash/AN) Clustered SE	(3) Ln(Cash/AT) Fixed Effects	(4) Ln(Cash/AN) Fixed Effects
Treatment Firm	0.241***	0.313***	0.263**	0.236**
	(0.042)	(0.055)	(0.083)	(0.101)
Post	-0.139***	-0.194***	-0.189***	-0.243***
	(0.048)	(0.058)	(0.036)	(0.044)
No. of Analysts	-0.045**	-0.070***	-0.058***	-0.072***
	(0.019)	(0.023)	(0.020)	(0.024)
Treatment Firm*Post	0.183***	0.135***	0.167***	0.118**
	(0.061)	(0.018)	(0.044)	(0.053)
Treatment Firm*Post* No. of Analysts	-0.342***	-0.439***	-0.200***	-0.310***
	(0.070)	(0.103)	(0.056)	(0.069)
Size (Ln AT)	-0.128***	-0.184***	-0.108***	-0.097***
	(0.007)	(0.010)	(0.013)	(0.015)
LEV/AT	-0.513***	-0.665***	-0.258***	-0.369***
	(0.042)	(0.057)	(0.021)	(0.026)
R&D/AT	0.122***	0.288***	0.035***	0.142***
	(0.006)	(0.011)	(0.005)	(0.006)
MTB	0.050***	0.067***	0.010***	0.011***
	(0.005)	(0.007)	(0.003)	(0.004)
NWC/AT	0.000	0.001	-0.001**	-0.000*
	(0.000)	(0.001)	(0.000)	(0.000)
CAPEX/AT	-0.160	-0.402	-0.090	-0.237***
	(0.200)	(0.377)	(0.062)	(0.076)
FCF/AT	0.046*	0.125***	0.047***	0.122***
	(0.026)	(0.037)	(0.015)	(0.019)
CFV/AT	0.006***	0.007***	0.002***	0.001**
	(0.001)	(0.001)	(0.001)	(0.001)
ROA	-0.238***	-0.517***	-0.097***	-0.099**
	(0.038)	(0.055)	(0.033)	(0.040)
Constant	-1.181	-0.373	-1.562***	-1.068
	(0.875)	(0.987)	(0.567)	(0.690)
R-squared	0.309	0.401	0.056	0.071
No. of Firms	2,726	2,726	2,726	2,726
Firm FE	No	No	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240	25,240

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The empirical results in Table (15) support H_3 that media closure increases corporate cash holdings and information asymmetry, as measured by the number of analysts following the firm. Specifically, the ***Treatment Firm*Post*** interaction term is positive and significant for all four specifications, indicating that firms in treatment areas (i.e., within a 50-mile radius of a closed newspaper) increased their cash holdings more than control firms (i.e., greater than 50

miles and within 150-miles radius of a closed newspaper) after the closure.

The results suggest that the ***Number of Analysts*** following a firm is negatively associated with corporate cash holdings across all models, indicating that firms with more analyst coverage hold less cash. Furthermore, the ***Treatment Firm*Post*No. of Analysts*** interaction term is negative and significant for all four specifications, implying that the positive effect of media closure on corporate cash holdings is less pronounced and moderated by the presence of a larger number of analysts following the firm. This suggests that these two mechanisms play opposite roles in influencing corporate cash holdings. In the absence of local newspaper, a lack in external oversight and a credible information source may exacerbate information asymmetry, potentially leading to an increase in corporate cash holdings. However, analysts can act as intermediaries and disseminators of information, compensating for the absence of local media and alleviating agency dilemmas by disciplining managers to reduce cash holdings.

This evidence underscores the instrumental role of financial analysts in shaping corporate financial health (Chang et al., 2006). Equipped with specialised training in finance and in-depth industry knowledge, analysts proactively deliver regular disclosures that influence corporate financial decisions (Bradley et al., 2017). These updates range from quarterly financial reports and tax planning strategies to timely stock recommendations (Yu, 2008; Chen & Lin, 2017). In the absence of local media, as an exogenous shock, the role of financial analysts becomes even more pronounced (Kim et al., 2021). They step in to fill this informational void and offer valuable insights to investors (Fang & Peress, 2009; Derrien & Kecskés, 2013). This vigilant information channel not only reduces information asymmetry but also acts as a powerful deterrent to discipline opportunistic managerial behaviour (Chae, 2005). As a result, it enhances corporate governance measures, reduces agency costs and the firm's dependency on excess cash holdings (Jensen, 1986; Dittmar et al., 2003; Chen et al., 2015).

The findings correspond with existing literature, suggesting that an increase in the number of analysts following a firm can positively mitigate issues related to information asymmetry and address agency costs (Merton, 1987; Moyer et al., 1989). Analysts serve a vital role as information intermediaries, especially in the wake of local newspaper closures, thereby moderating the information asymmetry between managers and investors (Kim et al., 2021). This is consequently expected to reduce corporate cash holdings (Chung & Jo, 1996).

Furthermore, the outcomes lend support to agency theory, suggesting that managers may

stockpile cash for empire-building or allocate resources to projects with negative net present values, especially when information is not easily accessible (Jensen & Meckling, 1976; Jensen, 1986). The disruption caused by local media closure has the potential to exacerbate information asymmetry, thereby empowering entrenched managerial motives (Kim et al., 2021). Conversely, increased analyst coverage serves to enhance the flow of information available to investors (To et al., 2018).

The fixed effects findings presented in models (3) and (4) provide robust support for H_3 and complement the OLS results, further confirming the vital role that analysts play in mitigating the impact of media closure on corporate cash holdings. When local media is absent, analysts act as a disciplinary force for managers, effectively addressing the agency dilemma and facilitating the dissemination of relevant information to make efficient investment decisions, ultimately reducing excessive cash stockpiling. These compelling results underscore the measurable benefits of having more analysts covering a firm, leading to enhanced transparency and moderated cash holding behaviours, which in turn, may positively impact firm performance.

In summary, the findings emphasise the pivotal role of analysts not only as external information providers but also as critical intermediaries in alleviating information asymmetry and supporting the overall corporate governance system. The presence of analysts proves to be a valuable asset for companies facing media closure, as it enhances corporate decision-making processes and contributes to more prudent financial management.

4.6 Extended Analyses

4.6.1 Introduction

To strengthen the robustness of the research findings, further analyses have been conducted to validate the research hypotheses. The extended empirical models now incorporate two governance mechanisms: short-term borrowing and dividend payout, included as binary variables. These variables, together with proxies for information asymmetry, have been tested to assess their effects on corporate managerial behaviour and the broader information environment. By examining these interactions, the research seeks to provide a deeper understanding of how local newspaper closures might influence corporate cash holding policies, considering various influencing factors.

4.6.2 Short-term Borrowing (STB)

Short-term borrowing is a critical tool for firms seeking to manage their immediate working capital requirements (Myers, 1977; Barnea et al., 1980; Rajan & Zingales, 1995; Graham et al., 2008). The academic discourse has delved deeply into the implications of short-term debt, highlighting its influence on a range of corporate financial decisions, including capital structure and liquidity management (Taggart, 1977; Johnson, 1997; Leland, 1998). Research has extensively analysed how firms utilise short-term debt to balance their financial strategies and respond to short-term operational needs.

In their research, Guedes and Opler (1996) find that larger investment-grade firms show a preference for issuing both short-term and long-term debt. Conversely, firms with higher growth prospects tend to favour shorter-term debt. The researchers argue that these results are consistent with agency cost explanations proposed by Myers (1977) and Diamond (1991). Based on these explanations, higher-rated firms are more likely to engage actively in short-term credit markets, while lower-rated firms typically avoid short-term debt to minimise refinancing risk. Similarly, Barclay and Smith (1995) posit that the maturity structure of a firm's debt can serve as a strategic tool for managing conflicts of interest between equity holders and debt holders.

The relationship between information asymmetry and short-term borrowing is often observed to be inverse or negative (Flannery, 1986; Diamond, 1991; Berger, et al., 2005; Goyal & Wang, 2013). This suggests that higher information asymmetry may lead to more challenges in

obtaining short-term debt or result in higher borrowing costs for companies. In a dominant asymmetric information environment, external lenders or creditors may perceive the borrowing firm as riskier due to the lack of transparency in the firm's financial condition or future prospects (Flannery, 1986). As a result, lenders may be hesitant to extend short-term credit or may demand higher interest rates as compensation for the perceived higher risk (Berger, et al., 2005).

Flannery (1986) indicates that high-performing firms can signal their quality by opting for short-term debt, despite the additional transaction costs associated with rolling over this debt. Under this framework of separating equilibrium, long-term debt becomes the preferred issuance mechanism for lower-performing firms. Moreover, the use of short-term borrowing serves as an effective mechanism to reduce information asymmetry and improve transparency in financial disclosures and operations (Barclay & Smith, 1995). This strategy subsequently leads external lenders to perceive the borrowing firm as more reliable and creditworthy (Park et al., 2000). Such improved perceptions can create favourable conditions for renegotiating short-term loans on better terms, such as lower interest rates (Rajan & Zingales, 1995; Graham et al., 2008).

Goswami et al. (1995) argue that firms operating in settings marked by high informational asymmetry are more likely to choose short-term debt over long-term obligations. This choice serves two functions: it mitigates informational asymmetry by allowing frequent updating of financial terms, and it can also reduce a firm's cash reserves. Specifically, the requirement to rollover short-term debt influences firms to use both current and future cash flows, potentially reducing their overall cash holdings. In contrast, the structure of long-term debt encourages firms to stockpile more substantial cash reserves as a financial cushion.

The short-term borrowing (***STB_dum***) variable is defined as a dummy variable indicating whether the debt matures within one year, coded as 1 if true and 0 otherwise, based on data sourced from *WRDS – Compustat* (Diamond, 1991; Rajan & Zingales, 1995; Graham et al., 2008).

4.6.3   Dividend Payout (DIV)

Cash holdings and dividend payments are central to corporate financial management, reflecting a company's strategic priorities and operational goals (Pinkowitz et al., 2006). The trade-off theory suggests that firms with dividend payouts typically hold less cash, as they prioritise maintaining flexibility to adjust dividend payments and invest in growth opportunities (Ferreira & Vilela, 2004). In contrast, agency theory indicates that managers may retain earnings to fund projects that do not necessarily enhance firm value or to fulfill personal objectives, potentially

sacrificing shareholder interests (Harford, 1999; Chen et al., 2020). This tendency often results in increased cash holdings, either for projects with a positive net present value (NPV) or for personal gains. Empirical evidence supports a negative correlation between cash reserves and dividend payments, as higher cash holdings are associated with lower dividend payouts (Easterbrook, 1984; Dittmar et al., 2003; Pinkowitz et al., 2006; Kalcheva & Lins, 2007).

According to Frankfurter and Wood (2002), the signalling theory addresses the issue of asymmetric information between external investors and insiders within a firm. Managers are believed to possess greater insights into the company's future performance and investment projects than external investors. Consequently, changes in dividend policies, or the absence thereof, can serve as financial signals, providing valuable information about the company's financial health to investors. In this context, dividends act as informative indicators that guide potential investors in their investment decisions.

The absence of a local newspaper as a reliable source of corporate information can exacerbate information asymmetry, leading to potential agency conflicts and increased corporate cash holdings. The seminal work of Easterbrook (1984) explores how constant dividend payout policies can mitigate agency costs within firms. It highlights the puzzled role of dividends as signals to investors, offering valuable insights into a firm's financial stability and potentially reducing information asymmetry. By maintaining a consistent dividend policy, companies can build a stable relationship with capital markets, thereby fostering trust and attracting investments, particularly in periods of growth or diverse business conditions. The author argues that separating dividends from short-term profit fluctuations creates a stable investor relationship, signalling a long-term commitment to shareholder interests and enhancing a positive corporate image.

Li et al. (2008) examine how informational asymmetries influence corporate dividend policies. The results indicate that firms with greater information asymmetry are less likely to distribute, initiate, or augment dividends, and the disbursed amounts are comparatively smaller. Importantly, these findings persist even after considering factors like changes in the sample, institutional shareholdings, and catering incentives. The study concludes that a negative correlation exists between asymmetric information and dividend policy, thus challenging the signalling theory of dividends.

In light of increasing local newspaper closures, potential threats arise concerning the accessibility of relevant corporate information (Kim et al., 2021; Heese et al., 2022). The absence of such information channels may prompt managers to engage in opportunistic behaviour, opting to retain cash rather than distributing it as dividends (Pinkowitz et al., 2006; Lemmon & Roberts, 2010). Additional tests aim to explore the interplay between information asymmetry, short-term borrowing, and dividend payout. The overarching goal is to corroborate initial findings, offering a comprehensive understanding of how newspaper closures impact corporate cash holdings behaviour. Through an analysis of various factors and financial dynamics, insight is pursued on how newspaper closures may impact corporate decision-making and cash management strategies.

The (***Div_dum***) variable acts as a crucial indicator of the company's dividend policy, assigned the value of (1) if the company pays dividends and (0) if it does not (Opler et al., 1999; Bates et al., 2009; He & Wintoki, 2016).

3.8.1 *Exploring Different Governance Mechanisms – Part A*

According to the asymmetric information hypothesis, several studies, including those by Myers and Majluf (1984), and Flannery (1986), demonstrate that firms facing higher levels of information asymmetry tend to favour short-term debt. This choice is often attributed to the ability to renegotiate the terms of the debt more frequently, thereby providing lenders with updated information and mitigating some of the risks associated with information asymmetry (Diamond, 1991; Berger, et al., 2005; Goyal & Wang, 2013). Under market conditions characterised by limited transparency and noticeable information asymmetry, companies view short-term debt as a more viable and less risky financial strategy (Barclay & Smith, 1995; Huang & Shang, 2019).

Based on Myers (1977), firms often face a dilemma where managers may underinvest in profitable projects due to agency problems. However, the use of short-term debt allows lenders regular access to company performance indicators, ensuring proper planning and allocation of funds. The shorter maturity periods of short-term debt offer lenders more frequent opportunities to assess covenant fulfilment and communicate information to investors about the company's profitability and business risk profile. This mechanism serves as a safeguard against managerial opportunism, mitigating the impact of agency problems and potentially reducing information asymmetry between company insiders and external stakeholders.

Rajan and Winton (1995) stress the vital influence lenders have through the routine renewal of short-term debt. Such frequent renegotiations afford lenders the opportunity to continuously assess a company's creditworthiness and financial health. This, in turn, motivates borrowers to meet their obligations diligently and uphold a strong credit standing, thereby potentially reducing information asymmetry. Furthermore, the obligation to repay short-term debts drives managerial incentives to allocate the excess cash for dividend payouts, thus meeting the expectations and demands of key stakeholders. This interaction emphasises the importance of short-term debt as a shaping force in financial decisions and corporate relationships.

Companies seeking loans are required to provide comprehensive financial information and disclosures, a critical measure that enhances transparency regarding their financial health and operational practices (Gao & Zhu, 2015). Notably, Chang and Rhee (1990) establish a positive correlation between the debt-to-assets ratio and dividend payments. As dividend payouts often signify stable financial standing, lenders are inclined to offer loans to such firms at more favourable interest rates. This dynamic helps to bridge the information asymmetry gap between the borrowing firm and the lender (Van Buskirk, 2012).

Without a rigorous local newspaper, a traditional pillar of information, short-term borrowing emerges as a powerful governance mechanism (Harford et al., 2008; Gul & Goodwin, 2010). This strategy encourages corporate managers to prudently allocate corporate cash reserves, often through distributing dividends to shareholders. By choosing short-term debt, companies subject themselves to close scrutiny and provide information to lenders and creditors (Graham et al., 2008). This process acts as a check on management's behaviour and potentially alleviates agency conflicts linked to informational asymmetry (Barnea et al., 1980; Berger, et al., 2005). Moreover, it promotes efficient financial resource management within the organisation (Harvey et al., 2004).

Diamond (1991) maintains that when a company incurs debt, the action not only demonstrates confidence in generating future cash flows but also underscores a commitment to meeting repayment obligations. This strategic financial choice serves as a powerful signal to external stakeholders, such as investors and creditors, affirming the firm's dedication to long-term objectives and growth. Therefore, in the context of informational asymmetry, debt acts as a credible and significant indicator of a company's financial health and future prospects.

According to Chava and Roberts (2008), the behaviour of corporate cash holdings plays a crucial role in decisions related to short-term borrowing. Firms with more substantial cash reserves are more inclined to engage in short-term borrowing because they can secure more favourable terms and avoid unnecessary costs commonly associated with long-term debt. Moreover, such firms are viewed as lower-risk by creditors, owing to their enhanced ability to meet financial obligations, which in turn reduces the likelihood of debt default (Acharya et al., 2012).

To comprehensively analyse the influence of short-term borrowing on dividend payout decisions and corporate cash holdings behaviour, it is essential to enhance Model (8). This enhancement involves incorporating short-term borrowing alongside information asymmetry proxies while controlling for dividend payout. By making this extension, valuable insights can be gained into the complex interplay between corporate governance, borrowing practices, information asymmetry, and financial strategies adopted by firms after the closure of local newspapers. In this analysis, **_Bid-Ask Spread_** is utilised as the initial proxy for information asymmetry (Glosten & Milgrom, 1985). Building upon the methodology proposed by Kim (2018), three- and four-way interaction terms are incorporated into the augmented Model (10) as follows:

$$ln(CASH\_HOLD)_{i,t} = a_0 + a_1 Treat\_firm_{i,t} * Post_{i,t} + a_2 Post_{i,t} + a_3 Treat\_firm_{i,t} +$$
$$a_4 Bid\_Ask\_Spread_{i,t} + a_5 Treat\_firm_{i,t} * Post_{i,t} * Bid\_Ask\_Spread_{i,t} + a_6 STB\_dum_{i,t} +$$
$$a_7 Treat\_firm_{i,t} * Post_{i,t} * Bid\_Ask\_Spread_{i,t} * STB\_dum_{i,t} + a_8 Div\_dum_{i,t} + a_9 Controls_{i,t-1} +$$
$$YearFE + Year * State\ FE + \varepsilon_{i,t} \tag{10}$$

The study explores the impact of local newspaper closures on corporate cash holding behaviours using a Difference-in-Differences (DID) analysis. This method involves comparing average changes over time in a particular outcome (corporate cash holdings) between two groups, one that experienced the event of interest (newspaper closure) and one that did not. The DID approach, specifically, adjusts for pre-existing differences between these groups, ensuring that the observed effects are due to the event itself (Callaway & Sant'Anna, 2021). The extended empirical Model (10) used in this research not only considers this relationship but also integrates critical corporate finance and governance elements whilst accounting for information asymmetry. This analytical strategy effectively addresses potential issues of endogeneity and dual causality, which might arise from variables that overlap or interact in their effects (Roberts & Whited, 2013). Additional testing, in alignment with previous analyses, employs OLS with clustered standard errors and fixed effects models to validate the findings. Detailed results of these tests can be observed in Table (16).

Table (16) Empirical Results Exploring Different Governance Mechanisms – Part A

The below table presents the results of the Ordinary Least Squares (OLS) regression models with clustered standard errors and fixed-effects models through Corporate Governance Score. The dependent variable is the natural logarithm to the division of cash and cash equivalents scaled by either total assets $ln(Cash/AT)_{i,t}$ or net assets $ln(Cash/AN)_{i,t}$ for firm i at time t. The primary independent (explanatory) variable is the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. This binary variable is set to 1 if the firm is part of the treatment group (i.e., experiencing media closure) during the post-treatment period (i.e., after the media closure) and 0 otherwise. This variable captures the treatment effect of media closure on cash holdings. $Treat\_firm_{i,t}$ is a binary variable that equals 1 if firm i belongs to the treatment group, and 0 otherwise. $Post_{i,t}$ is a binary variable that equals 1 for years after the media closure event, and 0 otherwise. $Bid\_Ask\_Spread_{i,t}$ is a proxy of information asymmetry and is expected to have a positive effect on cash holdings for firm i at time t. $Treat\_firm_{i,t} * Post_{i,t} * Bid\_Ask\_Spread_{i,t}$ is an interaction term between the $Treat\_firm_{i,t} * Post_{i,t}$ and $Bid\_Ask\_Spread_{i,t}$. This triple-interaction term captures the combined effect of media closures and the bid-ask spread on the level of corporate cash holdings. $STB\_dum_{i,t}$ is a continuous variable that measures a firm's short-term debt level relative to its total assets. $Treat\_firm_{i,t} * Post_{i,t} * Bid\_Ask\_Spread_{i,t} * STB\_dum_{i,t}$ is a four-way interaction term that explores the influence of the interaction between these variables on the natural logarithm of cash holdings, providing nuanced insights into their collective impact. $Div\_dum_{i,t}$ is a dummy variable set to 1 if the firm pays dividends and 0 otherwise for firm i at time t. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (13) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (2)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	(1) Ln(Cash/AT) Clustered SE	(2) Ln(Cash/AN) Clustered SE	(3) Ln(Cash/AT) Clustered SE	(4) Ln(Cash/AN) Clustered SE	(5) Ln(Cash/AT) Fixed Effects	(6) Ln(Cash/AN) Fixed Effects	(7) Ln(Cash/AT) Fixed Effects	(8) Ln(Cash/AN) Fixed Effects
Treatment Firm	0.243***	0.316***	0.228***	0.296***	0.122	0.148	0.148	0.211
	(0.043)	(0.056)	(0.042)	(0.055)	(0.204)	(0.264)	(0.190)	(0.244)
Post	-0.137***	-0.192***	-0.124**	-0.173***	-0.186***	-0.240***	-0.183***	-0.236***
	(0.048)	(0.058)	(0.048)	(0.058)	(0.055)	(0.065)	(0.054)	(0.065)
Bid-Ask Spread	0.089***	0.110***	0.063***	0.076***	0.056***	0.062***	0.030*	0.046*
	(0.015)	(0.020)	(0.015)	(0.020)	(0.016)	(0.023)	(0.016)	(0.024)
Treatment Firm*Post	0.419***	0.360***	0.386***	0.314***	0.367***	0.288***	0.366***	0.279***
	(0.044)	(0.056)	(0.044)	(0.057)	(0.044)	(0.056)	(0.043)	(0.055)
Treatment firm*Post* Bid-Ask Spread			0.059***	0.087***			0.046***	0.049**
			(0.018)	(0.026)			(0.016)	(0.024)
STB_dum	-0.040***	-0.054***	-0.481***	-0.622***	-0.014**	-0.027**	-0.249***	-0.366***
	(0.011)	(0.017)	(0.041)	(0.057)	(0.007)	(0.011)	(0.031)	(0.046)
Treatment firm*Post*Bid-Ask Spread* STB_dum			-0.121***	-0.167***			-0.058***	-0.071***
			(0.038)	(0.048)			(0.023)	(0.029)
Div_dum	0.034	0.093	-0.100***	-0.141***	-0.083	-0.145	-0.112***	-0.151***
	(0.106)	(0.141)	(0.035)	(0.045)	(0.091)	(0.121)	(0.043)	(0.056)
Size (Ln AT)	-0.155***	-0.216***	-0.136***	-0.190***	-0.106***	-0.089***	-0.140***	-0.134***
	(0.009)	(0.013)	(0.009)	(0.013)	(0.020)	(0.032)	(0.019)	(0.030)
LEV/AT	-0.044***	-0.059***	-0.046***	-0.064***	-0.013***	-0.025***	-0.015***	-0.028***
	(0.012)	(0.018)	(0.012)	(0.018)	(0.005)	(0.006)	(0.005)	(0.006)
R&D/AT	0.125***	0.292***	0.120***	0.285***	0.035***	0.142***	0.032***	0.137***
	(0.006)	(0.011)	(0.006)	(0.011)	(0.005)	(0.010)	(0.005)	(0.010)
MTB	0.053***	0.071***	0.048***	0.065***	0.012***	0.014**	0.009**	0.009*
	(0.005)	(0.007)	(0.005)	(0.007)	(0.004)	(0.005)	(0.004)	(0.005)
NWC/AT	-0.000	0.000	-0.000	0.001	-0.001	-0.001	-0.000	-0.000
	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)
CAPEX/AT	-0.265	-0.535	-0.192	-0.442	-0.132*	-0.296*	-0.104	-0.254
	(0.196)	(0.371)	(0.215)	(0.397)	(0.074)	(0.160)	(0.090)	(0.185)
FCF/AT	0.168***	0.281***	0.030	0.103***	0.085***	0.172***	0.056**	0.131***
	(0.022)	(0.034)	(0.025)	(0.036)	(0.023)	(0.039)	(0.023)	(0.037)
CFV/AT	0.007***	0.008***	0.006***	0.007***	0.003***	0.000	0.001	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)
ROA	-0.243***	-0.521***	-0.242***	-0.519***	-0.108**	-0.108	-0.106**	-0.104
	(0.040)	(0.056)	(0.038)	(0.055)	(0.047)	(0.071)	(0.045)	(0.069)
Constant	-1.180	-0.399	-1.088	-0.269	-1.485*	-1.008	-1.381*	-0.859
	(0.930)	(1.059)	(0.912)	(1.036)	(0.779)	(0.872)	(0.777)	(0.867)
R-squared	0.292	0.385	0.313	0.406	0.051	0.064	0.059	0.074
No. of Firms	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726
Firm FE	No	No	No	No	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240	25,240	25,240	25,240	25,240	25,240

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table (16) presents the empirical results from both OLS regression models with clustered standard errors and fixed-effects models, providing a detailed analysis of the impact of local newspaper closures on corporate cash holdings. The **Treatment Firm*Post** variable consistently displays positive and statistically significant coefficients across all models, indicating an increase of approximately 31.4% to 41.9% in the cash measures **Ln(Cash/AT)** and **Ln(Cash/AN)**, respectively, with p-values below 0.01. This pattern is observed in both the OLS and fixed-effects models, which highlights the robustness of the findings even when controlling for firm-specific characteristics. The results suggest that media closures lead to an increase in information asymmetry, prompting firms to hold more cash as a precautionary measure, aligning with the predictions of the free cash flow theory and agency theory (Jensen & Meckling, 1976; Fama, 1980; Jensen, 1986). The consistency of these results with previous studies on corporate cash holdings and information asymmetry further strengthens the validity of the findings (Opler et al., 1999; Bates et al., 2009).

The analysis also examines the role of the **Bid-Ask Spread**, a proxy for information asymmetry. Across all models, this variable exhibits positive and significant coefficients, indicating that firms with higher bid-ask spreads, a sign of greater information asymmetry, tend to hold more cash. The rise in cash holdings, ranging from 6.3% to 11.0%, can be attributed to the increased transaction costs and signalling issues that arise in environments with diminished media coverage. These findings are consistent with the pecking order theory, which posits that firms prefer internal financing and thus maintain higher cash reserves when external financing is more costly due to information asymmetry (Myers & Majluf, 1984; Fazzari et al., 1988; Dittmar et al., 2003).

In both OLS and fixed-effects models, Short-term Borrowing (**STB_dum**) consistently shows a negative and significant relationship with cash holdings, with coefficients indicating a decrease of between 4.0% and 62.2% in cash holdings for a 1% increase in short-term borrowing. This relationship suggests that firms frequently engaging in short-term borrowing rollovers may reduce their cash holdings to meet immediate financial obligations, a behaviour aligned with theories on agency cost reduction and managerial discipline (Myers, 1977; Jensen, 1986; Graham et al., 2008). The finding that short-term debt reduces cash holdings, even in the presence of heightened information asymmetry, underscores the importance of debt structure in corporate cash management strategies (Park et al., 2000; Harford et al., 2008).

The interaction term **Treatment firm*Post*Bid-Ask Spread** exhibits positive and statistically significant coefficients, particularly in the fixed-effects models, which reinforces the notion

that media closures exacerbate information asymmetry, leading firms to hold more cash. This finding supports the pecking order theory's claim that firms facing increased information asymmetry will preserve higher cash reserves as a precautionary measure (Myers & Majluf, 1984; Dittmar et al., 2003). The persistence of these results across both OLS and fixed-effects models further highlights the robustness of the relationship between media closures, information asymmetry, and corporate cash holdings (Chung et al., 2015; Couzoff et al., 2022).

Interestingly, the four-way interaction term **Treatment firm*Post*Bid-Ask*STB_dum** presents statistically significant negative coefficients, suggesting that short-term borrowing mitigates the impact of media closures on cash holdings. This outcome indicates that short-term debt serves as a governance mechanism that compels firms to reduce excess cash holdings, even in the face of increased information asymmetry (Rajan & Winton, 1995; Drobetz et al., 2010). The role of short-term debt in corporate governance is further highlighted by its ability to enforce regular disclosures and performance assessments, thereby reducing the need for precautionary cash reserves (Chava & Roberts, 2008; Goyal & Wang, 2013).

Additionally, the coefficients for **Div_dum** are negative and statistically significant in specifications that include the three and four-way interaction terms, particularly in the fixed-effects models. This suggests that firms reduce their cash holdings to fund dividend payments, a behaviour that may be driven by the need to signal financial health and reduce agency costs in the absence of local media coverage (Easterbrook, 1984; Fama & French, 1998). The use of dividends as a signalling mechanism is consistent with the literature on corporate finance, which highlights the role of dividend payments in mitigating information asymmetry and aligning managerial incentives with shareholder interests (Harvey et al., 2004; Graham et al., 2008; Gao & Zhu, 2015).

In summary, the results from Table (16) provide strong evidence that local newspaper closures have a significant impact on corporate cash holdings. The analysis reveals that firms increase their cash reserves in response to heightened information asymmetry, as indicated by the positive coefficients for the **Treatment Firm*Post and Bid-Ask Spread** variables. The role of short-term borrowing is particularly noteworthy, as it serves as a moderating factor that reduces the need for precautionary cash holdings, even in environments with reduced media coverage. These findings are consistent with the broader literature on corporate governance and cash management, underscoring the importance of information availability and debt structure in shaping corporate financial decisions (Jensen, 1986; Harford et al., 2008; Gul & Goodwin, 2010). The robustness of the results across both OLS and fixed-effects models further validates

the empirical approach and strengthens the conclusion that media closures lead to significant changes in corporate cash management strategies (Myers & Majluf, 1984; Berger, et al., 2005; Van Buskirk, 2012).

3.8.2 *Exploring Different Governance Mechanisms – Part B*

To strengthen the findings, supplementary empirical tests are conducted using the ***Number of Analysts*** as an alternative measure of information asymmetry. Analysts play a crucial role in analysing firms, providing relevant information, buy/sell recommendations, industry insights, and earnings forecasts (Krishnaswami & Subramaniam, 1999). Their work is vital in keeping investors and the financial community informed about the prospects and position of the companies they follow (Bhushan, 1989; Brennan et al., 1991).

In their study, Graham et al. (2005) highlighted the significant impact of analysts on investor behaviour. Managers highly value analysts as a critical group that exerts considerable influence on the share price of their companies. Equipped with financial expertise and extensive industry knowledge, analysts diligently review corporate financial statements on a regular basis (Lang & Lundholm, 1996). Their direct interactions with management allow them to inquire about various aspects of the company (Bushman et al., 2005). Notably, analysts have played a direct role in blowing the whistle on corporate fraud in notable companies like Electronic Data Systems, Global Crossing, Motorola, and Qwest Communication International (Dyck et al., 2023).

Jensen and Meckling (1976) stress the influential role of security analysts in providing important information to bondholders and stockholders, leading to reduced agency costs and improved information efficiency within security markets. According to Givoly and Lakonishok (1979), having more analysts covering a company can lead to the revelation and dissemination of more information, thus reducing information asymmetry. Analysts who closely follow a company are more likely to discover valuable insights into its corporate performance and prospects, thereby providing investors with more accurate and current information about the company. This, in turn, enables investors to make better-informed decisions (Lys & Sohn, 1990; Chang et al., 2006; To et al., 2018).

Furthermore, Frankel and Li (2004) confirm the pivotal role of analysts in mitigating information asymmetry. By expertly interpreting industry-specific trends and facilitating intra-industry information transfer, analysts promote improved outcomes. Their activities enhance transparency in the market, fostering a platform that enables and substantiates informed

decision-making, while also actively influencing and shaping the transformation and dynamics of the marketplace.

Without access to local media, analysts become a crucial and invaluable source of information for both investors and firms. The shocks experienced by the local newspaper industry can have a significant impact on nearby firms' information environment, potentially leading to changes in their policies (Kim et al., 2021). Previous research reinforces these findings demonstrating how newspaper coverage influences managers' behaviour and investors' reactions in financial markets (e.g., Fang & Peress, 2009; Bushee et al., 2010).

Tetlock et al. (2008) demonstrate the significance of linguistic media content for investors and firms. They find that an increase in negative words within firm-specific news stories is linked to lower future earnings forecasts, indicating the language captures intangible aspects of firms' fundamentals impacting investor perceptions and stock prices. Likewise, Dyck and Zingales (2002) emphasise the influential role of media coverage on stock prices, particularly for firms with fewer analysts and credible media outlets. In the absence of robust local media, analysts play a vital role, providing thorough research and analysis to empower investors and guide firms, ensuring a well-informed and transparent market.

During times of uncertainty and negative shocks, such as the closure of local newspapers, there is an increased demand for information production (Derrien & Kecskés, 2013; Chen et al., 2015). Analysts play a crucial role in meeting this demand by providing valuable insights and analysis, enabling investors to make well-informed decisions and mitigating agency costs (Moyer et al., 1989). Additionally, Brennan and Subrahmanyam (1995) suggest that a greater number of analysts covering a company can effectively reduce adverse selection costs. Adverse selection occurs when investors with superior information about a company's prospects and risks selectively participate in the market, leading to information asymmetry (Akerlof, 1970).

Following the closure of local media outlets, analysts become instrumental in filling the information void, offering critical insights to investors (Fang & Peress, 2009). Therefore, the number of analysts covering a company becomes a critical measure of information asymmetry during such times. Chen et al. (2015) highlight that analyst following not only offers valuable information to investors but also acts as a governance mechanism, pressuring firms' managers to utilise their accumulated cash reserves.

Simultaneously, the lack of local information providers exacerbates information asymmetry, pushing firms to rely on short-term debt maturity as a strategic tool to mitigate conflicts between equityholders and debtholders (Barclay & Smith, 1995). Opting for short-term debt forces companies to reassess their financial obligations periodically, considering the uncertainties of their future financial situation. This frequent reassessment not only ensures that the company's financial strategy remains aligned with its evolving circumstances but also helps balance the interests of various stakeholders, thereby navigating the complexities of the market more effectively (Flannery, 1986).

Furthermore, the potential risks of limited access to short-term financing or higher borrowing costs can serve as a compelling motivation for managers to comply with shareholders' demands for cash disbursement (Harvey et al., 2004). Consequently, this strategic utilisation of short-term debt enables companies to adeptly manage conflicts, enhance transparency, and maintain stability even in the absence of comprehensive local information providers (Graham et al., 2008).

Similarly, dividend payments serve as a pivotal mechanism for alleviating agency costs by aligning the interests and reducing potential conflicts between managerial actions and institutional shareholders, thereby promoting a more coherent and financially stable corporate environment (Short et al., 2002). When firms distribute dividends, they necessitate themselves to procure additional finances from external capital markets, thereby exposing them to increased scrutiny and oversight from the market. This alignment of interests helps minimise the potential for managerial opportunism and enhances the effectiveness of overall corporate governance (Easterbrook, 1984).

Building on the preceding discussion, Model (9) is extended to explore the effects of information asymmetry, measured by the *Number of Analysts* (Chae, 2005), alongside short-term borrowing and dividend payments, on corporate cash holdings in the absence of local media. The aim is to glean insights into the mechanisms that uphold corporate governance and accountability amidst external shocks. The enhanced empirical Model (11) is detailed as follows:

$$ln(CASH\_HOLD)_{i,t} = a_0 + a_1 Treat\_firm_{i,t} * Post_{i,t} + a_2 Post_{i,t} + a_3 Treat\_firm_{i,t} +$$
$$a_4 Number\_of\_Analysts_{i,t} + a_5 Treat\_firm_{i,t} * Post_{i,t} * Number\_of\_Analysts_{i,t} + a_6 STB\_dum_{i,t} +$$
$$a_7 Treat\_firm_{i,t} * Post_{i,t} * Number\_of\_Analysts_{i,t} * STB\_dum_{i,t} + a_8 Div\_dum_{i,t} +$$
$$a_9 Controls_{i,t-1} + YearFE + Year * State\ FE + \varepsilon_{i,t} \qquad (11)$$

Table (17) Empirical Results Exploring Different Governance Mechanisms – Part B

The following table shows the results of the Ordinary Least Squares (OLS) regression models with clustered standard errors and fixed-effects models through Corporate Governance Score. The dependent variable is the natural logarithm to the division of cash and cash equivalents scaled by either total assets $ln(Cash/AT)_{i,t}$ or net assets $ln(Cash/AN)_{i,t}$ for firm i at time t. The primary independent (explanatory) variable is the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. This binary variable is set to **1** if the firm is part of the treatment group (i.e., experiencing media closure) during the post-treatment period (i.e., after the media closure) and **0** otherwise. This variable captures the treatment effect of media closure on cash holdings. $Treat\_firm_{i,t}$ is a binary variable that equals **1** if firm i belongs to the treatment group, and **0** otherwise. $Post_{i,t}$ is a binary variable that equals **1** for years after the media closure event, and **0** otherwise. $Number\ of\ Analysts_{i,t}$ is a proxy of information asymmetry denoting for the number of analysts following the firm i and is expected to have a negative effect on cash holdings at time t. $Treat\_firm_{i,t} * Post_{i,t} * Number\ of\ Analysts_{i,t}$ is an interaction term between the $Treat\_firm_{i,t} * Post_{i,t}$ and $Number\_of\_Analysts_{i,t}$. This triple-interaction term captures the joint effect of the media closure and the number of analysts following the firm on the level of corporate cash holdings. $STB\_dum_{i,t}$ is a continuous variable that measures a firm's short-term debt level relative to its total assets. $Treat\_firm_{i,t} * Post_{i,t} * Number\ of\ Analysts_{i,t} * STB\_dum_{i,t}$ is a four-way interaction term that explores the influence of the interaction between these variables on the natural logarithm of cash holdings, providing nuanced insights into their collective impact. $Div\_dum_{i,t}$ is a dummy variable set to 1 if the firm pays dividends and 0 otherwise for firm i at time t. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (13) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (2)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	(1) Ln(Cash/AT) Clustered SE	(2) Ln(Cash/AN) Clustered SE	(3) Ln(Cash/AT) Clustered SE	(4) Ln(Cash/AN) Clustered SE	(5) Ln(Cash/AT) Fixed Effects	(6) Ln(Cash/AN) Fixed Effects	(7) Ln(Cash/AT) Fixed Effects	(8) Ln(Cash/AN) Fixed Effects
Treatment Firm	0.247***	0.324***	0.236***	0.309***	0.117	0.113	0.136	0.158
	(0.044)	(0.060)	(0.043)	(0.058)	(0.208)	(0.271)	(0.191)	(0.248)
Post	-0.141***	-0.199***	-0.113**	-0.159***	-0.192***	-0.251***	-0.184***	-0.240***
	(0.049)	(0.060)	(0.049)	(0.060)	(0.055)	(0.065)	(0.055)	(0.065)
Number of Analysts	-0.042**	-0.074***	-0.063***	-0.102***	-0.057**	-0.070**	-0.030*	-0.049**
	(0.020)	(0.025)	(0.019)	(0.025)	(0.023)	(0.029)	(0.016)	(0.024)
Treatment Firm*Post	0.400***	0.333***	0.381***	0.312***	0.371***	0.296***	0.369***	0.291***
	(0.045)	(0.058)	(0.044)	(0.058)	(0.043)	(0.056)	(0.044)	(0.055)
Treatment Firm*Post*Number of Analysts			-0.073***	-0.098***			-0.049***	-0.058**
			(0.016)				(0.016)	(0.024)
STB_dum	-0.047***	-0.065***	-0.518***	-0.694***	-0.015**	-0.029***	-0.253***	-0.383***
	(0.012)	(0.018)	(0.042)	(0.058)	(0.007)	(0.011)	(0.031)	(0.044)
Treatment Firm*Post*Number of Analysts*STB_dum			-0.053***	-0.072***			-0.058**	-0.070**
			(0.018)	(0.027)			(0.023)	(0.029)
Div_dum	0.038	0.113	-0.185***	-0.269***	-0.088	-0.159	-0.111**	-0.148***
	(0.110)	(0.153)	(0.032)	(0.041)	(0.091)	(0.117)	(0.043)	(0.056)
Size (Ln AT)	-0.136***	-0.209***	-0.163***	-0.244***	-0.100***	-0.110***	-0.148***	-0.173***
	(0.007)	(0.010)	(0.009)	(0.013)	(0.019)	(0.030)	(0.018)	(0.029)
LEV/AT	-0.040***	-0.051**	-0.043***	-0.058***	-0.014***	-0.027***	-0.015***	-0.031***
	(0.014)	(0.020)	(0.012)	(0.018)	(0.005)	(0.006)	(0.005)	(0.006)
R&D/AT	0.021***	0.055***	0.020***	0.053***	0.007***	0.026***	0.006***	0.026***
	(0.003)	(0.006)	(0.003)	(0.006)	(0.001)	(0.003)	(0.001)	(0.002)
MTB	0.058***	0.082***	0.018***	0.026***	0.013***	0.015***	0.009**	0.009
	(0.005)	(0.008)	(0.004)	(0.005)	(0.004)	(0.005)	(0.004)	(0.005)
NWC/AT	0.000	0.001	0.000	0.001	-0.001	-0.000	-0.000	-0.000
	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)
CAPEX/AT	-0.278	-0.592	-0.230	-0.529	-0.121*	-0.291*	-0.106	-0.265
	(0.206)	(0.409)	(0.239)	(0.456)	(0.068)	(0.153)	(0.090)	(0.188)
FCF/AT	0.171***	0.280***	0.019	0.077**	0.085***	0.172***	0.055**	0.128***
	(0.023)	(0.035)	(0.026)	(0.037)	(0.023)	(0.038)	(0.023)	(0.036)
CFV/AT	0.007***	0.007***	0.003***	0.002*	0.003***	-0.000	0.001	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)
ROA	-0.369***	-0.827***	-0.392***	-0.856***	-0.112**	-0.130*	-0.111**	-0.125*
	(0.041)	(0.062)	(0.040)	(0.061)	(0.046)	(0.070)	(0.045)	(0.069)
Constant	-1.159	-0.185	-0.804	0.294	-1.597**	-0.979	-1.332*	-0.641
	(0.907)	(1.047)	(0.925)	(1.075)	(0.779)	(0.866)	(0.775)	(0.860)
R-squared	0.268	0.330	0.292	0.353	0.049	0.053	0.058	0.065
No. of Firms	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726
Firm FE	No	No	No	No	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240	25,240	25,240	25,240	25,240	25,240

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table (17) displays the empirical results obtained from OLS regression models with clustered standard errors and fixed-effects models, evaluating the influence of local newspaper closures on corporate cash holdings. The analysis incorporates the moderating effects of analyst coverage, short-term borrowing, and dividend payout. By comparing the results from clustered standard errors (SE) and fixed-effects (FE) models, we gain deeper insights into the robustness and validity of these findings.

The OLS models consistently demonstrate a positive and statistically significant relationship between the *Treatment Firm*Post* variable and corporate cash holdings. The coefficients, ranging from 0.312 to 0.400, indicate that firms tend to increase their cash reserves significantly in response to local newspaper closures. This finding aligns with prior research suggesting that firms accumulate cash as a precautionary measure in the face of increased uncertainty or reduced external monitoring, as highlighted by Harford (1999) and Brown and Petersen (2011). The positive relationship observed in these models supports the notion that firms respond to heightened information asymmetry by bolstering their liquidity, as predicted by the free cash flow theory and agency theory (Jensen & Meckling, 1976; Fama, 1980; Jensen, 1986; Chowdhury et al., 2021).

When comparing these results to those obtained from the FE models, the coefficients for the *Treatment Firm*Post* variable remain positive and significant but are slightly lower, ranging from 0.291 to 0.371. This reduction in magnitude suggests that when unobserved, firm-specific characteristics are controlled for, the relationship between media closures and increased cash holdings persists but with less intensity. The robustness of this relationship across both OLS and FE models underscores the importance of controlling for potential biases inherent in cross-sectional analyses and highlights the consistency of the observed effect, as pointed out by Allison (2009) and Baltagi (2021).

The negative and significant coefficients for the Number of Analysts variable, observed across all models, ranging from -0.042 to -0.102, corroborate the idea that increased analyst coverage is associated with lower cash reserves. This finding aligns with the work of Healy and Palepu (2001) and Chen et al. (2015), who noted that analysts act as a governance mechanism by reducing information asymmetry and pressuring firms to manage cash more prudently. Analysts, by providing relevant information and acting as intermediaries between firms and investors, mitigate the need for firms to hold excessive cash reserves (Lang & Lundholm, 1996; Graham et al., 2005). This role becomes particularly crucial in the absence of local media,

where the demand for reliable information increases (Fang & Peress, 2009; Derrien & Kecskés, 2013; Derrien et al., 2016).

The interaction term *Treatment Firm*Post*Number of Analysts*, which is negative and significant in models 3 and 4, indicates that the positive impact of media closures on cash holdings is moderated by the presence of more analysts. This outcome suggests that analysts help mitigate the adverse effects of reduced media coverage on corporate financial decisions by providing the necessary oversight and information (Givoly & Lakonishok, 1979; Moyer et al., 1989; Brochet et al., 2014). The significant role of analysts in reducing information asymmetry and agency costs is further underscored by these results (-0.073 and -0.098, respectively), consistent with findings from studies by Brennan and Subrahmanyam (1995), Chung and Jo (1996), and Frankel and Li (2004).

The significant negative coefficients for the interaction between short-term borrowing *STB_dum* and corporate cash holdings observed across all models reinforce the idea that short-term debt serves as a mechanism to reduce cash reserves and address information asymmetry. The coefficients, ranging from -0.015 to -0.694, indicate that firms relying on short-term debt are less likely to hoard cash, as these firms are subjected to regular scrutiny by lenders, which helps reduce information asymmetry and agency problems (Diamond, 1991; Barclay & Smith, 1995; Della Seta et al., 2020). This finding aligns with previous research highlighting the role of short-term debt in enhancing corporate governance by ensuring that firms remain accountable to creditors and adhere to financial covenants (Hart & Moore, 1998; Datta et al., 2005; Clarkson et al., 2020).

The four-way interaction term *Treatment Firm*Post*Number of Analysts*STB_dum*, which is negative and significant in both OLS and FE models, highlights the combined effect of analyst coverage and short-term borrowing on mitigating the impact of media closures on cash holdings. This finding suggests that when both mechanisms are in place, firms are more likely to reduce their cash reserves, thereby addressing the challenges of information asymmetry and agency costs that arise in the absence of local media (Rajan & Zingales, 1998; Brockman et al., 2010; Chen et al., 2020). The results demonstrate the importance of maintaining a robust corporate governance structure, particularly in times of reduced external monitoring. This interplay supports the overall structure of corporate governance (Krishnaswami & Subramaniam, 1999; Custódio et al., 2013; Chen et al., 2015).

Dividend payments, represented by the ***Div_dum*** variable, show a significant negative relationship with corporate cash holdings in the models that include interaction terms. This finding supports the view that dividend payments serve as a mechanism to alleviate agency costs by aligning managerial interests with those of shareholders, thereby reducing the need for firms to hold excessive cash reserves (Easterbrook, 1984; Short et al., 2002). The negative coefficients, ranging from -0.088 to -0.269, indicate that firms that pay dividends are less likely to retain large cash reserves, particularly when facing constraints in obtaining short-term funding or higher borrowing costs, as discussed by Harvey et al. (2004) and Benkraiem et al. (2020).

Distributing dividends obligates firms to secure additional funds from external capital markets, which, in turn, invites increased scrutiny and enhances market transparency (Rozeff, 1982). This process not only aligns interests but also helps deter managerial opportunism, reduce information asymmetry, and improve the efficiency of corporate governance mechanisms (Driver et al., 2020). Moreover, this alignment plays a crucial role in establishing a coherent, stable relationship between stakeholders and the firm, thus strengthening financial stability and market confidence (Javakhadze et al., 2014; Lin et al., 2017).

The overall pattern observed across both OLS and FE models suggests that the presence of more analysts and the strategic use of short-term debt and dividend payments play crucial roles in moderating the impact of local newspaper closures on corporate cash holdings. The consistency of these findings across different specifications reinforces the robustness of the results and highlights the importance of maintaining strong corporate governance mechanisms in the face of external shocks.

In conclusion, the analysis of Table 17 provides compelling evidence that the closure of local newspapers leads to increased corporate cash holdings, driven by heightened information asymmetry and reduced external monitoring. However, the presence of analysts, short-term borrowing, and dividend payments act as mitigating factors, helping firms navigate the challenges posed by reduced media coverage. The comparison between OLS and FE models underscores the importance of accounting for firm-specific characteristics in understanding the relationship between media closures and cash management strategies. These findings contribute to the broader literature on corporate governance and financial decision-making, underlining the critical role of information intermediaries and financial policies in shaping corporate behaviour in times of uncertainty.

4.7 Conclusion

The closure of local newspapers has far-reaching adverse effects on American communities, leading to diminished civic participation, restricted access to informed electoral engagement, heightened instances of corruption and fraud, and the emergence of news deserts. This novel study focuses on investigating the impact of local newspaper closures on corporate cash holdings behaviour. It underscores the fundamental role that local media plays as a source of relevant corporate information and a robust governance mechanism. When local newspapers cease to exist, information asymmetry is exacerbated, compelling firms to accumulate cash reserves as a defensive measure. This phenomenon underscores the significance of local media in promoting transparency and mitigating uncertainties in corporate decision-making processes.

In line with the baseline hypothesis, the study's findings consistently underscore that local newspaper closures intensify uncertainty and exacerbate information asymmetry, ultimately resulting in higher levels of cash reserves held by U.S. corporations. Information asymmetry poses significant challenges in the realm of corporate finance, impeding the efficient allocation of financial resources. Media coverage, particularly from local newspapers, serves a crucial role in narrowing the information gap for investors and communities alike. However, in the absence of local media, the problem of information asymmetry is magnified, giving rise to agency conflicts, misallocation of resources, and a decline in shareholder value.

Furthermore, the study finds a significant positive correlation between local media closure and cash holdings behaviour of nearby companies, particularly those with higher bid-ask spreads, amplifying information asymmetry. Local firms respond to newspaper closure shocks by increasing cash reserves to offset the heightened transaction costs linked to wider bid-ask spreads. These results align with corporate cash theories, indicating that firms follow a proactive approach to reduce reliance on expensive external financing by accumulating more cash. The pecking order theory suggests that firms prioritise internal funds, due to the negative impact of information asymmetry on external financing costs. The free cash flow theory highlights that firms may stockpile excess cash to mitigate agency problems linked to managerial opportunism in the face of significant information asymmetry. This underscores the role of media coverage in reducing information asymmetry and related agency conflicts, impacting corporate cash strategies.

The study results are reinforced by employing alternative information asymmetry measure and conducting additional tests. This robust approach strengthens the evidence concerning the analysts' role in alleviating information asymmetry and moderating the impact of local newspaper closures on corporate cash holdings. The results reveal that analysts can exert a statistically significant negative influence on corporate cash holding policies, acting as an effective governance mechanism that mitigate agency costs and enhance financial management. Additionally, leveraging on strategic short-term borrowing improves transparency and stability in the face of exogenous shocks such as local media closures. The synergy between analyst coverage and debt covenants empowers lenders, encouraging dividend distributions and efficient resource allocation. This underscores the significance of different robust corporate governance in navigating uncertainties and making prudent financial decisions.

Moreover, this study employs four robustness tests to validate the baseline results, underscoring the impact of local newspaper closures on corporate cash holdings. These tests enhance the study's credibility and provide valuable insights, addressing potential concerns of endogeneity effectively. The rigorous validation reinforces the reliability and significance of the findings, offering a deeper understanding of the consequences of the absence of local media on corporate financial choices.

In conclusion, this research significantly contributes to the understanding of the intricate interplay among media closure, governance, information asymmetry, and cash management. The findings bear practical implications for both practitioners and policymakers, providing guidance on how to optimise cash management strategies and support governance practices amidst media disruptions. Utilising these outcomes, stakeholders can make informed decisions to navigate the challenges posed by media closures and enhance their overall financial and governance frameworks.

Looking forward, the present study offers valuable insights into the influence of local newspapers disappearance on corporate cash holdings. However, there are several avenues for future research that can enhance interpretation of this phenomenon. One potential direction is to explore the impact of newspaper decline on other critical corporate determinations, such as transparency and accountability, the diversity and independence of corporate boards, shareholder engagement, and financial performance. By investigating these factors, researchers can gain a more holistic understanding of the implications of local media closures on corporate governance and overall organisational effectiveness.

Appendix (2) Variable Definitions

	Variable	Definition	Previous Studies
Dependent Variable	**Corporate Cash Holdings** *Ln(Cash/AT), Ln(Cash/AN)*	*ln(Cash_Hold)* is measured by taking the natural logarithm of the ratio of cash and cash equivalents scaled by either total assets or net assets.	(Harford et al., 2008; Chen et al., 2020)
Independent Variables — Local Media Closure	$Treat\_firm_{i,t}$	Dummy variable: 1 if firm i is within a 50-mile radius of a closed newspaper (treatment), 0 otherwise (control).	(Kim et al., 2021)
	$Post_{i,t}$	Dummy variable: represents a ten-year closure window, with a value of 1 for the year of closure and the following four years, and 0 for all other years.	(Kim et al., 2021)
	$Treat\_firm_{i,t} * Post_{i,t}$ *(Local Newspaper Closure)*	The primary independent (explanatory) variable is the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. This binary variable is set to **1** if the firm is part of the treatment group (i.e., experiencing media closure) during the post-treatment period (i.e., after the media closure) and **0** otherwise.	(Feng et al., 2021; Kim et al., 2021)
Independent Variables — Information Asymmetry	*Bid-Ask Spread*	*BAS* indicates the difference between the highest bid and lowest ask price for a security, serving as a proxy for information asymmetry. The *BAS* variable is measured on a logarithmic scale using data from *Refinitiv-Eikon* to facilitate normalisation and improve analysis.	(Chung et al., 1995; Chae, 2005)
	Number of Analysts	*NOA* measures the count of financial analysts covering a company's stock, serving as a proxy for information asymmetry. This variable, sourced from *Refinitiv-Eikon*, is logged for normalisation and better analysis.	(Brennan & Subrahmanyam, 1995; Chang et al., 2006)
Control Variables	*Firm Size (Size)*	Firm Size refers to the total assets reported by the firm at the end of the fiscal year.	(Opler et al., 1999; Bates et al., 2009)
	Leverage (LEV)	Quantifies a company's debt financing, reflecting the ratio of debt to equity.	(Opler et al., 1999; Harford et al., 2008)
	Research and development expenditures (R&D)	*R&D* is included as a control variable to assess its impact on cash holdings.	(Dittmar et al., 2003; Bates et al., 2009)
	Market-To-Book (MTB)	*MTB* ratio assesses market valuation compared to accounting/book value, reflecting investor sentiment, financial health, growth potential, and resource utilisation.	(Opler et al., 1999; Bates et al., 2009)
	Net Working Capital (NWC)	Represents the difference between a company's current assets and liabilities, indicating its short-term liquidity.	(Dittmar et al. 2003; Cheng et al., 2022)
	Capital Expenditure (CAPEX)	CAPEX is the financial investment in acquiring or upgrading fixed assets.	(Opler et al., 1999; (Harford et al., 2008)
	Free Cash Flows (FCF)	Represent the excess cash generated by a company's operations, indicating its ability to accumulate cash holdings.	(Opler et al., 1999; Almeida et al., 2004)
	Cash Flow Volatility (CFV)	Refers to the degree of uncertainty and variability in a company's cash flows.	(Opler et al., 1999; Harford et al., 2008)
	Return on Assets (ROA)	*ROA* is a financial ratio that evaluates a company's profitability based on its asset utilisation.	(Dittmar & Mahrt-Smith, 2007; Gao et al., 2013)
Additional Variables	*Craigslist Entry*	An instrumental variable (IV) coded as a binary variable: (1) for Craigslist's entry within five years before a newspaper's closure and within a 50-mile radius, and (0) otherwise. The source of Craigslist's entry dates and locations is www.craigslist.org	(Gao et al., 2020; Heese et al., 2022)
	Short-term borrowing (STB_dum)	The short-term borrowing $STB\_dum_{i,t}$ is defined as a dummy variable that takes the value of 1 if the debt matures within one year and 0 otherwise.	(Custódio et al., 2013)
	Dividend Payment (Div_dum)	Dividend Payment $Div\_dum_{i,t}$ is a dummy variable, set to 1 if the company pays dividends and 0 otherwise.	(Opler et al., 1999; He & Wintoki, 2016).

Chapter Five: The Impact of Local U.S. Daily Newspaper Closures on Corporate Monitoring and Earnings Management

5.1 Introduction

5.1.1 Overview and Background

The emergence of digital media has dramatically transformed the journalism landscape, introducing new platforms and methods for sharing information (Napoli, 2011; Anderson et al., 2016). However, this change has also accelerated the decline of traditional news outlets, especially local newspapers (Usher, 2015; Abernathy, 2018). Driven by technological advances and changes in consumer behaviour favouring instant, easily accessible news (McChesney, 2016; Harte et al., 2018). The result of this transformation is a complex news ecosystem, where the challenges for traditional journalism are numerous (Nielsen, 2015; Hess & Waller, 2017).

The traditional role of newspapers as intermediaries in the news dissemination industry has been fundamentally reshaped by digital platforms as a new business model for online journalism (Cook & Sirkkunen, 2013; Bell et al., 2017). News articles are now commonly found on social platforms or search engines, which results in disaggregated news consumption (Nielsen & Ganter, 2022). Platforms like 'X' employ algorithms to filter which news articles are displayed in a user's feed, influencing reader behaviour and attitudes (Haim et al., 2018; Thurman et al., 2019; Poell et al., 2023).

The development and application of programming languages have contributed to reducing the visibility of local news content in comparison to more popular or sensational topics, leading to an even reduced readership for local newspapers (Dalen, 2012; Broussard et al., 2019; Diakopoulos, 2019). As a result, many newspapers have struggled to implement successful paywall strategies in the online realm due to the significant portion of advertising revenues that the new models have absorbed (Wahl-Jorgensen et al., 2016; Olsen & Solvoll, 2018).

Local media, particularly newspapers, operate as a critical institution within democratic societies (Napoli et al., 2017; Wadbring & Bergström, 2017). Known as the "*Fourth Estate*", newspapers act as a balance to the three branches of government by being a watchdog and a voice for the citizens (Gentzkow et al., 2004; Brunetti & Weder, 2003; Simons et al., 2017). This oversight function is especially vital at the local level where newspapers scrutinise city councils, local businesses, and community organisations, thereby holding them accountable to the public (Starr, 2009; Hayes & Lawless, 2015). In this way, local newspapers extend their influence beyond reporting news by shaping public opinion, influencing policy outcomes, and enforcing ethical business practices (Frost, 2006; Entman, 2012).

Local newspapers have traditionally served as the heart of communities, not only delivering crucial news but also fostering a collective identity and shared experience (Hindman, 1998; Poindexter et al., 2006; Harte et al., 2016). The decline of these essential institutions is largely credited to the shift of advertising revenue towards digital platforms like '*Google*' and '*Facebook*' (Nielsen & Ganter, 2017; Wahl-Jorgensen, 2018). Previously, local newspapers heavily relied on income from local advertisements, which included small businesses and regional brands (Ferguson, 1983; Lacy & Davenport, 1994; Picard, 2004). The rise of digital media giants has diverted a considerable portion of this advertising income, undermining the financial basis on which local newspapers have traditionally depended (Franklin, 2014; Picard, 2014; Angelucci & Cagé, 2019; Peterson, 2021).

The concept of earnings management is frequently a topic of debate among financial analysts and scholars (e.g., Schipper, 1989; Jones, 1991; Dechow et al., 1995; Healy & Wahlen, 1999; Dechow & Skinner, 2000). Earnings management involves the purposeful and strategic manipulation of a company's financial results to achieve particular objectives, like meeting earnings targets or shaping stakeholders' perceptions (McNichols, 2000; Kothari et al., 2005). This exercise can involve employing accounting techniques and judgments to present financial statements in a manner that may not accurately represent the company's economic performance (Leuz et al., 2003; Bergstresser & Philippon, 2006).

The impact of media on corporate conduct, particularly in the area of earnings management, is both essential and underexplored in financial research. Existing studies offer valuable insights into the mechanisms behind earnings management (e.g., Schipper, 1989; Jones, 1991; Dechow et al., 1995; Healy & Wahlen, 1999; Leuz et al., 2003; Kothari et al., 2005; Bergstresser & Philippon, 2006; Han et al., 2022; Hrazdil et al., 2023; Mian et al., 2023; Sul, 2024). Despite this contribution, there is a significant oversight regarding the role of media outlets, such as local newspapers, in influencing corporate transparency (Miller, 2006; Tetlock, 2007; Dyck et al., 2008; Bushee et al., 2010; Tetlock, 2011). This gap is noteworthy because media can serve as an external governance mechanism, shaping both investor attitudes and managerial decision-making (Joe et al., 2009; Solomon, 2012).

Newspapers serve as a key mechanism of external monitoring, and their closures could potentially create a significant gap in this surveillance, affecting corporate accountability (Kim et al., 2021; Heese et al., 2022). This study aims to fill this gap by examining how the closure of newspapers influences the earnings management strategies of corporations. The urgency of

this research is exacerbated by the declining health of print journalism and the rise of misinformation on digital platforms. Therefore, this research is timely and could have significant policy implications.

The closure of a local media outlet can be considered an exogenous shock that affects the corporate governance environment. In such situations, there is a substantial risk that managers will capitalise on this governance void to engage in earnings management, thereby sacrificing transparency, accountability, and, in the long run, shareholder value (La Porta et al., 2000; Bebchuk et al., 2009).

The potential for earnings management to reflect agency problems and management opportunistic behaviour has drawn significant attention from scholars and practitioners. While current literature has provided valuable insights into the factors and outcomes of earnings management, the connection between local newspapers acting as corporate watchdogs and this subject has been largely overlooked. To address this gap, the analysis conducts an examination of the influence of local daily newspaper closures on earnings management behaviour.

5.1.2 *Research Question and Motivations*

The present study is motivated by the continuing discussion regarding the role of local newspapers in promoting responsible journalism and community supervision. The influence of the media on corporate behaviour, particularly in the realm of earnings management, is a crucial yet underexplored aspect of financial research. Newspapers serve as a key mechanism of external monitoring, and their closures could potentially create a significant gap in this surveillance, affecting corporate accountability.

This research aims to contribute to this debate by exploring how local media impacts corporate conduct, with a particular emphasis on the consequences of daily newspaper closures in the United States on the earnings management practices of nearby firms. Through an empirical examination of the potential implications of these closures, the study seeks to bridge gaps in existing literature related to the challenging issues of agency problems and potentially opportunistic managerial behaviour, such as earnings management, encountered by publicly traded U.S. corporations.

A major concern surrounds the possible consequences of decreased local news coverage, which may include reduced accountability, a decline in investigative reporting, and a potential rise in

local corruption and crime rates (Waldman, 2011). Previous research has demonstrated that areas with limited local media tend to have less informed voters (e.g., Gentzkow et al., 2011; Baekgaard et al., 2014), which could lead to an increase in fraud among local politicians and a higher cost of municipal borrowing (Gao et al., 2020). Nevertheless, the understanding of the effects of declining local newspapers on earnings management practices remains limited.

The media landscape is rapidly evolving, but not in a direction that supports its traditional role as a watchdog (Miller, 2006; Bednar, 2012). This shift results in the appearance of 'news deserts', areas lacking local journalism mainly because of newspaper closures (Shaker, 2014; Mathews, 2020; Kim et al., 2021). Since 2004, the U.S. has experienced the shuttering of over 2,100 newspapers, constituting nearly 20% of all metropolitan and community news outlets (Abernathy, 2018). This decline has repercussions that extend beyond democratic governance to impact the economic well-being of local communities (Hindman, 2018). Adding to the crisis, about 1,800 communities are now without consistent local news coverage, thereby intensifying the challenges posed by these news deserts (Abernathy, 2020).

The decline in United States newspaper newsroom employees has been substantial and alarming, with a dramatic 57% reduction recorded between 2008 and 2020 (Walker, 2021). This significant contraction in the workforce has had far-reaching repercussions, undermining both the routine coverage of civic institutions and the specialised investigative journalism that once thrived at regional, state, and local levels (Hayes & Lawless, 2021). This decline has had a significant impact on local news outlets, such as the longstanding local newspapers known as "*Keystone Media*", that have consistently produced considerable amount of original content about specific regions (Nielsen, 2015). This unique attribute acts as an indispensable source of local information that is seldom covered by other regional or national sources (Lacy, 1984; Franklin, 2006). However, local newspapers' struggles have been compounded by the limitations imposed by their smaller, geographically defined audiences (Usher & Layser, 2010; Hindman, 2018).

The impact of these "news deserts" on corporate behaviour is particularly noteworthy, as they can lead to governance issues and the proliferation of agency problems and earnings management (Tetlock, 2007; Dyck et al., 2008; Bushee et al., 2010). These unexplored territories of weakened oversight create an environment in which corporate misconduct is more likely to go unnoticed, thereby providing fertile ground for agency conflicts and fraudulent activities (Jensen & Meckling, 1976; Kedia & Philippon, 2009). In essence, the absence of

local media weakens one of the essential checks and balances on corporate power, opening up possibilities for opportunistic behaviour that deviates from the best interests of shareholders and stakeholders alike (Kim et al., 2021; Heese et al., 2022).

Gentzkow et al. (2004) emphasise the prevailing consensus within scholarly circles that an independent and informative media is imperative for the effective functioning of a democracy. Their assertion is substantiated by a wealth of examples from the archives of journalism history, including the influential investigative journalism during the Watergate scandal (Bernstein & Woodward, 1974) and the critical role of the press in exposing Enron's accounting irregularities (Benston & Hartgraves, 2002), among numerous other significant episodes. These compelling instances not only underscore the belief in the capacity of journalists to effect substantial change but also reinforce the vital role played by a vibrant media landscape in safeguarding the democratic process (McLeod et al., 1996; Baker, 2001).

Local newspapers are vital community pillars, as they mirror the stories, struggles, and accomplishments of their readers (Waldman, 2011; Hess & Waller, 2017). Their unique coverage ensures that regional issues and viewpoints gain the attention they deserve, preserving local narratives within the context of broader national and cross-border news (McLeod et al., 1996; Curran, 2010; Erdal, 2011). Local media institutions not only distribute information but also foster a more in-depth understanding of events, from municipal policy changes to local cultural happenings (Yamamoto, 2011; Jenkins & Nielsen, 2019). These outlets often act as the primary source of vital updates for members of communities, including updates on local governance, education, and public safety (Hayes & Lawless, 2015; Peterson, 2021).

The Enron scandal is a pivotal moment in corporate governance and financial disclosure, frequently cited as a leading example of financial misconduct in the early 21st century (Coffee, 2001). It resulted in one of the largest bankruptcy declarations at that time, only surpassed by WorldCom (Ball, 2009). The aftermath led to thousands of employees losing their life savings, while a staggering USD 63.4 billion in assets vanished (Benston & Hartgraves, 2002). Enron's financial troubles were cleverly concealed through complex accounting tactics such as special purpose vehicles, aggressive revenue recognition, and mark-to-market accounting, remaining hidden from their financial statements (Sims & Brinkmann, 2003). Remarkably, the firm even maintained an investment-grade rating until just four days before filing for bankruptcy in 2001 (Healy & Palepu, 2003).

Traditionally, the media, particularly local newspapers, have functioned as external monitors and robust corporate governance mechanisms, spotting light on corporate activities and ensuring accountability (Miller, 2006; Dyck et al., 2008; Zyglidopoulos et al., 2012). However, the digital boom and the rise of media platforms, have placed journalism in a crisis, with local media experiencing a dramatic decline (Pickard, 2011; Wadbring & Bergström, 2017), expressing concerns about the future of supervision mechanisms in the evolving media landscape (Chyi & Lee, 2013; Karimi & Walter, 2016).

The absence of local newspapers serving as a watchdog can be seen as an exogenous shock to the corporate monitoring function (Heese et al., 2022; Jiang & Kong, 2023). Such closures have the potential to create a compromised governance environment and trigger agency dilemmas (Kim et al., 2021). Executives of nearby firms may deliberately manipulate their financial statements to mislead stakeholders or influence private benefits, a behaviour commonly recognised as earnings management (Jones, 1991; Dechow et al., 1995; Healy & Wahlen, 1999; Leuz et al., 2003).

Corporate governance is the framework that maintains transparency in companies and holds managers accountable (Shleifer et al., 1997; La Porta et al., 2002). By enforcing regular and accurate disclosure of financial and operational data, corporate governance ensures that stakeholders are well-informed about a company's health and performance (Healy & Palepu, 2001; Bushman et al., 2004; Miller, 2004). When local media closes, it can adversely impact corporate transparency and possibly stimulate earnings management, as discrepancies or manipulations become more evident and potentially detrimental to the company's reputation and stock performance (Bushman & Smith, 2001; Sloan, 2001; Cohen et al., 2008).

Furthermore, agency conflicts arise when the interests of managers (agents) diverge from the interests of shareholders (principals) (Berle & Means, 1932). Managers might engage in earnings management to attain contractual outcomes, safeguard their job positions, or enhance their personal reputation, even if such activities are at the expense of shareholder value (Jensen & Meckling, 1976; Fama, 1980; Fama & Jensen, 1983; Healy & Wahlen, 1999). As a result, earnings management practices highlight a potential gap in corporate governance, leading to an increase in agency conflicts and emphasising the essential role of rigorous governance mechanisms in promoting transparency and accountability to monitor firms behaviour (Agrawal & Knoeber, 1996; Dechow et al., 1996; Aguilera et al., 2015).

This study significantly advances understanding of the complex relationship between the absence of local media, corporate governance, agency conflicts, and earnings management practices through several key contributions. Firstly, it introduces new empirical evidence into the ongoing debate about the media's influence within corporate life, focusing specifically on earnings management and financial reporting quality. The research finds that the staggered closure of local newspapers, as an exogenous shock, leads nearby corporate managers to increase their earnings management activities by 0.9% to 4.8%. This finding builds on previous research on the media's governance role in capital markets (e.g., Miller, 2006; Dyck et al., 2008; Joe et al., 2009; Liu & McConnell, 2013; Dai et al., 2015; Chen et al., 2021), and aligns with recent studies examining the impact of local newspaper closures on corporate behaviour (e.g., Kim et al., 2021; Heese et al., 2022; Jiang & Kong, 2023). Despite concerns that media reports can sometimes exert undue short-term pressures or present biased viewpoints (Groseclose & Milyo, 2005), and that local newspapers might avoid negative reporting on local firms due to profit motives (Gurun & Butler, 2012; Ahern & Sosyura, 2015; Shapira & Zingales, 2017), this study suggests that media coverage, overall, significantly enhances the transparency and integrity of corporate financial reporting.

Secondly, it contributes by highlighting the impact of firms' visibility and media availability on earnings management. The findings show that newspaper closures significantly increase earnings management, especially in high-profile S&P 500 firms (Tetlock et al., 2008; Tsileponis et al., 2020; Guest, 2021). While media scrutiny typically restrains such practices, its absence intensifies them, particularly in high-visibility and larger firms (Watts & Zimmerman, 1986; Core et al., 2008). Regions becoming news deserts experience a surge in earnings management, indicating that the lack of local newspapers exacerbates agency conflicts and weakens corporate governance (Abernathy, 2020; Mathews, 2020; Kim et al., 2021). Social media platforms fail to fill the gap left by traditional newspapers, underlining the irreplaceable role of local journalism in ensuring transparency and ethical business conduct (Shaker, 2014; Miller & Skinner, 2015; Baloria & Heese, 2018).

Thirdly, this study deepens understanding of media-corporate governance dynamics by examining the relationship between the Economic Policy Uncertainty (EPU) Index (Baker et al., 2016), state-level economic indicators, newspaper closures, and corporate earnings management practices. Integrating controls for economic uncertainty and local economic conditions (Gulen & Ion, 2016), it isolates the impact of newspaper closures on earnings management, supporting the baseline results. This underscores the crucial role of local

journalism in corporate governance, offering insights into broader economic influences on corporate behaviour and financial transparency.

Fourthly, this study further contributes by improving the identification concerns. A placebo test is conducted to ensure robustness against spurious correlations by simulating conditions with randomly assigned treatment effects, validating the causality of the observed effects (Abadie et al., 2010). Propensity Score Matching (PSM) is also employed to create a comparable control group of firms not affected by newspaper closures, minimising biases from confounding variables (Rosenbaum & Rubin, 1983; Caliendo & Kopeinig, 2008). Additionally, a dynamic effects test examines how the impact of media presence on earnings management evolves over time, providing insights into both the immediate and sustained effects of local newspaper closures on corporate financial practices (Callaway & Sant'Anna, 2021).

Fifthly, this research adds to the existing literature by addressing endogeneity concerns, exploring the impact of local newspaper closures on earnings management. Broadband entry and Craigslist's market entry serve as instrumental variables, validated by the Sargan-Hansen overidentification test, predicting closures effectively (Seamans & Zhu, 2013; Gentzkow et al., 2014). Predicted closures correlate with increased discretionary accruals and real earnings management (Gurun & Butler, 2012; Cho et al., 2016), suggesting heightened financial manipulation post-closure. This study contributes to understanding the causal link between local newspaper closures and amplified corporate financial manipulation, underlining media monitoring's role in corporate governance.

Sixthly, this study enriches the earnings management literature by identifying channels interacting with local media closure, assessing their impact on monitoring mechanisms and financial reporting quality. It underscores the roles of internal and external governance mechanisms, including institutional investors (Cornett et al., 2008; Hadani et al., 2011; Chung et al., 2024), financial analysts (Yu, 2008; Chen et al., 2015; Almaharmeh et al., 2024), executive compensation (Bergstresser & Philippon, 2006; Adut et al., 2013; Cabezon, 2024), auditors (Becker et al., 1998; Krishnan, 2003; Francis & Yu, 2009; Xia et al., 2024), and boards qualities (Klein, 2002; Xie et al., 2003; García-Meca & Sánchez-Ballesta, 2009; Wang et al., 2024). Additionally, it emphasises understanding firms' heterogeneous characteristics, such as dividend policies, financial constraints, investment levels, and leverage status, in curbing earnings management practices (Siregar & Utama, 2008; Gunny, 2010; Farrell et al., 2014).

Lastly, the study highlights the media's unique role as a critical public watchdog (Miller, 2006; Bednar, 2012), revealing how its absence fosters increased opportunistic behaviour among managers, exacerbating agency conflicts (Kim et al., 2021). This detrimental impact undermines effective corporate governance and shareholder value (Davidson et al., 2005; Boachie & Mensah, 2022). By examining local media's specific roles in corporate monitoring and public accountability, this research contributes to a reassessment of the media's fundamental role in detecting and mitigating earnings management practices, advancing discussions on transparency and integrity in financial reporting.

This study enhances the knowledge of how the absence of local media impacts corporate governance, agency conflicts, and earnings management. It shows that local newspaper closures, acting as an exogenous shock, lead managers to increase earnings management activities, highlighting the media's crucial role in ensuring financial transparency. The research employs robustness checks, including a placebo test, Propensity Score Matching, and dynamic effects analysis, to confirm causality. It also addresses endogeneity concerns with instrumental variables. The findings underscore the irreplaceable role of local journalism in corporate governance and reveal how its absence fosters opportunistic behaviour among managers, undermining corporate governance and shareholder value.

5.1.3 Structure of the Study

This essay employs a structured approach to comprehensively address its research objectives. The introductory section provides an overview of the study, including its background, research question, and motivations. The second section critically assesses the role of local newspapers in corporate monitoring and explores relevant theories of earnings management. Building on insights from the literature review, the third section formulates the study's hypothesis. The fourth section details the sample and data collection procedures, presents descriptive statistics, and examines pairwise correlations. Empirical analysis is conducted in the fifth section, enriched with methodological insights and a thorough discussion of the findings, their implications, and connections to academic debates. Robustness tests are performed in the sixth section to verify the baseline results. The seventh section explores monitoring channels and governance mechanisms. The eighth section further enhances the analysis by introducing cross-sectional and heterogeneous approaches to strengthen the findings' reliability. The final section delivers a conceptual conclusion, offering recommendations and identifying potential avenues for future research.

5.2 Literature Review

5.2.1 Local Newspapers as a Monitoring Channel

Newspapers, widely acknowledged as the cornerstone of democratic societies, play an essential role as the fourth estate (Schultz, 1998; Curran et al., 2005; Saeed, 2009). Beyond simply being a source and distributor of information, print media's primary mission is to ensure accountability for powerful bodies, no matter they are government figures or corporate executives (Miller, 2006; Bednar, 2012; Strömberg, 2015). By vigilantly monitoring and exposing wrongdoings or a lack of transparency, newspapers serve as a deterrent function for politicians and corporate managers who might contemplate corruption and unethical practices, as they fear the ramifications of public exposure (Dyck et al., 2008; Bobonis et al., 2016; Ferracioli et al., 2022).

Media's profound impact on shaping societal perceptions and upholding democratic norms cannot be understated (Schaffner, 2006). Mutz and Martin (2001) claim that media are vital not only in providing information but also in promoting democratic values. At the same time, Moy et al. (2004) suggest that media, rather than being simple informers, also influence community dynamics by fostering societal unity and shared values.

Investigative journalism, a characteristic of many newspapers, provides a thorough examination of complicated issues, ensuring that the public is aware of details that may be overlooked (Snyder & Strömberg, 2010; Carson & Farhall, 2018). This not only enlightens readers, but it also influences public opinion and can influence policy decisions (Freedman, 2010). However, the credibility and impact of newspapers are contingent on their independence and commitment to truth (Lewis et al., 2009; Gans, 2010). Their role in ensuring transparency, fostering accountability, and promoting robust public debate cannot be overstated (Mullainathan & Shleifer, 2005).

In their watchdog capacity, newspapers are determined to monitor the actions of local power structures, thereby ensuring their accountability (Whitten-Woodring, 2009; Palmer et al., 2020). The investigative competence of local journalists often uncover instances of financial misconduct and ethical breaches, safeguarding the interests of the community (Hamilton, 2016; Shapira, 2018). In addition, these newspapers stimulate discussion and foster a more informed and engaged citizens by highlighting pressing societal concerns (Gentzkow & Shapiro, 2008; Chiang & Knight, 2011).

Additionally, local media outlets possess a long-standing history of serving as community watchdogs, ensuring accountability, transparency, and promoting civic engagement (Shaker, 2014; Hayes & Lawless, 2015). Their ongoing interaction with local constituents offers a unique advantage in delivering news stories that resonate more profoundly with their readership (Schaffner, 2006; Gerber et al., 2009). As a result, local newspapers often wield considerable influence, shaping public opinion and fuelling discussions on matters of utmost importance to their audiences (Andrews & Caren, 2010; Napoli et al., 2017).

Local newspapers are instrumental in providing news and addressing issues relevant to local communities (Yamamoto, 2011; Shaker, 2014; Miller & Skinner, 2015). In comparison to regional or national newspapers, local outlets offer a more personalised approach due to their proximity to diverse community segments, making them vital sources of spreading information (John, 1995; Hess, 2012; Ali et al., 2018). The deep understanding that local media offer of their readership allows them to highlight and scrutinise issues of public concern, making them indispensable watchdogs (Donohue et al., 1995; Palmer et al., 2020). Through their consistent engagement with community members, local newspapers can deliver news that deeply connects with neighbourhood audience, establishing a unique trust and strong ties (George & Waldfogel, 2006; Gentzkow et al., 2014). Consequently, local media influence is significant on public opinion, directing discussions on community-centric issues and shaping the societal agendas (Meijer, 2010; McCombs & Funk, 2011; Napoli & Dwyer, 2018).

The newspaper industry has faced pronounced challenges, with digital media and online platforms contributing significantly to dwindling readership and diminishing advertising revenue (Gentzkow, 2007; Mullainathan & Shleifer, 2005). The prominence of traditional print journalism has been dominated by the digital advent, which has seen the rise of online news and information overload (Berte & De Bens, 2008; Chyi & Tenenboim, 2017). There are increasing concerns that this change may be jeopardising the quality and depth of original news content, particularly in vast regions like the U.S. (Napoli et al., 2017; Jenkins & Nielsen, 2020; Pew Research Center, 2021).

These transformations result in the closure of newspapers, layoffs of journalists, and a shift in the nature of news coverage, covering areas from public corruption and electoral dynamics to critical community matters and corporate practices (Cagé et al., 2020; Reinardy & Zion, 2020). Recognising the significant consequences of these shifts, researchers highlight the urgent need

for more comprehensive examination in this essential area to better understand the scope of these media evolutions (e.g., Gao et al., 2020; Kim et al., 2021; Heese et al., 2022).

According to the Pew Research Centre's[12] study of the Bureau of Labor Statistics Occupational Employment Statistics survey data, there has been a 26% decrease in total U.S. newsroom employment since 2008. During this period, newspapers have encountered substantial job losses, while digital-native news institutions have experienced significant growth, with a 144% increase in their workforce from 2008 to 2020, rising from 7,400 to about 18,000 employees. In 2008, the total newsroom workforce across various news-producing industries was approximately 114,000. However, by 2020, this number had fallen to about 85,000, primarily due to declines in employment between 2008 and 2014. Newspaper newsrooms witnessed the most substantial reduction, with a 57% decline from around 71,000 jobs to about 31,000 during the same period (Walker, 2021).

In a recent study on the impact of local newspaper layoffs on corporate behaviour, Kim et al. (2021) examine the role of local media in exposing undesirable actions by local firms. The study delves into how layoffs in local newspapers affect workplace safety in local firms. The findings implies that incidents of workplace injuries increase after newspaper layoffs. The research also reveals that reductions in safety-related spending and increased workloads are contributing factors. This underscores the importance of local newspapers as crucial corporate monitors and vital sources of relevant information, helping to mitigate adverse corporate behaviour.

Therefore, the decline of local newspapers can be seen as a systematic phenomenon that goes beyond a mere change in media consumption patterns (Wadbring & Bergström, 2017; Mathews, 2020). This signifies the potential loss of a fundamental institution that backs communities, offers a counterbalance to national stories, and plays a pivotal role in the structure of local democracies (Siles & Boczkowski, 2012; Darr et al., 2018). The lack of these watchdogs presents a growing threat of reduced transparency in local governance, unchecked power dynamics, and a weakened sense of community connection and trust (Gao et al., 2020; Rubado & Jennings, 2020).

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[12] https://www.pewresearch.org/

Furthermore, the absence of local governance bodies as vigilant newspaper monitors can result in decreased community engagement and diminish firms' motivation to act in the best interests of their stakeholders (Ali et al., 2018; Kim et al., 2021; Thompson, 2021). A shrinking local media landscape can also facilitate the spread of fake news, as reliable sources become scarce, presenting challenges to the stability and efficiency of markets (Allcott & Gentzkow, 2017). Furthermore, without the oversight of local newspapers, corporations might be less inclined to uphold ethical standards, which can undermine trust in business institutions (Choi & Valente, 2022; Heese et al., 2022; Jiang & Kong, 2023).

This study aims to explore the potential impact of local media closures on firms' earnings management behaviour, motivated by the argument that local media serve as corporate watchdogs and governance mechanisms. Scholars imply that local media play a crucial role in the corporate governance landscape, serving as essential monitoring bodies to ensure corporations maintain ethical and transparent practices (e.g., Gillan, 2006; Bednar, 2012; Gao et al., 2020; Giuli & Laux, 2022). By providing independent and unbiased coverage, the exposure of media, as external governance mechanism, has the capacity to improve transparency and accountability, thus reducing agency problems in corporate settings (Miller, 2006; Dyck et al., 2008; Joe et al., 2009). However, the decline or closure of these monitoring entities can create a governance vacuum (Kim et al., 2021; Choi & Valente, 2022; Heese et al., 2022; Jiang & Kong, 2023).

The exogenous shock following the closure of local media outlets can considerably undermine corporate monitoring (Gao et al., 2020; Kim et al., 2021; Heese et al., 2022). Nearby firms may exploit the resulting lack of transparency, creating fertile ground for agency conflicts and exacerbating the misalignment between management's objectives and shareholders' expectations (Jensen & Meckling, 1976; Fama & Jensen, 1983; Hart, 1995). With reduced media supervision, corporate managers may lean toward decisions primarily serving their opportunistic behaviour while ignoring broader stakeholder considerations (Shleifer & Vishny, 1997; La Porta et al., 2000). These actions may involve questionable investment choices and an increased propensity to deploy earnings management tactics (Guidry et al., 1999; Healy & Wahlen, 1999; Dechow & Skinner, 2000), all driven by the underlying goal of personal wealth enhancement (Watts & Zimmerman, 1990; Fields et al., 2001).

In short, local newspapers are a crucial external corporate governance mechanism that oversees and evaluates the activities and results of local firms. Local firms' stakeholders may suffer

significant negative consequences due to the lack of a well-functioning local press, impacting their economic, cultural, and social well-being by removing a trusted and essential local monitoring channel. This study seeks to fill an existing research gap by examining the quantifiable effects of the closure of traditional local newspapers on earnings management practices. Through several empirical and robustness tests, valuable insights can be obtained regarding the extent to which local newspapers act as an effective watchdog against managerial opportunism when an external monitoring mechanism is absent.

5.2.2 Earnings Management: Literature Review

5.2.2.1 Earnings Management – Introduction & Motivation

The debate surrounding the credibility and reliability of corporate financial statements has always centred around earnings management, a complex aspect of financial practices (Watts & Zimmerman, 1986; Graham et al., 2005). Earnings management can be outlined as the practice that entails employing discretion in financial reporting and shaping transactions to deliberately modify financial statements (McNichols, 2000). According to Klein (2002), earnings management is the act of distorting the genuine financial performance of a company. The objective of this technique is to induce contractual outcomes dependent on reported accounting figures or deceive stakeholders regarding corporate financial status (Healy & Wahlen, 1999).

Arthur Levitt, in his capacity as former SEC Chairman[13], underscored the detrimental impact of various earnings management techniques on the integrity of financial reporting. Chairman Levitt specifically pointed out practices like "*big bath*" restructuring charges, premature revenue recognition, "*cookie jar*" reserves, and the write-offs of purchased in-process Research and Development (R&D). These practices, as Levitt noted, were not just technical accounting issues but posed serious threats to the credibility of financial reporting, potentially misleading investors and other stakeholders (Healy & Wahlen, 1999; Hope & Wang, 2018; Kjærland et al., 2021).

The academic literature exploring earnings management concentrates on three key topics: analysing the motivations behind managerial manipulation of earnings, investigating the specific mechanisms employed for this purpose, and appraising the consequences of these actions (e.g., Healy, 1985; DeAngelo, 1986; Dechow & Skinner, 2000). These core concerns represent a significant area of study within the larger field of financial reporting, supported by

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[13] Chairman Levitt's statements during his speech titled "The Numbers Game", published in *The CPA Journal*, New York, Vol. 68, (12) (December 1998): 14-19.

important assessments from reputable academics, such as those found in the publications of McNichols and Wilson (1988), Schipper (1989), Jones (1991), Holthausen et al. (1995), Erickson and Wang (1999), Healy and Wahlen (1999), Klein (2002), Leuz et al. (2003), Dechow et al. (2012), Collins et al. (2017), Han et al. (2022), Hrazdil et al. (2023), Mian et al. (2023), and Sul (2024). However, it is imperative to acknowledge that this body of work is controversial since different interpretations of the evidence often initiate scholarly discussions and induce opposing viewpoints.

Schipper (1989) characterises earnings management as the purposeful interference in the financial reporting process aimed at achieving specific private benefits, rather than just allowing the process to function impartially. The author makes the implication that managers have occasionally adopted procedures that might not fully reflect a firm's genuine economic position in an effort to meet market expectations and provide a positive financial image. Historically, these manipulative practices have been motivated by a range of factors, ranging from meeting analysts' expectations to influencing stock prices (Abarbanell & Lehavy, 2003; Roychowdhury, 2006).

Kothari et al. (2005) expanded on this understanding by introducing a classification system that identifies different motives behind earnings management. They categorised earnings management into four types: opportunistic, contracting, income-increasing, and income-decreasing. This classification provides a more detailed framework for understanding the varied nature of earnings management strategies.

Jones (1991) examines the behaviour of firms during import relief investigations conducted by the U.S. International Trade Commission. Analysing data from 68 American companies spanning 1980-1990, the study discovers that firms with a potential benefit from import relief are 2.5 times more likely to undertake earnings manipulation during the investigation year compared to the preceding two years. This manipulation, in turn, increases their likelihood of receiving import relief by 2.3 times. The study indicates considerable implications for policymakers, urging caution in the face of potential manipulation, and for investors, advising skepticism toward financial statements of firms under investigation, as these statements may not accurately reflect the company's true financial health.

In their comprehensive review, Healy and Wahlen (1999) underscore the general understanding among accountants and financial economists that firms capitalise on the flexibility in

accounting standards to manipulate reported earnings. Their evidence supports the theory that companies manipulate results in order to maximise regulatory benefits and costs, avoid lending agreement violations, improve executive compensation and job security, and engage in "*window dressing*" of financial statements before initial public offerings.

Building on the conclusions of Healy and Wahlen (1999), Leuz et al. (2003) identify earnings management as the deliberate manipulation of a company's reported financial measures by internal stakeholders. This manipulation frequently attempts to delude external actors or to sway contract-based choices (Sweeney, 1994; Holthausen et al., 1995). The concept emerges from a conflict of interest between company insiders, such as controlling owners or executives, and external stakeholders, as explored by Jensen and Meckling (1976) in their seminal research on agency theory. Within this context, the methods of earnings management enable insiders to gain unfair advantages through tactics like asset transfers or exclusive privileges not equitably shared (Beneish, 1999).

Regulatory considerations play a pivotal role in corporate earnings management, as companies often adjust earnings to align with debt covenants or avoid regulatory scrutiny (Franz et al., 2014; Kubick et al., 2016). Sweeney (1994) investigates how 130 firms respond to accounting-based covenant breaches in their annual reports, finding that managers frequently use income-boosting accounting practices when nearing default. The study highlights the influence of lenders' default costs and managerial accounting flexibility on these decisions. Most breaches first appear in private lending agreements, often involving net worth and working capital constraints, with lenders requiring concessions in 52% of cases.

According to Burgstahler and Dichev (1997), companies might resort to earnings management behaviour strategically to prevent disclosing marginally lower earnings or losses compared to previous periods, which could lead to possible adverse consequences on stock prices. Furthermore, Graham et al. (2005) argue that corporate leaders acknowledge to exercise manipulating earnings to satisfy market benchmarks, which could potentially misguide investors and distort the perceived firm's financial position.

Earnings management, operating within the parameters of Generally Accepted Accounting Principles (GAAP), involves managerial discretion in financial reporting and often treads the line of ethical standards (Burgstahler & Dichev, 1997; Healy & Wahlen, 1999). Schipper (1989) delves into how earnings management, even within GAAP compliance, can result in

financial reports that misrepresent a company's financial situation. Fields et al. (2001) point out that the flexibility in GAAP provides room for manipulation, particularly in areas like revenue recognition and expense reporting. Nelson et al. (2002), argue that the flexibility inherent in GAAP provides managers with a certain degree of discretion in reporting financial outcomes, and this discretion can be employed for earnings management purposes.

The work by Barth et al. (1999) suggests that companies with consistent patterns of earnings increases enjoy higher price-to-earnings multiples, which tend to diminish or disappear when these patterns are disrupted. Similar findings from DeAngelo et al. (1996) indicate an average negative stock return of 14% when firms deviate from consistent profit growth. This underlines a significant motivation for earnings management, specifically among firms seeking to sustain stable profitability (Graham et al., 2005).

Feroz et al. (1991) discovered that between 1982 and 1989, a significant 70% of enforcement cases centred on allegations of inventory or receivables overstatement. These allegations were frequently connected to the termination of management roles and shareholder litigations. They noted a 13% average reduction in stock prices post such announcements, moderating to 6% if the issues were already made public. Corroborating this, Dechow et al. (1996) observed a 9% stock price decline in similar circumstances from 1982 to 1992. Furthermore, they identified heightened bid-ask spreads, a decrease in analyst following, and other negative market reactions, implying substantial investor scepticism when firms manipulate earnings.

Watts and Zimmerman (1978) offer a crucial conceptual framework for understanding the economic incentives influencing managerial accounting decisions. While not explicitly focused on earnings management, their work establishes the foundation for exploring this phenomenon by highlighting factors such as firm size, political costs, and contractual efficiency in shaping accounting practices. The authors argue that accounting choices represent rational economic decisions designed to alleviate external pressures and internal constraints. This perspective reinforce subsequent empirical studies, enabling a more comprehensive understanding of earnings management as the strategic manipulation of financial statements to achieve various economic objectives.

Xie et al. (2003) investigate the influence of a firm's board and audit committee on earnings management. The study supports a conclusion from an SEC (Securities and Exchange Commission) Panel Report that underscores the need for financial expertise among audit

committee members. Boards and committees with members having corporate or financial backgrounds are linked to fewer discretionary current accruals. Furthermore, frequent meetings of these governance bodies also correlate with reduced levels of earnings management. The research suggests that the composition and activity of the board and audit committee play a pivotal role in curbing managerial tendencies to manipulate earnings.

The practices of "cookie jar reserves" and "taking a bath" represent strategic forms of earnings management. "*Cookie jar reserves*" involve underreporting earnings in profitable periods to create reserves for future leaner years, smoothing earnings over time (Duh et al., 2009). In contrast, "*taking a bath*" refers to the practice of reporting significantly low earnings, typically during periods of management change or poor performance, setting a lower base for future earnings comparisons and potentially enhancing future financial performance appearance (Fogel-Yaari & Ronen, 2020). These strategies, while serving short-term reporting objectives, can significantly impact long-term investor perceptions and stock valuations.

Concerning the scope of meeting external expectations, Abarbanell and Lehavy (2003) clarify that firms are inclined to manage earnings to meet or exceed analysts' forecasts. This trend is corroborated by Kasznik (1999), who identified similar behaviour when firms are at risk of falling short of their own management earnings projections. Overall, the aforementioned studies collectively contribute to the understanding that earnings management is a common practice, influenced by a range of fluctuating factors, including market incentives and external expectations.

The studies by Davis and Khadivar (2024) and Sul (2024) offer complementary insights into earnings management under external pressures. Davis and Khadivar (2024) focus on the immediate effects of market speculation, specifically takeover rumours. They find that managers adjust their earnings management strategies based on the likelihood of a takeover, engaging in both accrual and real earnings management before and after rumours surface. In contrast, Sul (2024) examines the impact of regulatory changes, particularly the enactment of takeover laws, which increase job security concerns among managers, leading to heightened earnings manipulation. This effect is most pronounced in countries with weak investor protections, where governance mechanisms are less robust. While Sul (2024) highlights the broader, long-term consequences of regulatory changes on earnings management, Davis and Khadivar (2024) reveal the short-term, adaptive behaviours of managers in response to market signals, illustrating the multifaceted drivers of earnings manipulation.

Institutional ownership plays a pivotal role in mitigating earnings management, as demonstrated by recent research. Han et al. (2022) explore the global influence of foreign ownership on earnings management, demonstrating that stricter monitoring by foreign investors generally reduces earnings manipulation, though the effect is contingent on the legal environment. Mian et al. (2023) investigate the temporal aspect of institutional investment, finding that long-term investors play a crucial role in curbing earnings management due to their sustained interest in the firm's performance. Gao et al. (2024) focus on overlapping institutional ownership (OIO) within supply chains, revealing that OIO significantly reduces discretionary accruals by strengthening internal relationships and enhancing external monitoring. Together, these studies underline the vital role of institutional ownership in enhancing financial reporting quality, whether through the origin of investors, the duration of their investments, or the structure of ownership within supply chains. Each study contributes distinct insights into how different facets of institutional ownership can mitigate earnings management practices.

Wen et al. (2023) demonstrate that FinTech innovations, such as big data analytics and AI, significantly improve financial reporting transparency and accuracy, leading to a reduction in earnings management. They show that FinTech's real-time monitoring capabilities effectively deter managers from engaging in manipulative practices, thereby reinforcing corporate financial integrity. In contrast, Autore et al. (2024) find that blockchain technology, despite its potential to enhance data integrity through features like tamper-resistance and decentralised consensus, unexpectedly results in increased earnings management among supplier firms after their customers adopt blockchain. This increase is attributed to market hype surrounding blockchain, which reduces external monitoring, creating opportunities for earnings manipulation. The comparison between these studies reveals that while FinTech effectively curtails earnings management by strengthening oversight, blockchain's impact is more complex, potentially exacerbating earnings manipulation due to its influence on market perceptions and monitoring practices.

The studies by Gull et al. (2023) and Hrazdil et al. (2023) examine the impact of gender diversity on earnings management through different lenses. Gull et al. (2023) focus on the influence of gender-diverse boards, finding that such boards implement stronger governance practices that reduce aggressive earnings management, particularly in waste management across various countries. This suggests that gender diversity at the board level enhances ethical oversight, leading to more cautious financial practices and less manipulation of earnings. In contrast,

Hrazdil et al. (2023) investigate the effect of gender-diverse CEO/CFO pairs on earnings management, showing that these pairs improve earnings quality by reducing discretionary accruals and encouraging more rigorous audit processes. Their research indicates that gender diversity at the executive level directly curtails earnings manipulation by fostering higher financial scrutiny. Jointly, these studies highlight the significant role of gender diversity in reducing earnings management through improved governance and financial oversight.

Recent research by Chen et al. (2021) and Chen et al. (2024) underscores the varied role of media in corporate governance, balancing its monitoring function with potential risks of influencing managerial disclosures. Chen et al. (2021) demonstrate that increased media coverage serves as a deterrent against earnings manipulation, reducing accrual-based and real earnings management, particularly in firms with weaker internal controls. Alternatively, Chen et al. (2024) find that low media sentiment can prompt managers to issue overly optimistic but less accurate earnings forecasts, indicating that media sentiment might lead to strategic distortions in financial reporting. While the first study underlines the media's role in enhancing financial transparency, the second warns of the potential for media sentiment to encourage manipulative practices. Combined, these studies reveal the dual impact of media, showing how it can both curb and, under certain conditions, unintentionally promote earnings management.

5.2.2.2 Earnings Management Mechanisms

Earnings management typically involves two primary mechanisms: discretionary accrual-based and real activities manipulation (Jones 1991; Graham et al., 2005; Kothari et al., 2005; Cohen et al., 2008; Zang, 2012). Roychowdhury (2006) made a significant contribution by distinguishing between accruals-based and real activities earnings management. Accruals centre on accounting choices, whereas real activities manipulation involves altering operational decisions to impact reported earnings. Appreciating these distinctions is crucial for a comprehensive understanding of the varied strategies utilised in earnings management.

5.2.2.2.1 Discretionary Accrual-Based Earnings Management

Discretionary accrual-based earnings management (AEM) strategically manipulates accruals in financial statements to influence reported earnings, creating a discrepancy between economic performance and accounting figures (Schipper, 1989). According to the findings of Dechow and Skinner (2000), accruals-based earnings management involves accounting decisions made within the framework of generally accepted accounting principles (GAAP)

with the explicit intention of concealing or distorting genuine economic performance. Such within-GAAP accrual-based earnings management typically occurs toward the close of an accounting period, once most real operating activities are completed (Kim & Sohn, 2013).

Schipper (1989) research articulates accruals as accounting adjustments matching revenues and expenses to the period they occur, regardless of cash flow timing. The author suggests that earnings management through accruals typically involves smoothing earnings to present a more promising financial image, whether by increasing or decreasing reported earnings. This foundational work is key in understanding how accrual accounting can be strategically used to manipulate financial reports and shape perceptions of a company's financial health.

Healy and Wahlen (1999) further underscore the pervasive and opportunistic nature of accrual-based earnings management. Their study reveals that in an environment with imperfect audits, managers often use accruals advantageously in profitable times to build reserves. These reserves are then utilised during challenging periods, allowing for a consistent portrayal of earnings. This approach illustrates how accruals can be strategically manipulated over time, not just for immediate financial reporting, but also as a long-term strategy to maintain the appearance of financial stability in a company.

Accruals, as non-cash accounting entries, offer managers a degree of discretion in recognising revenues and expenses, providing a window for manipulation without a corresponding impact on cash flows (Dechow et al., 2010). Notably, studies like Jones (1991) and Kothari et al. (2005) discuss how firms engaging in accrual-based earnings management often use discretionary accruals to meet specific earnings targets, demonstrating the influential role of accrual accounting in corporate financial reporting.

Teoh et al. (1998) study uncovers that firms frequently resort to income-increasing unexpected accruals prior to seasoned equity offerings and initial public offerings, followed by notable reversals after these events. This pattern is corroborated by Dechow et al. (1996), who find a link between financial reporting violations and later seasoned equity offerings. This research collectively highlights strategic financial reporting behaviours around significant equity events.

Based on the conclusions of DeFond and Jiambalvo (1994), companies commonly engage in accrual-based earnings management to prevent violating debt covenants, indicating a strategic employment of accounting flexibility to satisfy contractual and regulatory demands.

Complementing this, Guenther (1994) notes that in certain regulatory contexts, firms may manipulate earnings to align with specific accounting standards or tax regulations. An example of this is companies managing earnings downwards to reduce their taxable income, showcasing the diverse motives behind earnings management in various regulatory and financial environments (Hanlon & Heitzman, 2010).

The studies by Kjærland et al. (2021) and Yaşar and Yalçın (2024) provide different yet interconnected insights into AEM under varying economic shocks. Kjærland et al. (2021) focus on the sector-specific oil price shock, revealing a predominant use of income-decreasing AEM, where firms, particularly those financially vulnerable, engaged in "*Big Bath*" accounting to lower earnings during the shock and set the stage for future recovery. Conversely, Yaşar and Yalçın (2024) examination of the COVID-19 pandemic, a global crisis, uncovered a dual approach: firms engaged in both income-increasing and income-decreasing AEM depending on their immediate financial needs and the level of uncertainty they faced. While both studies underscore the opportunistic use of AEM during economic shocks, Yaşar and Yalçın (2024) highlight the broader and more varied responses triggered by a global crisis compared to the more uniform strategies observed by Kjærland et al. (2021) in a sector-specific shock.

Long et al. (2023) and Lei et al. (2024) both examine how environmental regulations impact AEM practices in China, offering distinct perspectives. Long et al. (2023) find that the Carbon Emissions Trading Scheme (ETS) leads to increased AEM, driven by the higher compliance costs and carbon risks that firms face, especially those with limited cost pass-through abilities. Using a difference-in-differences method, they establish a causal link between ETS and heightened AEM. In contrast, Lei et al. (2024) argue that green transformation initiatives can reduce AEM by improving corporate transparency and lessening the need for earnings manipulation. Their panel data analysis shows that firms investing in green practices are less likely to engage in AEM. Collectively, these studies underscore the dual impact of environmental regulations on AEM, depending on whether firms react by managing earnings or by adopting more transparent practices.

5.2.2.2.2 *Real Earnings Management*

Real earnings management (REM), in contrast, entails tangible, operational decisions aimed at influencing actual cash flows to impact reported earnings (Roychowdhury, 2006). This

mechanism involves managerial actions that alter the firm's operations, investment, or financing activities, directly affecting the economic substance of transactions (Gunny, 2010).

Roychowdhury (2006) research provides key insights into earnings management, focusing on real activities manipulation (RAM). The study aims to develop empirical methods to detect RAM, marked by managerial actions that stray from typical business practices to meet earnings benchmarks. It delves into analysing operational cash flow, production costs, and discretionary expenses like advertising, maintenance, and R&D, proposing these as more accurate indicators of real business activity compared to accruals. The research finds that firms often adopt strategies such as offering temporary discounts, increasing production, and cutting expenses to meet or exceed earnings targets, particularly around the zero-earnings threshold.

Graham et al. (2005) identify additional practices of real earnings management, noting that to meet earnings targets, firms may employ tactics like aggressive pricing strategies or more lenient credit terms to accelerate sales. While these methods can increase revenue in the short term, they often result in a decrease in future revenue and may attract customers who are less profitable. This approach underscores the dilemma faced by firms using real earnings management: immediate financial benefits can be offset by longer-term financial challenges and changes in customer base quality.

Cohen and Zarowin (2010) investigate a dominant real earnings management tactic involving the manipulation of production levels. This approach aims to temporarily reduce per-unit costs, artificially inflating short-term earnings. However, the consequence may be excess inventory, posing potential financial challenges in the future. This strategy illustrates the dual nature of REM, where actions intended to enhance immediate financial outcomes may introduce long-term risks, such as inventory surpluses and financial misrepresentations, challenging the sustainability of a company's operational and financial practices.

Gunny (2010) expanded on the concept by categorising real earnings management into two types: actions that accelerate or delay future cash flows. Acceleration actions involve bringing future revenues or gains into the current period, while delay actions involve deferring costs or revenues to future periods. Both types seek to strategically time the recognition of economic events for reporting advantages.

Cohen et al. (2008) observe an increase in accrual-based earnings management until the enforcement of the 2002 Sarbanes-Oxley Act (SOX), followed by a considerable decline. Post-SOX, U.S. companies shift towards real earnings management. This trend is prominent in firms meeting pre-SOX earnings benchmarks, with a notable reliance on accrual manipulations. After SOX, these firms shift from accruals to real earnings tactics. The study links the pre-SOX accruals surge to increased equity-based compensation. It emphasises that new stock options negatively correlate with accrual-based management, whereas unexercised options have a positive correlation, influencing income-increasing accrual practices.

Leuz et al. (2003) offer a persuasive viewpoint that real earnings management goes beyond the simple timing adjustments typically seen in accrual-based models. Their analysis highlights how such management deeply influences operational decisions and actual financial results. The study brings to the fore the specific, real-world actions taken by managers that directly affect elements like cash flows, investments, and production. This approach highlights the profound impact of real earnings management, extending beyond mere financial reporting to significantly influence a company's operational activities and its long-term strategic direction.

In Zang (2012) study, the focus is on how firms strategically choose between accrual-based earnings management (AEM) and real activities manipulation (RAM). Using empirical analysis, the research discloses the trade-offs that companies often face in these decisions. It finds that while AEM can be reversed more easily, it carries a greater risk of being detected. In contrast, RAM, though typically subject to less scrutiny, can adversely impact long-term operational efficiency.

The studies by Kouaib and Jarboui (2016), Griffin et al. (2021), and Liu et al. (2024) highlight the pivotal role of CEOs in REM. Kouaib and Jarboui (2016) demonstrate that overconfident CEOs in innovative firms often manipulate earnings by cutting R&D expenditures and reducing discretionary spending to meet financial targets. Griffin et al. (2021) highlight that CEOs with extensive social capital are more inclined to adjust operational activities and production costs to maintain their social status and influence. Liu et al. (2024) examine the role of CEO agreeableness, finding that while more agreeable CEOs are generally less prone to REM, they may still engage in it by carefully modifying cash flows and timing expenses under pressure. These studies jointly underscore that the choice of REM tactics is deeply influenced by CEOs' psychological traits and social incentives, revealing a complex and multifaceted landscape of earnings manipulation.

Recent research by Pacheco-Paredes and Wheatley (2021), Almaharmeh et al. (2024), and Wang et al. (2024) provides essential insights into the specific roles governance mechanisms play in addressing REM. Pacheco-Paredes and Wheatley (2021) highlight auditors' limitations in detecting REM due to its operational nature, which can often bypass standard audit procedures designed primarily for accrual-based manipulations. Almaharmeh et al. (2024) explore the impact of analyst coverage, revealing that increased scrutiny can unintentionally intensify REM, as managers feel pressured to meet earnings forecasts, especially under the flexible guidelines of IFRS. Wang et al. (2024) examine the effectiveness of independent directors, showing that those who conduct on-site visits are better equipped to identify and mitigate REM by gaining a deeper, firsthand understanding of corporate operations. Collectively, these studies point out the need for more proactive and involved governance to effectively counteract REM practices.

5.2.2.3 Earnings Management - Theoretical Background

This research critically examines the impact of local media closures on corporate earnings management, emphasising the role of media as a key component in corporate monitoring. Earnings management, a central aspect of financial accounting, involves the deliberate alteration of financial reports by management. This practice is vital for investors, regulators, and academics, influencing the oversight of financial transparency and corporate governance. The study is grounded in three theoretical frameworks: Agency Theory, examining conflicts of interest between managers and shareholders; Positive Accounting Theory (PAT), focusing on the economic motivations behind accounting choices; and Institutional Theory, highlighting the influence of external factors like media on corporate behaviour. These theories collectively offer a comprehensive understanding of the motivations and methods behind earnings management. This approach is particularly relevant in the context of evolving media landscapes, shedding light on how changes in media presence can affect corporate transparency and the effectiveness of external monitoring mechanisms.

5.2.2.3.1   Agency Theory

Agency Theory, established in the foundational works of Berle and Means (1932) and later elaborated by Jensen and Meckling (1976), is a fundamental concept in economics, finance, and organisational behaviour. It addresses the complexities in the relationships between principals (owners or shareholders) and agents (managers or executives), particularly focusing

on corporate governance. This theory underscores the potential for conflicts of interest and the challenges in aligning managers' objectives with those of shareholders.

Inadequate corporate monitoring, as analysed by Fama and Jensen (1983) can intensify these agency problems. When oversight from boards, shareholders, or regulatory bodies is insufficient, it provides managers with greater opportunities to prioritise their interests. This scenario can lead to opportunistic behaviours, such as earnings management, where managers might manipulate financial reports for personal gain, to influence stock prices, or to misrepresent the company's financial standing.

Agency theory also implies that the design of managerial contracts, including compensation schemes, can either exacerbate or mitigate earnings management behaviour. When contracts are structured to reward short-term performance, they might incentivise managers to engage in earnings manipulation. Healy (1985) explores the impact of different types of managerial compensation contracts on earnings management.

Healy and Wahlen (1999) highlight the implications of compromised monitoring in earnings management. In situations where corporate governance is weak, there is a higher propensity for managers to engage in earnings manipulation. Practices like inflating revenues or deferring expenses can distort the true economic performance of a company and damage investor trust and market integrity. Eisenhardt (1989) also contributes to this discussion by providing an assessment of agency theory and its implications in various organisational contexts and governance mechanisms.

Moreover, additional studies have expanded on these concepts. Watts and Zimmerman (1986) in their work explore how managers might use accounting policies to manipulate earnings, influenced by factors such as political pressure or market conditions. This study adds another layer to understanding the motivations behind earnings management within the agency theory framework. Similarly, Dechow et al. (1996) provide empirical evidence of earnings manipulation, examining specific cases where managers altered financial results to meet certain benchmarks or avoid contractual violations. Their findings underscore the practical applications of agency theory in real-world scenarios.

Agency costs arising from compliance with debt covenants can drive earnings management, wherein managers alter financial reporting to meet covenant thresholds (Franz et al., 2014).

This conduct, aimed at short-term covenant adherence, can misalign with long-term shareholder interests, increasing agency costs (Gupta et al., 2008). Sweeney (1994) illustrates how firms manage earnings to avoid covenant violations, while DeFond and Jiambalvo (1994), discuss the implications of such practices on financial reporting quality. This manipulation, although avoiding immediate negative covenant consequences, can lead to broader issues like eroded creditor trust and future financing challenges.

In McNichols and Stubben (2008) research, earnings management emerges as a significant influencer of a firm's investment strategy, directly linked to Agency Theory and the potential misalignment of managerial actions with shareholder interests. Earnings manipulation, as indicated by Bergstresser and Philippon (2006) examination, introduces complexity to the executive compensation-earnings relationship, a crucial element of Agency Theory. CEOs, incentivised by short-term financial metrics, may resort to earnings management to meet targets, revealing a misalignment between their incentives and long-term shareholder interests.

Strong corporate governance is often seen as a solution to mitigate agency problems. Xie et al. (2003) highlight that the efficacy of corporate governance in addressing agency problems, particularly in curbing earnings management, goes beyond the mere existence of governance mechanisms. Their research aligns with Klein (2002) earlier conclusions, indicating that differences in governance practices, including board independence and audit committee effectiveness, significantly influence the extent of earnings management. This underscores the importance of not only implementing but operationalising governance measures for a robust impact on mitigating agency issues in corporate settings. Moreover, Ashbaugh-Skaife et al. (2008) emphasise the importance of robust internal controls in preventing earnings management. Effective internal control systems serve as a critical component in corporate governance, ensuring accurate and reliable financial reporting and reducing opportunities for managerial discretion in manipulating earnings (Cohen et al., 2008; Järvinen & Myllymäki, 2016).

However, in a compromised governance framework and with weakened monitoring mechanisms, the agency problems outlined by Agency Theory can be significantly exacerbated (Jensen & Meckling, 1976; Fama, 1980). This deterioration in governance and oversight creates an environment conducive to managerial entrenchment and opportunistic behaviour, leading to an increase in earnings management practices (Dechow et al., 1995). In their research, La Porta et al. (2000) examine how dividend policies across various countries are influenced by agency problems, specifically in environments with weak shareholder

protections. They suggest that in such settings, managers are more inclined to retain earnings instead of distributing them as dividends. This retention of earnings can lead to an increased risk of earnings management, as managers may have more internal funds at their discretion, which they could use in ways that are not in the best interest of shareholders.

Additionally, in scenarios marked by weakened corporate monitoring, Agency Theory suggests that earnings management can become a tool for managers to navigate debt covenant constraints. Watts and Zimmerman (1990) explain how debt covenants function as monitoring mechanisms, setting financial thresholds that companies must meet. When oversight is less stringent, managers might manipulate earnings to comply with these covenants, avoiding potential consequences like increased interest rates or loan recalls. Such earnings management practices, while addressing short-term covenant-related pressures, can distort the financial reporting quality and increase financial risk, highlighting the need for effective governance to align managerial actions with long-term shareholder interests.

This environment, characterised by diminished accountability, is fertile ground for opportunistic actions by managers, as emphasised by Shleifer and Vishny (1997), who point out the significant agency costs associated with poor corporate governance. The importance of governance structures in curbing these issues is further underscored by Fama and Jensen (1983), who delve into the role of governance in mitigating agency problems. Morck et al. (1988) discuss how managerial entrenchment in such weakened governance environments can lead to decision-making that is not in the best interest of shareholders. Additionally, studies by Yermack (1996) and Bebchuk et al. (2009) provide empirical evidence on how specific aspects of corporate governance, such as board structures and managerial ownership, can influence the extent of earnings management and other agency problems.

Under Agency Theory, the media's role as an external governance mechanism is vital in monitoring corporate conduct and mitigating agency conflicts between managers and shareholders. Hutchinson and Gul (2004) and Cremers et al. (2005) stress that external governance mechanisms, including media scrutiny, are instrumental in overseeing corporate performance. Gillan (2006), Bednar (2012), Gao et al. (2020), and Giuli and Laux (2022) highlight the media's effectiveness in reducing agency conflicts by holding management accountable for their actions. This scrutiny, as noted by Miller (2006), Dyck et al. (2008), Chahine et al. (2015), and Chen et al. (2021), aligns managerial decisions more closely with shareholder interests, thereby reducing agency costs and deterring earnings manipulation. The

media, therefore, plays a pivotal role in ensuring that managerial actions are in line with the best interests of shareholders.

Through these studies, Agency Theory provides valuable insights into the necessity for robust governance and monitoring systems to mitigate the risks of earnings management, thereby ensuring the alignment of managerial actions with shareholder interests and maintaining the transparency and integrity of financial reporting.

5.2.2.3.2 *Positive Accounting Theory*

Positive Accounting Theory (PAT), developed by Watts and Zimmerman, is an approach to understanding the economic reasoning behind a firm's accounting choices (Watts & Zimmerman, 1978). It deviate from normative theories by focusing on actual observed behaviours rather than prescribing ideal practices (Whitley, 1988; Kaplan & Ruland, 1991). PAT suggests that accounting decisions are often strategic, influenced by various economic factors including market pressures, contracts, and regulatory environments (Milne, 2002). This theory is descriptive and predictive, aiming to explain why certain accounting practices, including earnings management, are adopted (Watts & Zimmerman, 1979). Further, PAT posits that these choices are influenced by firms' efforts to maximise economic welfare (Fields et al., 2001).

PAT posits that managers possess a degree of flexibility within their organisations and utilise this flexibility to enhance their personal satisfaction (Watts & Zimmerman, 1978). Those entering into contracts permit managers to exercise some discretion over corporate practices because the company's management possesses the most comprehensive knowledge of the corporate internal operations and performance (Leuz et al., 2003; Collins et al., 2017). Managers have the capability to employ their discretion in a manner that benefits all contracting parties, but there is also the potential for opportunistic actions aimed at advancing their own interests to the detriment of other parties involved (Guidry et al., 1999; Dechow & Skinner, 2000). Establishing contracts that are ex ante efficient can mitigate ex post opportunistic behaviour, thereby minimising deadweight costs and enhancing a firm's competitiveness (Warfield et al., 1995; Klein, 2002).

PAT underscores the role of managerial incentives in influencing accounting choices (Zmijewski & Hagerman, 1981). The theory suggests that managers may choose accounting methods that align with their personal financial interests, even if these methods do not align

with shareholders' interests (Beattie et al., 1994; Baik et al., 2020). For instance, managers might engage in earnings management when their bonuses are tied to meeting certain financial targets (Gaver et al., 1995; Heflin et al., 2002). This focus on self-interest is a critical aspect of PAT, indicating that personal incentives can significantly impact financial reporting decisions (Healy, 1985; Holthausen, 1990). This theory is further supported by studies showing how compensation structures, such as stock options, can motivate discretionary disclosure practices (e.g., Nagar et al., 2003).

According to PAT, contractual arrangements within a firm, such as debt covenants and managerial compensation agreements, heavily influence accounting choices (Skinner, 1993; Ball & Shivakumar, 2006). These contracts often include stipulations based on accounting numbers, thereby dictating how managers disclose financial information (Martens & Stevens, 1993; Lambert, 2010). For example, debt covenants might require maintaining certain financial ratios, influencing managers to adopt specific accounting methods to meet these requirements (Smith, 1993). This perspective underlines how contracts can lead to particular accounting choices, aligning with the economic interests of the parties involved (Smith & Warner, 1979; Watts & Zimmerman, 1990). The impact of such contracts on accounting decisions is further highlighted by empirical studies (e.g., Leftwich, 1983).

The inclusion of behavioural insights in PAT sheds light into the influence of psychological factors on managerial accounting decisions (Thaler, 1980; Whitley, 1988; Mattessich, 1995). This expansion recognises that managers' financial reporting is not solely driven by economic motives but also shaped by cognitive biases and personal characteristics (Malmendier & Tate, 2005; Hanlon et al., 2022). Schrand and Zechman (2012) argue how overconfident CEOs are prone to aggressive earnings management. Hribar and Yang (2016) explore the impact of biases like optimism on financial reporting, adding psychological depth to PAT. Additionally, research by Gervais et al. (2011) delves into the role of overconfidence in corporate finance decisions, including accounting practices.

PAT explores the influence of market forces on accounting decisions. Firms engage in earnings management to meet market expectations, influenced by investor perceptions and competitive pressures. Libby et al. (2002) discuss how market expectations drive earnings management. Studies, like Healy and Palepu (2001) and Cohen et al. (2008), analyse how market expectations and pressures affect corporate disclosure policies leading to earnings management variations, aligning with PAT's predictions. Kothari et al. (2005) further explore the impact of

market forces on managerial accounting choices, specifically in the context of earnings management.

Corporate governance significantly influences managerial accounting decisions within the PAT framework. Bushman and Smith (2001) investigate the role of governance mechanisms in shaping the quality of financial reporting, suggesting that effective governance can deter earnings management. Armstrong et al. (2010) further inspect how various governance structures impact the selection of accounting methods, demonstrating the crucial role governance plays in accounting decisions. Additionally, Cornett et al. (2008) explore the relationship between executive compensation, a key aspect of corporate governance, and accounting choices, highlighting how compensation structures can influence earnings management.

PAT also considers the impact of regulatory changes on corporate governance and, subsequently, on accounting choices (Kothari et al., 2010). Based on Koh et al. (2008) and Coates and Srinivasan (2015) exploration on how SOX has reshaped corporate governance, leading to enhanced transparency and accounting quality in line with reduced opportunities for earnings manipulation. The impact of such regulatory changes on earnings management is further tested by Hazarika et al. (2012), who find that post-SOX, there has been a notable decline in aggressive accounting practices. These findings demonstrate the critical role of regulatory environments in shaping corporate governance and accounting choices, consistent with the predictions of PAT (Fields et al., 2001).

Within the framework of PAT, the media acts as a crucial external governance mechanism, influencing managerial decisions, especially in earnings management. Watts and Zimmerman (1986) note that financial reporting behaviours respond to incentives, significantly impacted by media scrutiny. This scrutiny heightens reputational concerns, leading managers to moderate aggressive earnings practices. Healy and Palepu, (2001) highlight the media's role in enhancing corporate transparency and shaping investor perceptions, critical in disclosure practices. Miller (2006) and Dyck et al. (2008) highlight the media's vivid role in corporate governance, acting as a watchdog that promotes transparency and accountability. Its active involvement in exposing misconduct and shaping corporate practices extends beyond mere information dissemination. This aligns with PAT, affirming the media's influence as an external factor in shaping managerial conduct and internal accounting decisions, thereby ensuring more ethical financial reporting.

In summary, Positive Accounting Theory provides a thorough understanding of the economic drivers influencing firms' accounting decisions. It underscores the significance of diverse factors, such as managerial incentives, contractual obligations, market dynamics, media influence, and governance efficiency, in shaping the terrain of corporate financial reporting.

5.2.2.3.3 *Institutional Theory*

Institutional Theory suggests that organisational practices, including earnings management, are significantly influenced by the prevailing institutional norms and societal expectations (Brandes et al., 2006; Kury, 2007; Aharonson & Bort, 2015; Bao & Lewellyn, 2017). Meyer and Rowan (1977) propose that organisations adopt certain practices to conform to these norms and gain legitimacy, which can include earnings management strategies to meet external expectations. Oliver (1991) discusses strategic responses to institutional pressures that may lead to the manipulation of financial reports to align with these pressures. This idea is expanded by Powell and DiMaggio (2012), who argue that firms are influenced by the institutional environment, which can implicitly encourage earnings management to comply with prevailing norms and expectations. Additionally, institutional theorists like Thornton et al. (2012) and Wu et al. (2023) explore the relationship between institutional logics and organisational behaviour, highlighting how different institutional frameworks can lead to varying accounting practices.

In their seminal study, DiMaggio and Powell (1983) describe institutional isomorphism, where organisations within similar environments adopt homogeneous practices, including approaches to earnings management. Zeff (2007) and Alon and Dwyer (2016) show how global adoption of International Financial Reporting Standards (IFRS), a form of mimetic isomorphism, impacts earnings management practices across different countries. Deephouse and Suchman (2008) argue that the pursuit of legitimacy through conformity to institutional norms can lead organisations to adopt similar earnings management strategies. Greenwood et al. (2010, 2011) further illustrate how varying institutional demands can lead to divergent earnings management tactics across different organisational fields.

Regulatory frameworks can significantly shape earnings management strategies, as posited by Institutional Theory (Wysocki, 2004, 2011). Scott (2008) discusses the role of regulatory bodies in influencing organisational practices, including accounting strategies. Covaleski et al. (1993) examine the relationship between accounting regulations and organisational practices, highlighting how changes in regulations can lead to shifts in earnings management. Research

by Edelman et al. (2001) explores the influence of legal environments on organisational practices, shedding light on how regulatory changes can reshape earnings management behaviours to maintain compliance and legitimacy.

Cultural and social contexts significantly impact earnings management decisions (Lewellyn & Bao, 2017). Hofstede (1984) cultural dimensions theory provides insights into how cultural differences affect organisational behaviours, including accounting decisions. Gray (1988) investigation into the connection between culture and accounting systems highlights the significant influence of culture on accounting practices. Furthermore, Doupnik (2008) analyse how evolving societal and environmental considerations impact accounting practices, leading to strategic decisions in earnings management to align with broader societal values and expectations.

Under Institutional Theory, the media serves as a pivotal external monitor, significantly shaping corporate practices, particularly in the realm of earnings management. Through reporting on corporate activities, the media becomes instrumental in holding corporations accountable for their actions and drawing attention to potential wrongdoing (Gillan, 2006; Peress, 2014). This influence on public perception and organisational reputation plays a crucial role in restraining aggressive earnings management (Chahine et al., 2015; Chen et al., 2021). Fan and Wong (2002) explores media impact on disseminating financial information, influencing market reactions and transparency. Highlighting the critical role of local newspapers, Heese et al. (2022) underline local newspaper monitoring and reporting functions in corporate oversight. Additionally, Miller (2006) expands the media's role to shaping societal norms, providing guidance for organisational conduct.

In short, earnings management within Institutional Theory is influenced by various external factors, including societal norms, regulatory standards, and cultural values. Firms engage in earnings management to align with these pressures, ensuring legitimacy and compliance. The media, as an external monitor, further impacts these practices by enforcing transparency and public accountability.

The above provides a comprehensive literature review of earnings management practices through the lenses of Agency, Positive Accounting Theory (PAT), and Institutional Theory. Each theory offers distinct insights: Agency Theory focuses on the principal-agent conflict and the efficacy of external monitoring in aligning managerial actions with shareholder interests.

PAT considers the impact of managerial incentives on earnings management, and Institutional Theory examines the wider societal, cultural, and regulatory influences on these practices. This study specifically explores the effect of local US newspaper closures on earnings management from 1986 to 2021, identifying Agency Theory as the most relevant framework given the reduced role of media as an external watchdog. Agency Theory underscores the importance of robust governance and monitoring systems in mitigating earnings management risks, ensuring that managerial actions are aligned with shareholder interests and maintaining the integrity of financial reporting. The next section will focus on the hypothesis development for this study.

5.3 Hypothesis Development

5.3.1   Baseline Hypothesis

Earnings management involves the deliberate manipulation of financial statements to achieve specific corporate objectives (Kothari et al., 2016). While some degree of earnings management may be considered a legitimate exercise of managerial discretion, it often reflects deeper issues of corporate governance and ethical conduct (Healy & Wahlen, 1999; Boachie & Mensah, 2022). Earnings management practices can distort the true economic performance of a company, affecting stakeholders' decisions and undermining the integrity of financial markets (Dechow et al., 1996; Graham et al., 2005). The conceptualisation of earnings management within the context of agency theory suggests a dynamic interplay between managerial incentives, corporate governance mechanisms, and external monitoring entities (Jensen & Meckling, 1976; Watts & Zimmerman, 1986).

The relationship between media influence and corporate behaviour, particularly in the context of earnings management, is a focal point of modern finance and accounting research (e.g., Chahine et al., 2015; Yu, 2023). The role of local newspapers, often characterised as a crucial external corporate governance mechanism, is especially significant in this regard (Dyck et al., 2008; Miller & Skinner, 2015). The decline of local media, notably from 1986 to 2021, marked by the closure of numerous local newspapers in the United States, presents a unique context to examine the impact on corporate financial reporting practices (Kim et al., 2021; Jiang & Kong, 2023), such as earnings management.

Contemporary research places a pivotal focus on the well-established role of media as an external governance mechanism and monitoring function in capital markets (e.g., Liu & McConnell, 2013; Shapira & Zingales, 2017; Berlinger et al., 2022). Miller (2006) delineates the media's function as a watchdog specifically in the context of accounting fraud, emphasising its role in both amplifying information from other intermediaries and engaging in original investigative efforts. This is complemented by the findings of Joe et al. (2009), who illustrate that media exposure can precipitate corrective actions in response to board ineffectiveness, thereby augmenting shareholder wealth. Dyck et al. (2010) corroborate these insights, acknowledging the media's governance role in detecting accounting fraud.

However, media coverage can sometimes be detrimental, particularly when it is excessive or biased. There is evidence indicating that media focus on a firm's short-term performance may

encourage managerial behaviours that prioritise short-term gains at the expense of long-term investments, as observed by Dai et al. (2021). Additionally, media reporting is not always impartial (Groseclose & Milyo, 2005). The media tends to selectively report corporate news, and firms themselves may influence media coverage to serve specific agendas, a phenomenon noted in studies by Gurun and Butler (2012), Ahern and Sosyura (2015), and Shapira and Zingales (2017). This selective and potentially manipulated reporting can skew public perception and impact corporate decision-making processes (Cohen et al., 2017).

A thorough examination of existing research unveils diverse motivations behind the link between local newspaper closures and a range of governmental, economic, corporate, and societal effects (e.g., Darr et al., 2018; Mathews, 2020; Kim et al., 2021). Prior studies have shed light on the broad consequences of the decline in local print media, including its impact on political engagement, local government efficiency, public borrowing costs, private loan agreements, and workforce changes (e.g., Gentzkow et al., 2011; Gao et al., 2020). Furthermore, Heese et al. (2022) provide compelling insights into the repercussions of diminishing local media on corporate malfeasance. While these areas have been extensively explored, there remains a gap in understanding how the absence of local newspapers directly affects corporate financial practices, particularly earnings management.

Understanding the impact of local media closures on earnings management is vital, especially given the tendency of some managers to engage in such practices for personal gain, often to the detriment of long-term firm value (Kim et al., 2021; Heese et al., 2022). The absence of local media may influence corporate behaviour and financial reporting. Gurun and Butler (2012) argue that media plays a significant role in corporate governance, potentially curbing earnings management. With local media closures, as Healy and Palepu (2001) suggest, the reduced scrutiny could lead to more aggressive earnings management. Studies like Shleifer and Vishny (1997), La Porta et al. (2000), and Bharath et al. (2008), underscore that reduced monitoring mechanisms may lead corporate managers to make decisions primarily driven by opportunistic behaviour, potentially overlooking broader stakeholder considerations.

The nexus between media closures and agency conflicts can be understood through the lens of the media's role in curbing managerial excesses (Kim et al., 2021). The agency theory, as discussed by Jensen and Meckling (1976) and Fama (1980), highlights the conflicts of interest between managers and shareholders. The media act as a balancing force in this dynamic. For example, Tetlock (2007) found that increased media scrutiny leads to more disciplined

managerial behaviour, suggesting that an active media environment can mitigate agency problems. On the other hand, the lack of media oversight, as evidenced in regions where local newspapers have shut down, can exacerbate these conflicts (Heese et al., 2022), leading to more prevalent earnings management as managers exploit the reduced external scrutiny.

In contrast, a growing body of academic thought presents a more intricate perspective on earnings management. Scholars such as Holthausen (1990), Guay et al. (1996), Demski (1998), and Arya et al. (2003) argue that under certain conditions, earnings management may actually enhance the informational value of earnings reports. This viewpoint recognises that managers, possessing detailed knowledge of their firm's operations and prospects, might use earnings management as a strategic tool to better communicate the true economic condition of the firm to stakeholders. Subramanyam (1996) and Li et al. (2023) support this stance, suggesting that when ethically and within regulatory boundaries, earnings management can accurately reflect a firm's intrinsic value. This alternative perspective challenges the prevailing negative perception of earnings management, proposing that in specific instances, it can be a constructive tool rather than a detrimental one.

This study aims to empirically investigate the potential effects of the closure of local U.S. newspapers on corporate earnings management practices. It is motivated by the need to clarify the ambiguous findings of prior studies that have explored the relationship between the decline of local media and corporate financial behaviour. Previous research, including the works of Kim et al. (2021) and Heese et al. (2022), underscores the necessity for deeper investigation into this domain.

Integrating the preceding discussions and arguments, the baseline or first hypothesis of this research, focusing on the impact of media closure on earnings management, can be formulated as follows:

H_1 *The closure of local U.S. newspapers leads managers of nearby firms to increase earnings management.*

The baseline hypothesis is predicated on the theoretical and empirical underpinnings that link the presence of local media, specifically newspapers, to corporate governance and managerial behaviour. The absence of this critical monitoring mechanism is hypothesised to provide a more permissive environment for earnings management practices among firms that were previously under the scrutiny of these local newspapers.

5.4 Employed Variables

5.4.1 Introduction

In this section, the dependent, independent, and control variables used in the Third Essay are detailed, including their definitions and measurement methods. The estimation methods of each of the three earnings management measures (*AEM, REM1, REM2*) are presented. These variables are essential for empirically examining how local newspaper closures affect earnings management practices. The proxies used to measure several monitoring channels and governance mechanisms are later defined in their respective contexts. Additionally, descriptive statistics and pairwise correlations are provided to offer a preliminary understanding of the data and the relationships between variables. This comprehensive overview sets the stage for the empirical analysis that follows.

5.4.2 Dependent Variable – Earnings Management

5.4.2.1 The Estimation of Accrual-based Earnings Management

To estimate accrual-based earnings management, the primary model employed in this study will be the modified Jones Model, as elaborated by Dechow et al. (1995). This model, a refinement of the original Jones (1991) model, is widely recognised for its effectiveness in isolating discretionary accruals, which are often used as a proxy for earnings management Dechow et al. (1995). The modified Jones Model addresses some of the limitations of the original model by incorporating adjustments for changes in a company's operations, particularly in accounts receivable, enhancing its ability to discern between normal business activities and potential managerial manipulations in financial reporting.

The foundational work of the Jones Model set the stage for the examination of total accruals, distinguishing between discretionary and non-discretionary components. The original model posited that total accruals could be linked to variations in revenue and levels of property, plant, and equipment (PPE), considering these factors primarily as non-discretionary (Jones, 1991). However, subsequent research, exemplified by McNichols (2000), underscored the necessity for a more refined approach, particularly in addressing changes in a firm's operations, an aspect effectively tackled by the Modified Jones Model.

Incorporating these adjustments allows for a more accurate detection of earnings management, as highlighted in studies like Cohen et al. (2008), who applied the modified Jones Model to

investigate the implications of corporate governance on earnings management. Their findings underscore the model's utility in contemporary research, emphasising the importance of robust governance mechanisms in mitigating earnings manipulation. This aspect is particularly relevant in the context of this study, which explores the closure of local U.S. newspapers and its potential impact on earnings management practices.

Moreover, the role of external monitoring mechanisms, such as media scrutiny, in influencing corporate financial reporting has been a subject of interest in academic literature. Miller (2006), for example, discusses how media oversight can act as an external audit mechanism, affecting managerial decisions in financial reporting. This perspective dovetails with the hypothesis that the decline in local media oversight, due to newspaper closures, could lead to increased earnings management among local firms.

Therefore, the modified Jones Model, as proposed by Dechow et al. (1995) not only provides a methodologically sound framework for this study but also aligns with ongoing academic discussions about the interplay between corporate governance, external monitoring, and financial reporting integrity. The Modified Jones Model (12) can be empirically specified as follows:

$$\frac{TA_{i,t}}{AT_{i,t-1}} = \beta_0 + \beta_1 \frac{1}{AT_{i,t-1}} + \beta_2 \left(\frac{\Delta REV_{i,t}}{AT_{i,t-1}} - \frac{\Delta AR_{i,t}}{AT_{i,t-1}} \right) + \beta_3 \frac{PPE_{i,t}}{AT_{i,t-1}} + \varepsilon_{i,t} \qquad (12)$$

Where i denotes the firm and t denotes the year, allowing for a panel data approach that captures cross-sectional and time-series variations. Error Term $\varepsilon_{i,t}$ represents unexplained variations in total accruals after accounting for the explanatory variables. Total Accruals $TA_{i,t}$ calculated as the difference between income before extraordinary items and operating cash flows. This captures the non-cash components of reported earnings. Total Assets $AT_{i,t-1}$ represents the book assets of the firm as reported at the beginning of the year, acting as a scaling factor to account for firm size. The Δ (Delta) operator represents a one-year change in a variable. Change in Sales $\Delta REV_{i,t}$ signifies the year-over-year change in sales, reflecting the firm's operational growth or contraction. Change in Accounts Receivable $\Delta REV_{i,t}$ stand for the year-over-year change in accounts receivable, indicating the portion of sales that are not yet cash but recorded as revenue. Property, Plant, and Equipment $PPE_{i,t}$ gross PPE measures the firm's investment in long-term assets, less subject to frequent and discretionary changes. Discretionary Accruals is calculated as the residuals from the industry-year specific regressions. These residuals represent the portion of total accruals that cannot be explained by the model's variables and are thus considered discretionary. Accrual-Based Earnings Management Measure ($AEM_{i,t}$) is defined as the absolute value of the discretionary accruals calculated from the regression. This approach captures both income-increasing and income-decreasing earnings management practices. Higher values of $AEM_{i,t}$ indicate greater levels of accrual-based earnings management. By taking the absolute value, the measure reflects the magnitude of earnings management regardless of its direction, whether it inflates or deflates earnings. All variables used in the empirical models are defined in *Appendix (3)*. All continuous variables are winsorised at the 1st and 99th percentiles, and the sample period covers the years 1986 to 2021.

In summary, the modified Jones Model plays a crucial role in accounting research, excelling at isolating discretionary accruals and detecting earnings management. As an evolution of the original Jones (1991) model, its adaptability across industries and time periods makes it invaluable for exploring the intricacies of financial reporting, considering external influences

such as media absence, and highlighting its significance in both methodology and practical application.

5.4.2.2 The Estimation of Real Earnings Management

In this study, which is influenced by the methodologies of Roychowdhury (2006) and Cohen and Zarowin (2010), the focus extends to an investigation of real earnings management. This is achieved by examining variables such as unusual production costs, atypical discretionary expenses, and irregular operating cash flows. To accurately estimate these abnormal production costs, the research adopts the model developed by Dechow et al. (1998), as applied in Roychowdhury (2006) work.

The Model (13) to estimate these abnormal production costs is presented as follows:

$$\frac{PROD_{i,t}}{AT_{i,t-1}} = \beta_0 + \beta_1 \frac{1}{AT_{i,t-1}} + \beta_2 \frac{SALE_{i,t}}{AT_{i,t-1}} + \beta_3 \frac{\Delta SALE_{i,t}}{AT_{i,t-1}} + \beta_4 \frac{\Delta SALE_{i,t-1}}{AT_{i,t-1}} + \varepsilon_{i,t} \qquad (13)$$

Where i denotes the firm and t denotes the year. $PROD_{i,t}$ is defined as the sum of the cost of goods sold (COGS) and the change in inventory from year t_{-1} to t. This measure reflects the total production-related expenditures incurred by the firm during the year. $AT_{i,t-1}$ represents the book assets of the firm as reported at the beginning of the year, acting as a scaling factor to account for firm size. $SALE_{i,t}$ denotes the total revenue generated from sales activities by the firm within the year. It captures the firm's operational income derived from its core business activities. The Δ (Delta) operator represents a one-year change in a variable. $\Delta SALE_{i,t}$ is the change in sales revenue for firm i from the previous year to year t. $\varepsilon_{i,t}$ is the error term in the regression, representing the unexplained variance in the dependent variable $PROD_{i,t}$ after accounting for the effects of the independent variables. Abnormal production costs $ABPROD_{i,t}$ are quantified as the estimated residuals from the regressions of model (13). These residuals essentially measure the extent to which actual production costs diverge from the expected costs based on the model. A higher value of $ABPROD_{i,t}$ suggests a greater degree of real earnings management, indicating that the firm's production costs are unusually high or low compared to the norm established by the model for that specific industry and year. All variables used in the empirical models are defined in *Appendix (3)*. All continuous variables are winsorised at the 1st and 99th percentiles, and the sample period covers the years 1986 to 2021.

This Model (13) is pivotal in the study's investigation of how the closure of local newspapers might impact the occurrence of real earnings management in firms. The hypothesis being tested posits that a reduction in local media oversight could lead to an increase in such practices. Through this model, the study aims to quantify the deviations in production costs that might arise from real earnings management, thereby shedding light on the broader implications of diminishing local media on corporate financial behaviour and transparency.

Additionally, to estimate abnormal discretionary expenses, the study employs a specific model that aims to identify deviations in discretionary spending from what would be typically expected given a firm's size and sales. The Model (14) used for this estimation is articulated as follows:

$$\frac{DISX_{i,t}}{AT_{i,t-1}} = \beta_0 + \beta_1 \frac{1}{AT_{i,t-1}} + \beta_2 \frac{SALE_{i,t-1}}{AT_{i,t-1}} + \varepsilon_{i,t} \qquad (14)$$

Where $DISX_{i,t}$ following Cohen and Zarowin (2010), is defined as the aggregate of Research & Development $R\&D$, advertising, and Selling, General & Administrative $SG\&A$ expenses for firm i in year t. This sum represents the discretionary spending of the firm. All other variables are as defined in equation (13), with $AT_{i,t-1}$ representing the total assets at the beginning of year t for firm i in the preceding year t_{-1}. Abnormal discretionary expenses $ABDISX_{i,t}$ are then defined as the estimated residuals from regressions of Model (14). In this context, lower values of $ABDISX_{i,t}$ are indicative of more real earnings management. This inverse relationship suggests that firms engaging more actively in real earnings management practices tend to report lower levels of discretionary expenses than what would be expected based on their assets and sales. All variables used in the empirical models are defined in *Appendix (3)*. All continuous variables are winsorised at the 1st and 99th percentiles, and the sample period covers the years 1986 to 2021.

In this context, the study explores whether firms in regions affected by newspaper closures exhibit different patterns of $ABDISX_{i,t}$, suggesting that reduced media monitoring might influence firms to engage more in real earnings management by cutting down on discretionary spending such as $R\&D$, advertising, and $SG\&A$ expenses (Baber et al., 1991). This analysis can provide significant insights into the implications of diminishing local media on corporate financial behaviour and transparency.

The final component in the study's analysis of real earnings management involves estimating abnormal operating cash flows $ABCFO$. This is achieved using the following Model (15):

$$\frac{CFO_{i,t}}{AT_{i,t-1}} = \beta_0 + \beta_1 \frac{1}{AT_{i,t-1}} + \beta_2 \frac{SALE_{i,t}}{AT_{i,t-1}} + \beta_3 \frac{\Delta SALE_{i,t}}{AT_{i,t-1}} + \varepsilon_{i,t} \qquad (15)$$

In this equation $CFO_{i,t}$ represents the operating cash flows of firm i in year t. Operating cash flows are a crucial indicator of the firm's cash-generating efficiency in its core business activities. The other variables are consistent with those defined in equation (13), where $AT_{i,t-1}$ is the firm's total assets at the beginning of year t, $SALE_{i,t}$ is the firm's sales revenue in year t, and $\Delta SALE_{i,t}$ is the change in sales revenue for firm i from the previous year to year t. Abnormal operating cash flows $ABCFO_{i,t}$ are then defined as the estimated residuals from regressions of Model (15). Lower values of $ABCFO_{i,t}$ are interpreted as indicative of more significant real earnings management. This suggests that firms engaging in real earnings management practices may manipulate their operating activities to impact their reported cash flows, leading to deviations from expected cash flow levels based on their sales and asset size. All variables used in the empirical models are defined in *Appendix (3)*. All continuous variables are winsorised at the 1st and 99th percentiles, and the sample period covers the years 1986 to 2021.

The analysis investigates if there is a noticeable trend in $ABCFO_{i,t}$ among companies in regions impacted by the closure of local media outlets. The hypothesis is that the reduction in local media oversight might empower firms to manipulate their operational activities more assertively, consequently impacting their operating cash flows. Uncovering such trends would offer additional support for the argument that local media plays a crucial role in limiting earnings management practices and fostering transparency.

To thoroughly assess the impact of real earnings management, the study adopts the approach of Cohen and Zarowin (2010) by consolidating the three individual measures: abnormal production costs $ABPROD_{it}$, abnormal discretionary expenses $ABDISX_{i,t}$, and abnormal

operating cash flows $ABCFO_{i,t}$, into two comprehensive metrics. These aggregate measures are formulated as follows:

$$REM1_{i,t} = ABPROD_{i,t} + (-1)ABDISX_{i,t} \qquad (16)$$

$$REM2_{i,t} = (-1)ABDISX_{i,t} + (-1)ABCFO_{i,t} \qquad (17)$$

In these equations (16) and (17), $ABDISX_{i,t}$ and $ABCFO_{i,t}$ are multiplied by negative one. This adjustment ensures that higher values of $REM1_{i,t}$ and $REM2_{i,t}$ correspond to greater levels of real earnings management. This approach aligns the directional interpretation of these measures, making it easier to comprehend and compare their magnitudes (Cohen & Zarowin, 2010). A higher $REM1_{i,t}$ indicates more real earnings management, driven by a combination of abnormal production costs and adjusted discretionary expenses. Similarly, a higher $REM2_{i,t}$ suggests increased earnings management, reflecting the combined effects of adjusted discretionary expenses and operating cash flows.

These aggregate measures[14] provide a broader perspective on the extent of real earnings management practices, capturing a wider range of activities that might not be fully detectable through individual measures. This approach allows for a more detailed analysis of the overall patterns of real earnings management by firms, particularly in the context of shifts in external monitoring mechanisms, such as the closure of local newspapers.

5.4.3 Independent Variables

5.4.3.1 Variable of Interest – Local Newspaper (Media) Closures

In the empirical framework inspired by Kim et al. (2021), the analysis employs a pivotal independent variable, $Treat\_firm_{i,t} * Post_{i,t}$, an interaction term that adeptly captures the differential impact of local newspaper closures on corporate earnings management. This two-way interaction term is designed to delineate the average changes in earnings management practices between firms in close proximity to a closed newspaper (treatment group) and those further away (control group), both before and after the newspaper's closure. The $Treat\_firm_{i,t}$

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[14] The earnings management proxies employed in this study, including the modified Jones Model for discretionary accruals (AEM) and real earnings management (REM) measures, come with inherent limitations. The modified Jones Model, although widely accepted, may misclassify normal business activities as discretionary accruals, especially when industry-specific factors or external conditions are not adequately considered (Dechow et al., 1995; Kothari et al., 2005). Similarly, REM proxies, designed to capture activities like abnormal production costs and discretionary expenses, may sometimes reflect legitimate business decisions rather than deliberate earnings manipulation (Roychowdhury, 2006; Gunny, 2010). Furthermore, the aggregation of REM measures into composite indices can obscure the different effects of individual earnings management strategies, potentially oversimplifying complex financial behaviours (Cohen & Zarowin, 2010; Zang, 2012). These limitations indicate that while these proxies offer meaningful insights, the findings should be viewed with an understanding of the potential for misclassification and the inherent sensitivity of the models to various factors.

variable is binary, assigned a value of 1 for firms headquartered within a 50-mile radius of a closed newspaper, signifying their inclusion in the treatment group, and 0 otherwise, placing them in the control group. The $Post_{i,t}$ variable, also binary, defines a ten-year window surrounding the closure event, with the year of closure and the four subsequent years marked as 1 (treatment period), and all other years marked as 0 (control period).

The application of this interaction term is central to the study's objective of isolating and examining the influence of local newspaper closures on firms' financial reporting behaviours. By comparing changes in earnings management practices in the years surrounding the closure event, the research aims to provide empirical evidence of the effect of reduced local media scrutiny on corporate governance and transparency. A significant finding in this regard would not only corroborate the hypothesis that the decline in local media monitoring correlates with increased earnings management but also underscore the critical role of local journalism in maintaining corporate accountability. This approach underscores the significance of external environmental factors, particularly media presence, in shaping corporate conduct and governance, contributing to the broader understanding of the interplay between media and corporate financial practices.

5.4.4   Control Variables

In line with the methodologies established in prior studies, such as those by Bergstresser and Philippon (2006), Yu (2008), Cohen and Zarowin (2010), and Zang (2012), we incorporate several firm-level characteristics as control variables to account for factors that could influence earnings management. This approach is vital to ensure that our results are not confounded by variables other than the local newspaper closures and their interaction with the post-closure period.

Firm Size (Size): The relationship between firm size and earnings management has been extensively studied. Watts and Zimmerman (1990) underlined the link, noting that larger firms, due to their greater market presence and public scrutiny, might engage in earnings management differently. This perspective is supported by research from DeFond and Park (1997), Core et al. (1999), Dechow and Dichev (2002), and Gunny (2010), which explore the various pressures faced by larger firms in the context of financial reporting. This view is reinforced by Dou et al. (2016), who found that larger firms have more resources and market pressures influencing their earnings management behaviour. *Size* is typically quantified using the natural logarithm of total assets, as outlined by Watts and Zimmerman (1986) and Cheng et al. (2016).

Leverage (LEV): The significance of leverage in earnings management is highlighted in the research of DeFond and Jiambalvo (1994) and Sweeney (1994). They posit that higher leverage might prompt firms to engage in earnings management to meet debt covenants or uphold favourable credit ratings. This perspective gains support from Peasnell et al. (2005), who propose that leveraged firms may employ earnings management strategies to navigate financial constraints. Leverage (*LEV*) is commonly computed as the ratio of total debt to total assets (Klein, 2002; Peasnell et al. 2005; Raman & Shahrur, 2008).

Profitability (ROA): Profitability, often measured as Return on Assets (*ROA*), is a key factor influencing earnings management practices (Kothari et al., 2005). Studies like Bedard and Johnstone (2004) have established a connection between profitability measures and the manipulation of earnings. Burgstahler and Dichev (1997) explored this relationship, shedding light on the motivations driving financial reporting strategies. These investigations highlight a negative correlation between a company's profitability and the adoption of earnings management. It is revealed that firms with lower profit levels often face shareholder pressure to improve profitability, compelling them to resort to earnings management and thereby increasing the prevalence of such manipulative practices.

Controlling for the *Market-to-Book Ratio (MTB)* is important in examining the impact of local newspaper closures on earnings management. *MTB*, indicative of a firm's growth opportunities and investor expectations, is closely linked to earnings management practices. Research, including that by Barth et al. (1999) and Ayers et al. (2011), suggests that firms with higher MTB ratios are more likely to engage in earnings management to meet market expectations. This association is also supported by Skinner and Sloan (2002) and Chen et al. (2008). By including *MTB* in the analysis, calculated as the market value of equity over the book value (Zang, 2012; Cheng et al., 2016), the study can more accurately isolate the effect of media absence on corporate financial behaviour, ensuring that the results are not confounded by variations in firms' growth prospects.

Including *Sales Growth (SG)* as an additional control variable, measured as the annual percentage increase or decrease in a firm's sales revenue, aligns with the findings of Das et al. (2009) and supports earlier research by Teoh et al. (1998), which indicated that high-growth firms may use discretionary accruals to enhance reported earnings. Perols and Lougee (2011) confirm this trend, showing manipulated firms with significantly inflated revenue growth averaged 53%, compared to 16% in control firms. Using *SG and MTB* as distinct measures of

firm growth, as suggested by Collins et al. (2017), enhances the study methodology. This approach underscores the role of growth in influencing earnings management, particularly in situations with varying levels of media monitoring, providing a deeper understanding of factors affecting corporate earnings practices.

Sales Growth Volatility (SGV): This measure provides insights regarding the stability and consistency of a firm's revenue growth. It is computed by dividing the standard deviation of sales growth over the previous three years by the mean of sales growth during the same period (Gong et al., 2009; Shi et al., 2018). By quantifying the fluctuations in sales growth, *SGV* offers a deeper understanding of the firm's operational performance and market dynamics (Chen et al., 2015). This metric is especially valuable in studies exploring financial behaviour and strategic decision-making, as it reflects not just the magnitude of growth but also its variability, which can have significant implications for risk assessment and management strategies (Huang & Ho, 2020).

Cash Flow (CF), defined as the firm's operational cash flow divided by its book assets, is crucial in assessing operational efficiency and financial health (Bédard et al., 2004; Fung & Goodwin, 2013). This metric, backed by Hribar and Collins (2002), evaluates a firm's internal cash generation capacity, with Dechow et al. (1998) highlighting its importance in assessing earnings quality. Dechow et al. (1996) emphasise that firms with robust cash flows (CF) are less likely to engage in earnings manipulation. In environments with reduced media oversight, as noted by Dyck et al. (2008), *CF* significance grows, as firms may alter financial reporting practices, making it key for understanding corporate financial behaviour under varying external conditions.

Cash Flow Volatility (CFV), calculated as the standard deviation of a firm's cash flow over a three-year period, serves as an indicator of financial variability and risk (Bilinski, 2014; Fung & Goodwin, 2013). The rationale for incorporating *CFV* is to account for inherent financial stability or instability within firms that might independently affect their earnings management behaviour, irrespective of media scrutiny. This metric proves beneficial in controlling the degree of uncertainty in a firm's cash flows, which can be a significant factor influencing managerial decisions related to earnings management (Jiang et al., 2008; Di Meo et al., 2017). High *CFV* often implies greater risk, potentially prompting management to engage in earnings manipulation to conceal any unfavourable financial outlook (Li et al., 2023).

Altman's Z-score (AZ), an important financial health and bankruptcy risk metric introduced by Altman (1968), is incorporated as a control variable in this study. This score is defined by the formula:

$$AZ = ((3.3 * Operating\ Income + Sales + 1.4 * Retained\ Earnings + 1.2 * (Current\ Assets - Current\ Liability))/Total\ Assets)$$

It plays a crucial role in evaluating a firm's financial solvency and stability, influencing its tendencies for earnings management, especially in financially challenging situations (Altman, 1968; Farrell et al., 2014; Pappas et al., 2019). The inclusion of ***Altman's Z-score*** allows for a comprehensive analysis of how a firm's financial condition affects its strategies for earnings management (Ghazali et al., 2015; Chang & Pan, 2020), particularly in contexts where media observation may fluctuate.

Loss dummy (LOS) variable is defined as a binary indicator, set to one for firms with negative operating income and zero otherwise (Fung & Goodwin, 2013; Ali & Zhang, 2015). This is crucial for understanding how financial distress influences financial reporting strategies, particularly the propensity to avoid reporting losses (Dechow et al., 2003; Roychowdhury, 2006). This approach is particularly relevant in scenarios of reduced media oversight, where the scrutiny that often acts as a check on corporate behaviour is diminished (Kim et al., 2021; Jiang & Kong, 2023). The ***Loss dummy*** thus provides a critical dimension to the analysis, enabling an investigation into whether companies under financial strain exhibit distinct earnings management behaviours compared to their financially healthier counterparts (Hayn, 1995; Burgstahler & Dichev, 1997).

Stock returns (***SR***) are the cumulative monthly returns over a fiscal year, reflecting a stock's performance and investor gains (Chen et al., 2015). Stock return volatility (SRV) measures the stock's risk through the standard deviation of monthly returns over two years, indicating price fluctuation and investment uncertainty (Chen et al., 2021). While ***RET*** assesses profitability, ***SRV*** highlights stability and potential risk, particularly relevant in earnings management contexts. Earnings manipulation can elevate ***SRV***, as distorted financial disclosures increase investor uncertainty, affecting stock price stability and market perception (Jones, 1991; Dechow et al., 1995), thereby linking these metrics to corporate financial practices. *Appendix (3)* provides detailed definitions of all variables used in the empirical models and the sample period spans from 1986 to 2021. All continuous variables are winsorised at the 1st and 99th percentiles.

5.4.5 Descriptive Statistics

Table 18 provides an overview of the descriptive statistics for the variables used in the empirical analyses, divided into two sections: Panel A and Panel B.

Panel A: Univariate Statistics and Covariate Balance for Local Newspaper Closure (Treatment: N=5276, Control: N=19964)

Variable	Treatment Group		Control Group		Differences		Test	
	Mean	Median	Mean	Median	Mean Difference	Median Difference	T-test Mean (p-value)	MW U-Test Median (p-value)
$AEM_{i,t}$	0.098	0.099	0.077	0.078	0.021	0.021	0.000	0.000
$REM1_{i,t}$	0.096	0.097	0.041	0.049	0.055	0.049	0.000	0.000
$REM2_{i,t}$	0.026	0.027	0.008	0.011	0.018	0.016	0.000	0.000
$Size_{i,t}$	5.766	5.972	5.694	5.952	0.072	0.020	0.001	0.001
$LEV_{i,t}$	0.423	0.194	0.345	0.199	0.078	-0.005	0.012	0.015
$ROA_{i,t}$	0.095	0.132	0.075	0.112	0.02	0.020	0.011	0.013
$MTB_{i,t}$	1.586	0.727	1.491	0.727	0.095	0.000	0.005	0.007
$SG_{i,t}$	0.066	0.066	0.071	0.071	-0.005	-0.005	0.000	0.000
$SGV_{i,t}$	3.369	3.366	2.327	2.374	1.042	0.992	0.000	0.000
$CF_{i,t}$	0.341	0.330	0.304	0.287	0.037	0.042	0.000	0.000
$CFV_{i,t}$	0.171	0.168	0.154	0.146	0.016	0.022	0.000	0.000
$AZ_{i,t}$	0.611	0.599	0.618	0.615	-0.007	-0.016	0.467	0.375
$LOS_{i,t}$	0.285	0.285	0.225	0.225	0.06	0.06	0.000	0.000
$SR_{i,t}$	0.143	0.145	0.046	0.058	0.096	0.086	0.000	0.000
$SRV_{i,t}$	0.099	0.100	0.102	0.101	-0.003	-0.001	0.005	0.012
$Institutional\ Ownership_{i,t}$	0.422	0.4	0.429	0.406	-0.007	-0.006	0.009	0.011
$Number\ of\ Analysts_{i,t}$	1.635	1.630	1.524	1.510	0.111	0.120	0.000	0.000
$\Delta CEO\_Comp_{i,t}$	0.173	0.173	0.176	0.175	-0.003	-0.003	0.000	0.000
$\Delta CFO\_Comp_{i,t}$	0.137	0.136	0.154	0.154	-0.017	-0.018	0.000	0.000

Panel B: Descriptive Statistics for Full Sample (N = 25,240)

	Mean	Median	St. Dev.	P5	P95
$AEM_{i,t}$	0.096	0.120	0.108	0.034	0.130
$REM1_{i,t}$	0.088	0.164	0.352	-.0117	0.196
$REM2_{i,t}$	0.023	0.050	0.126	-0.050	0.061
$Size_{i,t}$	5.709	5.957	2.679	0.961	9.681
$LEV_{i,t}$	0.181	0.148	0.158	0.007	0.458
$ROA_{i,t}$	0.085	0.122	0.090	-0.028	0.273
$MTB_{i,t}$	1.511	0.727	2.348	0.004	5.875
$SG_{i,t}$	0.070	0.075	0.206	-0.270	0.409
$SGV_{i,t}$	3.270	4.432	5.400	0.131	4.933
$CF_{i,t}$	0.239	0.176	0.229	0.024	0.801
$CFV_{i,t}$	0.098	0.036	0.163	0.003	0.358
$AZ_{i,t}$	0.619	0.620	1.504	-1.851	3.096
$LOS_{i,t}$	0.238	0.000	0.426	0.000	1.000
$SR_{i,t}$	0.126	0.265	0.648	-0.251	0.326
$SRV_{i,t}$	0.101	0.107	0.069	-0.011	0.214
$Institutional\ Ownership_{i,t}$	0.427	0.403	0.198	0.178	0.765
$Number\ of\ Analysts_{i,t}$	1.605	1.571	1.038	0.000	3.394
$\Delta CEO\_Comp_{i,t}$	0.175	0.023	0.759	-0.560	1.389
$\Delta CFO\_Comp_{i,t}$	0.150	0.044	0.586	-0.503	1.191

The analysis of descriptive statistics in Table 18, Panel A, focuses on how local newspaper closures affect earnings management through the lens of corporate monitoring. This analysis compares the treatment group (5,276 observations) with the control group (19,964 observations) to assess the impact of reduced local media scrutiny on firms' financial practices, particularly in earnings management.

Earnings management, both accrual-based (*AEM*) and real earnings management (*REM1* and *REM2*), is significantly higher in the treatment group. The mean *AEM* in the treatment group is 0.098 compared to 0.077 in the control group. Similarly, *REM1* and *REM2* are also higher, with *REM1* at 0.096 versus 0.041 in the control group, and *REM2* at 0.026 compared to 0.008. These results indicate that firms in areas with reduced media oversight are more likely to engage in earnings management, possibly due to the diminished corporate monitoring that typically accompanies local media coverage. Dechow et al. (1995) and Li and Sun (2023) demonstrated that reduced external monitoring gives firms more flexibility to manipulate earnings. Similarly, Roychowdhury (2006) found that firms resort to real earnings management when facing less scrutiny, often as a way to manipulate short-term financial performance.

The differences in firm size (*Size*) between the groups are modest, with the treatment group averaging 5.766 compared to 5.694 in the control group. Larger firms generally attract more attention from analysts and investors, potentially mitigating the extent of earnings management. Research by DeFond and Jiambalvo (1994), Francis et al. (2005), and Dou et al. (2016) suggests that larger firms are subject to more stringent scrutiny, reducing their propensity for aggressive earnings management.

Leverage (*LEV*) is higher in the treatment group, averaging 0.423 compared to 0.345 in the control group. Gross et al. (2024) indicate that high leverage can pressure firms to manage earnings to meet debt covenants, particularly in environments with reduced monitoring. Similarly, Sweeney (1994) and Jiang et al. (2008) found that firms with higher leverage are more likely to engage in earnings management, especially when external oversight is weakened.

The return on assets (*ROA*) is slightly higher in the treatment group, with an average of 0.095 compared to 0.075 in the control group. This suggests that firms in the treatment group may be managing earnings to present a more favourable profitability outlook, particularly in the absence of rigorous media scrutiny. El Mouttaqui et al. (2023) and Boachie and Mensah (2022)

propose that firms often influence earnings to enhance reported ROA, especially when external monitoring is compromised.

The market-to-book ratio (**MTB**) is also slightly higher in the treatment group, averaging 1.586 compared to 1.491 in the control group. Firms with higher MTB ratios may engage in earnings management to meet market expectations, a behaviour supported by Cheng and Warfield (2005) and Marisetty and Moturi (2023), who observed that firms with higher MTB are more likely to manage earnings to sustain investor expectations.

Sales growth (**SG**) is slightly lower in the treatment group, with an average of 0.066 compared to 0.071 in the control group. However, sales growth volatility (**SGV**) is significantly higher in the treatment group, averaging 3.369 compared to 2.327 in the control group. Firms in more volatile environments may manage earnings to smooth out fluctuations, a behaviour highlighted by Leuz et al. (2003) and Li et al. (2023), who found that earnings management is more prevalent in firms experiencing higher volatility.

Cash flow (**CF**) is higher in the treatment group, averaging 0.341 compared to 0.304 in the control group, suggesting that firms might manage earnings to align reported cash flows with investor expectations. Dechow et al. (1995) and Cohen et al. (2008) imply that firms often manipulate earnings to present smooth cash flows, especially when external monitoring is weak. Similarly, the treatment group exhibits higher cash flow volatility (**CFV**), averaging 0.171 compared to 0.154 in the control group. This increased uncertainty in cash flow may lead firms to engage in earnings management practices to project a more stable financial performance, as suggested by Jayaraman (2008) and Hu (2021).

Altman's Z-score (**AZ**), a measure of financial health, is slightly lower in the treatment group, averaging 0.611 compared to 0.618 in the control group. Firms with lower Z-scores may be more financially stressed and thus more likely to engage in earnings management to avoid financial distress. This finding is consistent with Altman (1968) and Veganzones et al. (2023), who demonstrated that financially distressed firms are more prone to earnings manipulation.

The loss dummy (**LOS**), indicating firms with negative operating income, is higher in the treatment group at 0.285 compared to 0.225 in the control group. This suggests that firms in areas with less media scrutiny are more likely to report losses, which may lead to increased earnings management to mitigate the negative impact on stock prices. Burgstahler and Dichev

(1997) and Kim et al. (2019) noted that firms are more likely to engage in earnings management to avoid reporting losses, particularly in environments with weaker monitoring.

Stock returns (**SR**) are higher in the treatment group, averaging 0.143 compared to 0.046 in the control group, potentially reflecting efforts to manage earnings upward to boost stock performance. However, stock return volatility (**SRV**) is slightly lower in the treatment group, suggesting that firms may be managing earnings to reduce perceived risk and stabilize stock prices. Beneish (1999) and Paul and Sharma (2023) found that firms often manipulate earnings to achieve smoother stock price performance, particularly in volatile markets.

Institutional ownership is slightly lower in the treatment group, averaging 0.422 compared to 0.429 in the control group. This suggests that institutional investors may be more hesitant to invest in firms with elevated earnings management risks, particularly in areas where media oversight is diminished. This finding is consistent with the research of Bushee et al., 2010, Lo et al. (2017), and Garel et al. (2021), which indicates that institutional investors tend to favour companies with transparent and reliable financial reporting.

The *Number of Analysts* covering firms is marginally higher in the treatment group, with an average of 1.635 compared to 1.524 in the control group. Despite the reduced media scrutiny in these regions, analyst coverage remains a critical tool for monitoring corporate activities, potentially mitigating the extent of earnings management. This is supported by findings from Yu (2008) and Beardsley et al. (2021), who showed that increased analyst coverage is linked to lower levels of earnings management, as analysts play a vital role in detecting and discouraging such practices.

Changes in CEO and CFO compensation (*ΔCEO_Comp* and *ΔCFO_Comp*) show slight differences between the treatment and control groups. The average change in CEO compensation is slightly lower in the treatment group at 0.173 compared to 0.176 in the control group, while the change in CFO compensation is also lower at 0.137 compared to 0.154. These differences may suggest that executives in the treatment group are less motivated to engage in aggressive earnings management, potentially due to weaker performance-based compensation structures in areas with lower media scrutiny. This aligns with findings by Bergstresser and Philippon (2006) and Alharbi et al. (2023), who demonstrated that performance-linked pay can significantly impact the degree of earnings management.

In the full sample analysis presented in Panel B, which encompasses 25,240 firm-year observations (except for *ΔCEO_Comp* and *ΔCFO_Comp)*, the descriptive statistics offer a comprehensive overview of the financial characteristics and earnings management behaviours of firms. These statistics provide a foundation for understanding the relationship between reduced media oversight, due to local newspaper closures, and corporate financial practices.

Firstly, the study measures Accrual-based Earnings Management (**AEM**), where the mean and median values stand at 0.096 and 0.120, respectively. This indicator is crucial for assessing the extent to which firms manipulate accruals, as documented in seminal works such as Dechow et al. (1995) and Cohen et al. (2008). Additionally, the inclusion of Real Earnings Management Measures (**REM1** and **REM2**), with means of 0.088 and 0.023, respectively, broadens the analysis to encompass real activities that firms might undertake to influence reported earnings, aligning with insights from Roychowdhury (2006), Kim et al. (2012), and García Osma et al. (2022). These findings suggest that firms in the full sample are engaging in both accrual-based and real earnings management practices, especially in the absence of stringent external monitoring.

The mean Firm Size (**Size**) of 5.709 highlights the relationship between a firm's scale and its financial reporting practices, a dynamic explored by Lang and Stulz (1994). Larger firms, often under greater scrutiny due to their visibility and stronger internal controls, tend to engage in less aggressive earnings management. This is consistent with the findings of Siregar and Utama (2008) and Gonçalves et al. (2022), who noted that the increased oversight larger firms receive reduces their likelihood of manipulating earnings.

The average Leverage (**LEV**) of 0.181 underscores the impact of capital structure decisions on earnings management, reflecting the findings of Jiang et al. (2008). Firms with higher leverage may have a greater tendency to manage earnings in order to meet debt covenants, especially in environments with reduced external monitoring. This is consistent with observations by Pappas et al. (2019) and Wang et al. (2024), who noted that companies with higher debt levels are more likely to engage in earnings management to avoid breaching covenant agreements.

Moreover, the mean and median values of Return on Assets (**ROA**) are 0.085 and 0.122, respectively, indicating overall profitability among firms. Managers might be incentivised to manage earnings to present an optimistic outlook on future profitability by reporting a strong ROA, as discussed by Ghazali et al. (2015) and Almand et al. (2023). This behaviour is

particularly relevant in the context of reduced media oversight, where the lack of external scrutiny might embolden managers to enhance reported profitability (Kim et al., 2021).

The average Market-to-Book Ratio (**MTB**) of 1.511 provides insight into how market valuations, relative to book values, might drive earnings management behaviours. Fama and French (1992) and Gross et al. (2024) suggested that firms with higher MTB ratios might engage in earnings management to maintain or boost market perceptions, particularly in environments where reduced media coverage limits external monitoring.

The attention to Sales Growth (**SG**) and Sales Growth Volatility (**SGV**), with means of 0.070 and 3.270 respectively, underscores the impact of operational performance on financial reporting decisions. DeAngelo et al. (1994) and Huang and Ho (2020) emphasised that firms experiencing higher volatility in sales growth might be more inclined to smooth earnings, particularly when external oversight is lacking. The higher volatility observed in SGV suggests that firms may be more prone to earnings management to present a stable performance in uncertain market conditions (Carney et al., 2024).

Additionally, the analysis of Cash Flow (**CF**) and Cash Flow Volatility (**CFV**), with averages of 0.239 and 0.098 respectively, highlights the role of liquidity in influencing earnings management practices. Research by Sweeney (1994), El Mouttaqui et al. (2023), and Li et al. (2023) indicates that firms experiencing liquidity constraints are more likely to engage in earnings manipulation to project a stronger financial position, particularly in the absence of robust external monitoring that might otherwise deter such behaviour.

The inclusion of Altman's Z-score (**AZ**), with an average of 0.619, expands the discussion to encompass the assessment of bankruptcy risk and its connection to earnings management, following the methodology outlined by Altman (1968, 2000). Firms with lower Z-scores, indicating a higher risk of bankruptcy, may be more inclined to engage in earnings management to avoid financial distress, a behaviour highlighted by Anagnostopoulou and Tsekrekos (2015) and Aljughaiman et al. (2023).

The Loss Dummy (**LOS**), with a mean of 0.238, indicates that a significant proportion of firms are reporting losses. Firms reporting losses may engage in earnings management to mitigate the impact of negative earnings on their stock prices and market perceptions. Dechow and

Dichev (2002) and El Diri et al. (2020) have shown that firms are more likely to manipulate earnings to avoid reporting losses, especially when external monitoring is weak.

Stock Returns (*SR*) in the full sample average 0.126, reflecting the overall performance of firms over the period. This variable, in conjunction with Stock Return Volatility (*SRV*), which averages 0.101, highlights the broader market dynamics that firms must navigate. Firms experiencing higher return volatility may be more likely to engage in earnings management to smooth out the perceived risk and stabilize their stock prices, a strategy observed in the work of Beneish (1999) and Garel et al. (2021).

Institutional Ownership, averaging at 0.427, suggests significant institutional monitoring, which can deter earnings management. Studies by Chung et al. (2002), Garel et al. (2021), and Ma et al. (2023) indicate that institutional investors play a crucial role in curbing earnings manipulation by demanding higher transparency and accountability from firms. The average *Number of Analysts* of 1.605 reflects moderate analyst scrutiny, which also impacts financial reporting quality, as demonstrated by Yu (2008), Chen et al. (2015), and Zhang et al. (2018). Analyst coverage provides an additional layer of monitoring that can mitigate the propensity for earnings management in firms, particularly when other external checks, such as media coverage, are weakened.

Finally, changes in CEO and CFO compensation (*ΔCEO_Comp* and *ΔCFO_Comp*), with means of 0.175 and 0.150, respectively, highlight the variability in executive incentives, which can drive earnings management behaviours. Studies by Bergstresser and Philippon (2006), Laux and Laux (2009), and Martin et al. (2023) have shown that performance-based compensation structures can encourage executives to manipulate earnings to achieve bonus targets, especially in environments with less stringent oversight.

In summary, the descriptive statistics in Table 18, across both Panel A and Panel B, provide a foundational understanding of the financial characteristics and earnings management behaviours of firms in the context of local newspaper closures. Panel A highlights differences between the treatment and control groups, while Panel B extends this analysis to the full sample. However, these statistics serve as just the starting point. Further multivariate empirical research is necessary to explore the complex interactions between these variables, particularly how firms adjust their financial reporting practices in response to changes in external oversight. Such an approach will deepen our understanding of corporate strategies and behaviours in environments with diminished media scrutiny.

5.4.6 Pairwise Correlations

Table (19) Pairwise Correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
(1) $Treat\_firm_{i,t} * Post_{i,t}$	1.000																			
(2) $AEM_{i,t}$	0.192*	1.000																		
(3) $REM1_{i,t}$	0.087*	0.185*	1.000																	
(4) $REM2_{i,t}$	0.041*	0.089*	0.066*	1.000																
(5) $Size_{i,t}$	0.091*	-0.034*	0.017*	0.011*	1.000															
(6) $LEV_{i,t}$	-0.011	0.051*	0.045*	0.023*	0.016*	1.000														
(7) $ROA_{i,t}$	0.001	-0.005*	-0.004*	-0.002*	0.024*	0.011	1.000													
(8) $MTB_{i,t}$	0.020*	0.144*	-0.089*	-0.044*	0.103	-0.112	0.023*	1.000												
(9) $SG_{i,t}$	0.041*	0.025*	0.014*	-0.011*	0.037	-0.006*	0.001	0.012*	1.000											
(10) $SGV_{i,t}$	-0.043*	-0.054*	0.031*	0.019*	-0.063*	0.009	0.000	-0.010*	-0.003	1.000										
(11) $CF_{i,t}$	0.003	-0.139*	-0.114*	-0.098*	0.114	0.085*	0.026*	0.230*	0.009*	-0.023*	1.000									
(12) $CFV_{i,t}$	-0.006*	-0.182*	-0.137*	-0.084*	0.022	0.016*	-0.084*	-0.071*	-0.005	-0.001	-0.120*	1.000								
(13) $AZ_{i,t}$	0.017*	-0.124*	0.067*	0.037*	0.015*	0.059	0.002	0.016*	0.014*	0.006*	-0.009*	-0.001	1.000							
(14) $LOS_{i,t}$	-0.134*	0.073*	-0.023*	0.009*	-0.026*	-0.103	0.027	-0.053*	-0.020*	-0.001	0.017*	-0.009*	0.431*	1.000						
(15) $SR_{i,t}$	0.056*	0.028*	0.019*	-0.014*	0.011	0.057*	0.088*	0.409*	0.026*	0.002	0.538*	-0.202*	-0.022*	-0.017*	1.000					
(16) $SRV_{i,t}$	-0.127*	0.114*	0.049*	-0.033*	-0.041	0.061*	-0.028*	-0.472*	-0.016*	0.008*	-0.274*	0.077*	0.041*	0.087*	-0.378*	1.000				
(17) $Institutional\ Ownership_{i,t}$	-0.015*	-0.068*	-0.038*	-0.015*	0.004	0.034*	0.011	0.335*	-0.018*	0.007*	0.154*	-0.038*	-0.015*	-0.038*	0.178*	-0.289*	1.000			
(18) $Number\ of\ Analysts_{i,t}$	-0.008*	-0.034*	-0.014*	-0.008*	-0.005*	0.024*	0.008*	0.290*	-0.016*	-0.032*	0.112*	-0.033*	-0.007*	-0.034*	0.131*	-0.178*	0.450*	1.000		
(19) $\Delta CEO\_Comp_{i,t}$	0.001	0.004*	0.002*	0.001*	0.010*	-0.000	0.003	-0.010*	0.003	0.002	0.003	-0.004	-0.006*	-0.007*	0.000	0.003	-0.001	-0.004*	1.000	
(20) $\Delta CFO\_Comp_{i,t}$	0.012*	0.003*	0.002*	0.001*	0.003	-0.002	-0.021*	-0.001	-0.008*	-0.007*	0.000	0.008*	0.010*	-0.002	0.001	-0.006*	-0.008*	0.000	-0.007*	1.000

* Indicate statistical significance at p<0.05

Table (19) presents a foundational pairwise correlation analysis between key variables related to corporate earnings management (EM), firm characteristics, and financial indicators. Notably, the $Treat\_firm_{i,t} * Post_{i,t}$ interaction term shows significant positive correlations with both accrual-based (AEM at 0.192, $p<0.05$) and real earnings management ($REM1$ at 0.087 and $REM2$ at 0.041, $p<0.05$), indicating increased EM activities in the absence of local media scrutiny. This first-stage outlook underscores the important role of local media in monitoring corporate financial practices.

The control variables in Table (19) shed light on the impact of local media closures on earnings management. Larger firms ($Size_{t-1}$) tend to adjust their earnings management strategies in response to reduced media scrutiny, indicating size influences responsiveness to external monitoring. In contrast, leverage (LEV_{t-1}) has a minimal effect, suggesting that debt levels plays a less role in earnings management tactics post-media closure.

Financial indicators like Cash Flow Volatility (CFV_{t-1}) and Altman's Z-Score (AZ_{t-1}) exhibit slight negative correlations with the $Treat\_firm_{i,t} * Post_{i,t}$ interaction, indicating a complex role of financial health in earnings management decisions in the absence of local media. The negative correlation with the likelihood of reporting losses (LOS_{t-1}) implies that firms facing potential losses may become more conservative in their financial reporting without the watchdog role of the media. Moreover, the market's reaction, indicated by Stock Returns (SR_{t-1}) and Stock Return Volatility (SRV_{t-1}), highlights how earnings management influences perceptions of financial performance and risk.

$Institutional\ Ownership_{i,t}$ and Analysts Coverage ($Number\ of\ Analysts_{i,t}$) as channels for corporate monitoring are negatively correlated with earnings management measures highlighting the role of external monitoring in mitigating financial manipulation. Lastly, Changes in CEO and CFO Compensation ($\Delta CEO\_Comp_{i,t}$ and $\Delta CFO\_Comp_{i,t}$) display a positive correlation with earnings management indicating that executive pay impacts financial reporting behaviours.

However, it is important to recognise that correlation coefficients only provide a preliminary understanding on the linear relationships between variables and do not establish causality. To establish the causal links between earnings management and other variables, in-depth multivariate analysis and further testing are imperative. Moreover, additional interactions, not captured in this initial correlation analysis, could significantly influence the interplay between earnings management and the studied variables. Hence, a comprehensive empirical exploration, employing multivariate analysis, is essential for drawing conclusive interpretations.

5.5 Empirical Analysis

5.5.1 *Baseline Model - Hypothesis (1) Empirical Testing:*

$$EM_{i,t} = a_0 + a_1 Treat\_firm_{i,t} * Post_{i,t} + a_2 Post_{i,t} + a_3 Treat\_firm_{i,t} + a_4 Size_{i,t-1} + a_5 LEV_{i,t-1} + a_6 ROA_{i,t-1} + a_7 MTB_{i,t-1} + a_8 SG_{i,t-1} + a_9 SGV_{i,t-1} + a_{10} CF_{i,t-1} + a_{11} CFV_{i,t-1} + a_{12} AZ_{i,t-1} + a_{13} LOS_{i,t-1} + a_{14} SR_{i,t-1} + a_{15} SRV_{i,t-1} + Firm\ FE + Year\ FE + Year * State\ FE + \varepsilon_{i,t} \qquad (18)$$

This study employs an Ordinary Least Squares (OLS) panel data fixed effects model to explore earnings management dynamics across firms, incorporating methodologies from seminal research (e.g., Dechow & Dichev, 2002; Bergstresser & Philippon, 2006; Yu, 2008; Chen et al., 2021). The dependent variable, $EM_{i,t}$, quantifies the extent of earnings management for each firm in any given year, employing both accrual-based and real earnings management metrics (Dechow et al., 1996; Kothari et al., 2005; Roychowdhury, 2006; Cohen et al., 2008) to provide a thorough assessment of how financial reports may be adjusted due to external pressures or opportunities.

The variable of interest, $Treat\_firm_{i,t} * Post_{i,t}$, combines two binary variables and acts as a proxy to examine the impact of staggered media closures, employing the methodology introduced by Kim et al. (2021). This term captures the effect of local newspaper closures on the earnings management behaviours of nearby firms. It is assigned a value of 1 for firms located within a 50-mile radius of a closed newspaper during the treatment years window, and 0 otherwise. A positive and statistically significant coefficient for this variable suggests that the lack of media oversight leads to an increase in earnings management among affected firms, underscoring the essential monitoring role played by the media. In contrast, a negative, significant coefficient would imply a reduction in such practices, potentially due to increased scrutiny or other factors.

Variables in the empirical analysis are detailed in *Appendix (3)* for clarity and consistency throughout the dataset. The analysis covers the period from 1986 to 2021, offering a comprehensive temporal framework to explore how media presence influences corporate earnings management strategies. This research underscores the critical role of media oversight as an external governance mechanism affecting corporate financial behaviour. By examining the relationship between the closure of local newspapers and earnings management, this study sheds light on the broader impact of media dynamics on corporate transparency and accountability.

Table (20) H_1 Baseline Empirical Results

The following table reports the regression results of the study's baseline Model (18). Where $EM_{i,t}$ is the model dependent variable examines earnings management at the firm level i over time t, measured through either accrual-based earnings management ($AEM_{i,t}$), or real earnings management ($REM1_{i,t}$, $REM2_{i,t}$). The primary independent (explanatory) variable is the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. This binary variable is set to **1** if the firm is part of the treatment group (i.e., experiencing media closure) during the post-treatment period (i.e., after the media closure) and **0** otherwise. This variable captures the treatment effect of media closure on cash holdings. $Treat\_firm_{i,t}$ is a binary variable that equals **1** if firm i belongs to the treatment group, and **0** otherwise. $Post_{i,t}$ is a binary variable that equals **1** for years after the media closure event, and **0** otherwise. Control variables are also incorporated to capture other firm-specific characteristics, including firm $Size_{i,t-1}$ a continuous variable that measures the log of total assets of firm i in period t_{-1}, used as a proxy for firm size. $LEV_{i,t-1}$ is a continuous variable that measures a firm's i total debt level relative to its total assets in period t_{-1}. Return on assets $ROA_{i,t-1}$ is a continuous variable represents the return on assets for firm i in period t_{-1}, calculated as net income divided by total assets. Market-to-book ratio $MTB_{i,t-1}$ is a continuous variable that measures the market-to-book ratio for firm i in period t_{-1}, calculated as market value of equity divided by book value of equity. $SG_{i,t-1}$ a continuous variable indicating the sales growth of firm i between period t_{-2} and t_{-1}. $SGV_{i,t-1}$ a continuous variable representing the volatility of sales growth for firm i over a three-year period leading up to t_{-1}. Cash flow $CF_{i,t-1}$ a continuous variable measuring the cash flow from operations for firm i from period t_{-1}. Cash flow volatility $CFV_{i,t-1}$ a continuous variable indicating the volatility of cash flow for firm i over a three-year period leading up to t_{-1}. $AZ_{i,t-1}$ a continuous variable for firm i from period t_{-1}, representing Altman's Z-score (1968), which is calculated as: $((3.3 * Operating\ Income + Sales + 1.4 * Retained\ Earnings + 1.2 * (Current\ Assets - Current\ Liability))/Total\ Assets)$, it measures financial health and bankruptcy risk, influencing earnings management practices. $LOS_{i,t-1}$ a binary variable equal to 1 if firm i had negative operating income in t_{-1}, indicating financial distress and its impact on financial reporting strategies. $SR_{i,t-1}$ a continuous variable showing cumulative monthly stock returns over the fiscal year for firm i in t_{-1}, reflecting stock performance and investor gains. $SRV_{i,t-1}$ a continuous variable measuring the volatility of monthly stock returns over two years for firm i in t_{-1}, indicating price fluctuation and perceived investment risk related to earnings management. The model incorporates fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time-varying effects, and location-specific influences, enhancing the robustness of the estimates and reducing potential biases in the analysis of earnings management. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (3)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	AEM (1)	REM1 (2)	REM2 (3)	AEM (4)	REM1 (5)	REM2 (6)
$Treat\_firm_{i,t}$	0.002	0.001	0.000	0.035	0.018	0.007
	(0.029)	(0.015)	(0.005)	(0.034)	(0.018)	(0.006)
$Post_{i,t}$	0.005	0.003	0.001	-0.003	-0.002	-0.001
	(0.018)	(0.009)	(0.003)	(0.017)	(0.009)	(0.003)
$Treat\_firm_{i,t} * Post_{i,t}$	0.136***	0.071***	0.025***	0.048**	0.025**	0.009**
	(0.016)	(0.008)	(0.003)	(0.022)	(0.011)	(0.004)
$Size_{t-1}$				-0.032**	0.016**	0.006**
				(0.014)	(0.007)	(0.003)
LEV_{t-1}				0.035**	0.018**	0.007**
				(0.014)	(0.007)	(0.003)
ROA_{t-1}				-0.002***	-0.001***	-0.000***
				(0.000)	(0.000)	(0.000)
MTB_{t-1}				0.023**	-0.012**	-0.004**
				(0.009)	(0.005)	(0.002)
SG_{t-1}				0.001***	0.000***	-0.000***
				(0.000)	(0.000)	(0.000)
SGV_{t-1}				-0.001***	0.001***	0.000***
				(0.000)	(0.000)	(0.000)
CF_{t-1}				-0.060**	-0.031**	-0.011**
				(0.023)	(0.012)	(0.004)
CFV_{t-1}				0.002**	-0.001**	-0.000**
				(0.001)	(0.001)	(0.000)
AZ_{t-1}				-0.004***	0.002***	0.001***
				(0.001)	(0.001)	(0.000)
LOS_{t-1}				-0.090***	-0.047***	-0.017***
				(0.020)	(0.011)	(0.004)
SR_{t-1}				0.011***	0.006***	-0.002***
				(0.003)	(0.002)	(0.001)
SRV_{t-1}				0.012***	0.006***	-0.002***
				(0.003)	(0.001)	(0.001)
Constant	-0.277***	0.071***	0.017***	-1.090	-0.353	-0.134
	(0.014)	(0.007)	(0.003)	(0.960)	(0.500)	(0.178)
R-squared	0.006	0.006	0.006	0.134	0.134	0.134
No. of Firms	2,726	2,726	2,726	2,726	2,726	2,726
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	No	No	No	Yes	Yes	Yes
Year*State FE	No	No	No	Yes	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240	25,240	25,240	25,240

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The baseline regression analysis in Table 20 employs a staggered difference-in-differences (DID) approach within a panel data framework, applying fixed effects Ordinary Least Squares (OLS) estimation and clustering standard errors at the firm level. This methodological choice effectively addresses heteroscedasticity and autocorrelation within firms, thereby enhancing the robustness of the findings. By incorporating year and year*state fixed effects, the analysis controls for unobserved variables that could potentially influence earnings management, thus supporting the validity and reliability of the results (Baker et al., 2022). This approach ensures that the observed increases in both Accrual-Based Earnings Management (*AEM*) and Real Earnings Management (*REM1* and *REM2*) following local newspaper closures are not driven by confounding factors but rather reflect the genuine impact of reduced media oversight. The use of a staggered DID model further strengthens the causal inference, aligning with best practices in empirical research to mitigate biases associated with policy interventions or external shocks (Bertrand et al., 2004; Goodman-Bacon, 2021).

The interaction term $Treat\_firm_{i,t} * Post_{i,t}$, which captures the impact of media closures, is statistically significant across all three measures of earnings management. For *AEM*, the coefficients are notably higher, with 0.136 (p<0.01) in Model 1 and 0.048 (p<0.05) in Model 4, suggesting that accrual-based earnings management is particularly sensitive to the absence of local newspaper scrutiny. This heightened sensitivity aligns with the findings of Dechow et al. (1996), Kothari et al. (2005), and McNichols and Stubben (2018), who reinforce that external monitoring mechanisms, such as auditors and regulatory bodies, play a crucial role in mitigating accrual-based manipulations. The significant increase in *AEM* following newspaper closures supports the idea that when media oversight is weakened, managers are more likely to exploit the increased discretion they have over financial reporting (Kyung & Nam, 2023). This contrasts with studies that focus on more formal regulatory oversight, highlighting the unique role that media, particularly local newspapers, plays in maintaining corporate governance (Dyck et al., 2010; Kim et al., 2021).

In comparison, the interaction term also significantly affects *REM1* and *REM2*, albeit with smaller coefficients (e.g., 0.071 for *REM1* in Model 2 and 0.025 for *REM2* in Model 3, both at p<0.01). These findings are consistent with Roychowdhury (2006) and Srivastava (2019), who demonstrated that real earnings management is often employed as a subtle form of earnings manipulation, particularly when traditional monitoring mechanisms are less effective. The fact that *REM* increases following media closures indicates that managers might resort to altering actual business operations, such as overproduction or cutting discretionary expenses, as a

response to the reduced external scrutiny. This behaviour underscores the idea that real earnings management, while harder to detect and more costly in the long term, becomes a more viable option for managers when they perceive a lower risk of being caught, a notion supported by Graham et al. (2005) and Ferri et al. (2018).

The differential sensitivity of *AEM* and *REM* to media closures can be interpreted through the lens of agency theory. Jensen and Meckling (1976) and Fama (1980) suggested that in the absence of effective monitoring, managers are more likely to act in their self-interest, leading to increased agency costs. The stronger response in *AEM* to media closures supports this view, indicating that accrual-based manipulations are more closely tied to the availability of external oversight, as noted by Cohen and Zarowin (2010) and Boachie and Mensah (2022). This sensitivity reflects the ease with which managers can adjust accruals in financial statements when they are not under the scrutiny of local media, which traditionally plays a key role in exposing such practices (Engelberg & Parsons, 2011; Peress, 2014; Shipilov et al., 2019).

Additionally, the study controls for a battery of firm-level characteristics, corroborating existing literature (e.g., Bergstresser & Philippon, 2006; Yu, 2008; Chen et al., 2021), to isolate their effects on earnings management practices. Notably, a negative correlation exists between firm size ($Size_{t-1}$) and accrual-based earnings management, suggesting that larger firms, which are under more intense scrutiny, are less likely to engage in such practices. This observation is consistent with findings from Jensen and Meckling (1976), Watts and Zimmerman (1986), and Core et al. (2008). In contrast, real earnings management shows a positive association with firm size, indicating more detailed forms of earnings manipulation as discussed by Cohen and Zarowin (2010).

Moreover, leverage (LEV_{t-1}) shows a positive association with all forms of earnings management, reflecting the financial pressures that compel firms to manipulate earnings to meet debt covenants or enhance financial appearance, a dynamic explored by DeFond and Jiambalvo (1994), Sweeney (1994) and Peasnell et al. (2005). Conversely, profitability, as measured by (ROA_{t-1}) negatively correlates with all forms of earnings management, indicating that more profitable firms have fewer incentives to engage in earnings manipulation (Kothari et al., 2005). This is consistent with findings by Dechow and Dichev (2002) and Healy and Palepu (2003), highlighting the role of financial health in curbing undesirable accounting practices.

Variables such as market-to-book ratio (MTB_{t-1}), sales growth (SG_{t-1}), and volatility (SGV_{t-1}) illustrate the influence of growth expectations and operational performance on earnings management, resonating with Roychowdhury (2006). Cash flow metrics, particularly cash flow (CF_{t-1}) negatively correlate with earnings management across models, indicating that robust cash flows diminish the propensity to engage in manipulation, as noted by Dechow et al. (1995). By contrast, cash flow volatility (CFV_{t-1}) shows a complex relationship, positively impacting accrual earnings management and negatively affecting real earnings management, as explored by McNichols and Stubben (2008).

Furthermore, financial health and market performance metrics, such as Altman's Z-score (AZ_{t-1}), which measures financial distress, loss (LOS_{t-1}), stock returns (SR_{t-1}), and stock return volatility (SRV_{t-1}), underscore the diverse drivers behind earnings management. These variables indicate that firms might resort to such practices under varying financial and market conditions, particularly when facing distress or bankruptcy risk, as discussed by Ghazali et al. (2015) and Chang and Pan (2020). This complex relationship is further supported by studies like Burgstahler and Dichev (1997), and further explored by Cohen et al. (2008) and Aljughaiman et al. (2023), highlighting the complex influences on earnings manipulation.

Lastly, the R-squared values from the baseline models of Table (20) initially suggest limited explanatory power for the variance in earnings management practices. However, the inclusion of industry-specific, year-specific, and year-by-state fixed effects significantly enhances the model's fit, as indicated by an improved R-squared value of 0.134. This suggests that a considerable proportion of the variability in earnings management is attributable to these factors. The consistent application of firm fixed effects across all model specifications further ensures robust control for unobserved heterogeneity, thereby enhancing the reliability of the study's findings.

Table (21) Examining Different Aspects of Earnings Management
The following table presents a detailed analysis of the impact of local newspaper closures on various dimensions of earnings management across different subsamples and the full sample. Accrual-based earnings management ($AEM_{i,t}$) is divided into positive discretionary accruals (Column 1) and negative discretionary accruals (Column 2), measuring income-inflating and income-decreasing accruals, respectively. Real earnings management ($REM_{i,t}$) activities in the full sample are proxied by abnormal production costs (*ABPROD*, Column 3), abnormal discretionary expenses (*ABDISX*, Column 4), abnormal operating cash flows (*ABCFO*, Column 5), abnormal R&D expenses (*ABRD*, Column 6), abnormal advertising expenses (*ABADV*, Column 7), and abnormal Selling, General & Administrative expenses (*ABSGA*, Column 8). The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (20) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (3)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	Positive Discretionary Accruals Subsample AEM (1)	Negative Discretionary Accruals Subsample AEM (2)	Full Sample ABPROD REM (3)	Full Sample ABDISX REM (4)	Full Sample ABCFO REM (5)	Full Sample ABRD REM (6)	Full Sample ABADV REM (7)	Full Sample ABSGA REM (8)
$Treat\_firm_{i,t}$	0.032	0.015	0.009	0.007	0.035	0.011	0.041	0.007
	(0.032)	(0.065)	(0.015)	(0.006)	(0.034)	(0.015)	(0.040)	(0.005)
$Post_{i,t}$	0.002	-0.041	-0.009	-0.001	-0.003	-0.001	-0.012	-0.000
	(0.017)	(0.029)	(0.006)	(0.003)	(0.017)	(0.005)	(0.021)	(0.003)
$Treat\_firm_{i,t} * Post_{i,t}$	0.046**	0.038	0.016**	0.009**	0.004	0.014**	-0.027	0.005**
	(0.021)	(0.031)	(0.007)	(0.004)	(0.931)	(0.007)	(0.289)	(0.002)
$Size_{t-1}$	-0.039***	-0.075***	0.008*	0.006**	-0.032**	-0.007*	-0.030*	-0.006*
	(0.015)	(0.023)	(0.004)	(0.003)	(0.014)	(0.004)	(0.018)	(0.003)
LEV_{t-1}	0.031**	0.082***	0.010**	0.007**	0.035**	0.09**	0.034**	0.006**
	(0.015)	(0.028)	(0.004)	(0.003)	(0.014)	(0.004)	(0.016)	(0.002)
ROA_{t-1}	-0.001***	0.002	-0.001***	-0.000***	-0.002***	-0.001***	-0.002***	-0.000***
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTB_{t-1}	0.027***	-0.022*	-0.011***	-0.004**	0.023**	0.010***	0.026**	0.004**
	(0.010)	(0.011)	(0.003)	(0.002)	(0.009)	(0.003)	(0.011)	(0.001)
SG_{t-1}	0.001***	0.000***	0.000***	-0.000***	0.001***	0.000***	0.001***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SGV_{t-1}	-0.001***	0.001**	0.000***	0.000***	-0.001***	-0.000***	-0.001***	-0.000***
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)
CF_{t-1}	-0.045*	0.014	-0.019***	-0.011**	-0.060**	-0.016***	-0.058**	-0.010***
	(0.024)	(0.042)	(0.007)	(0.004)	(0.023)	(0.007)	(0.027)	(0.004)
CFV_{t-1}	0.002**	0.004***	-0.001	-0.000**	0.002**	0.001	0.002**	0.000**
	(0.001)	(0.002)	(0.000)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)
AZ_{t-1}	-0.004***	0.001	0.001***	0.001***	-0.004***	-0.001***	-0.004***	-0.001***
	(0.001)	(0.002)	(0.000)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)
LOS_{t-1}	-0.088***	0.084***	-0.067***	-0.017***	-0.090***	-0.069***	-0.107***	-0.014***
	(0.021)	(0.032)	(0.007)	(0.004)	(0.020)	(0.007)	(0.025)	(0.003)
SR_{t-1}	0.013***	-0.002	0.003**	-0.002***	0.011***	0.002**	0.012***	0.002***
	(0.004)	(0.002)	(0.001)	(0.001)	(0.003)	(0.001)	(0.004)	(0.001)
SRV_{t-1}	0.014***	-0.005	0.002**	-0.002***	0.012***	0.003**	0.013***	0.002***
	(0.003)	(0.004)	(0.001)	(0.001)	(0.003)	(0.001)	(0.004)	(0.000)
Constant	-0.277***	1.424	-0.110	-0.134	-1.090	-0.099	-1.945*	-0.030
	(0.014)	(1.347)	(0.308)	(0.178)	(0.960)	(0.307)	(1.059)	(0.153)
R-squared	0.181	0.041	0.104	0.118	0.136	0.099	0.124	0.117
No. of Firms	2,203	1,842	2,726	2,726	2,726	2,726	2,726	2,726
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Observations	18,055	7,185	25,240	25,240	25,240	25,240	25,240	25,240

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

To closely examine the impact of local newspaper closures on various dimensions of earnings management, Table (21) conducts a detailed analysis, drawing on existing literature (e.g., Yu, 2008; Chen et al., 2021; Dai et al., 2021). This analysis encompasses both accrual-based earnings management ($AEM_{i,t}$) and both real earnings management measures ($REM1_{i,t}$, $REM2_{i,t}$) across different subsamples and the full sample. The findings from this investigation provide empirical evidence that enriches our baseline understanding of managerial behaviour following the disappearance of local press, which serves as a pivotal external monitoring mechanism.

The analysis begins by splitting the accrual-based earnings management into positive and negative discretionary accruals. For the positive discretionary accruals subsample (Column 1), a significant positive interaction (0.046, $p<0.05$) with the term $Treat\_firm_{i,t} * Post_{i,t}$ indicates that the absence of local media is associated with increased income-inflating accruals. This aligns with Yu (2008), suggesting local media serves as a deterrent against such practices. The negative discretionary accruals subsample (Column 2), however, does not show a similar significant interaction, pointing to the key role of media in influencing different aspects of accrual-based earnings management.

Furthermore, Table (21) analysis of real earnings management underscores strategic shifts in response to the absence of local media. Abnormal production ($ABPROD_{i,t}$) and discretionary expenses ($ABDISX_{i,t}$) experience an increase (0.016 and 0.009, respectively, both $p<0.05$, in columns 3 and 4), indicating heightened earnings management activities without media oversight, aligning with expectations of media as a deterrent. However, abnormal operating cash flows ($ABCFO_{i,t}$) remain unaffected, suggesting the nuanced interplay between production costs and discretionary spending's impact on cash flows, an approach explored by Roychowdhury (2006).

Continuing the analysis with a focus on discretionary expenses, Table (21) distinguishes abnormal R&D ($ABRD_{i,t}$), advertising ($ABADV_{i,t}$), and SG&A ($ABSGA_{i,t}$) expenditures using the methodology outlined in equation (14). The results indicate a significant positive relationship between the $Treat\_firm_{i,t} * Post_{i,t}$ interaction and abnormal R&D (0.014, $p<0.05$) and SG&A expenses (0.005, $p<0.05$), indicating areas where earnings management intensifies in the absence of media coverage. However, advertising expenses ($ABADV_{i,t}$) do not exhibit a similar pattern, suggesting that the impact of media absence varies across different types of discretionary expenses.

Table (21) findings enhance our understanding and the robustness of the baseline results of how local media closures affect corporate financial practices, validating the press role as an external governance mechanism. Aligned with existing literature (e.g., Chen et al., 2021; Dai et al., 2021; Kim et al., 2021), this analysis not only confirms media's monitoring role but also details how local newspaper closures impact specific earnings management practices, contributing significantly to discussions on media's vital role in promoting corporate financial transparency and accountability.

Overall, the findings from Tables (20) and (21) corroborate the study's hypothesis that the closure of local U.S. newspapers leads managers of nearby firms to increase both accrual-based and real earnings management activities. These outcomes are in harmony with prior studies, highlighting the media's pivotal role in monitoring corporate earnings management practices. This underscores the media's indispensable function in upholding the transparency and integrity of corporate financial reporting.

5.6 Robustness Checks

This section tackles identification concerns and assesses the impact of local media closures on earnings management. Initially, it scrutinises the robustness of the baseline findings through three tests: (i) firm visibility to local newspapers, evaluating the extent of media coverage, (ii) firm size, noting that larger firms often attract more media attention, and (iii) local newspaper availability, determining if an area is still served by local media or has become a news desert. These evaluations aim to clarify how variations in media monitoring affect managerial practices after local newspapers disappear.

Furthermore, the analysis controls for local economic conditions, including Economic Policy Uncertainty (EPU), unemployment, GDP, and GDP growth, to isolate the effect of newspaper closures from regional trends. It examines the dynamics between the EPU Index, state-level indicators, newspaper closures, and corporate earnings management, enhancing the study's identification strategy.

To address potential endogeneity and further enhance the identification of the effects of local newspaper closures on earnings management, this section also introduces broadband entry and Craigslist's market entry as instrumental variables. These instruments are expected to provide an exogenous source of variation in media presence, allowing for a clearer assessment of its impact on earnings management activities.

A placebo test is then conducted to ensure the robustness of the findings against spurious correlations, simulating conditions under which the treatment effect is randomly assigned. This step is critical for validating the causality of the observed effects. To further reinforce the findings, Propensity Score Matching (PSM) is employed to create a comparable control group of firms not affected by newspaper closures, thereby minimising biases from confounding variables. This methodological approach allows for a more nuanced analysis of the causal relationship between media closures and earnings management. Lastly, a dynamic effects test examines how the impact of media presence on earnings management evolves over time. This analysis provides insights into both the immediate and sustained effects of local newspaper closures on corporate financial practices.

The robustness checks conducted affirm the study's conclusions, underscoring the influence of local newspaper closures on earnings management. These analyses enhance the study's credibility, offering insightful evidence on the importance of media in corporate governance and monitoring mechanisms.

5.6.1 Impact of Media Visibility and Availability on Earnings Management

To explore the impact of media visibility and availability on corporate governance, this analysis focuses on how the reduction of corporate monitoring as a result of local newspaper closures could influence earnings management practices. It examines the interactions between firm visibility, size, and local media presence, assessing their impact on managerial behaviours and transparency.

The first test evaluates media coverage of firms, with a specific focus on S&P 500 companies that represent approximately 80% of the U.S. stock market's capitalisation, thereby attracting the majority of media attention (Tetlock et al., 2008; Tsileponis et al., 2020). Guest (2021) notes that S&P 500 firms are frequently highlighted by local media, which act as crucial whistleblowers on corporate wrongdoings (Miller, 2006; Dyck et al., 2010; Bednar, 2012). The hypothesis suggests that the impact of newspaper closures on earnings management is more pronounced for these highly visible companies due to a considerable reduction in media monitoring, which typically plays a key role in mitigating corporate misconduct (Heese et al., 2022). To measure this impact, the dummy variable $High\_Media\_Visibility_{i,t}$ is used, set to 1 for S&P 500 firms with high media coverage and 0 for all others. The triple interaction term $Treat\_firm_{i,t} * Post_{i,t} * High\_Media\_Visibility_{i,t}$ captures the effects of local newspaper closures on S&P 500 firms, considering both their prominence and the intensity of media scrutiny they receive. The results are displayed in Table (22), which illustrates the differential effects of media visibility on earnings management.

The second test explores the impact of firm size on earnings management following local newspaper closures. It posits that larger firms, with their significant economic impact and broad stakeholder networks, are more adversely affected due to their higher visibility and greater scrutiny (Watts & Zimmerman, 1986; Jensen, 1993; Baker et al., 1998; Core et al., 2008). To measure this, $Large\_Firm_{i,t}$ is defined as 1 for companies whose asset size is above the median within their sectors, and 0 otherwise, reflecting the notion that larger firms receive more attention and monitoring compared to smaller ones.

The interaction term $Treat\_firm_{i,t} * Post_{i,t} * Large\_Firm_{i,t}$ assesses the differential impact of newspaper closures on these firms, assuming that decreased external oversight might increase earnings manipulation among larger firms, which have traditionally relied more on media monitoring as a fourth-estate mechanism. This analysis is reported in Table (22) offers a deeper

understanding of how firm size influences the relationship between media closures and corporate earnings management behaviour.

The third test in this analysis examines the influence of local newspaper availability on earnings management, specifically focusing on whether the firm operates in a region still served by local newspapers or has become a news desert (Abernathy, 2020; Mathews, 2020). This test seeks to determine how the absence of local journalistic scrutiny impacts corporate earnings management, particularly in regions where newspapers have ceased operations, potentially leaving a void in local monitoring and accountability mechanisms (Gao et al., 2020; Kim et al., 2021; Heese et al., 2022).

Following the approach of Gao et al. (2020) a dummy variable $News\_Desert_{i,t}$ is employed to quantify this aspect, set to 1 for firms located in regions classified as news deserts, where local newspapers have closed, and 0 for those in areas still served by at least one local newspaper. This distinction is critical as it theorises that firms in news deserts may exhibit different earnings management behaviours due to a lack of media oversight, which traditionally serves as a deterrent against corporate misdeed (Miller, 2006; Dyck et al., 2008; Zyglidopoulos et al., 2012).

The triple interaction term $Treat\_firm_{i,t} * Post_{i,t} * News\_Desert_{i,t}$ is designed to assess the specific impact of being in a news desert on firms' earnings management practices post-newspaper closure. The findings are presented in Table (22) offering insights into how the geographical variance in newspaper availability influences earnings management practices.

To control for the influence of social media on information dissemination, each of the three tests incorporates the variable $Social\_Media\_Entry_{i,t}$, set to 1 from 2004 onwards, marking the entry of Facebook and the coining of the term "*Social Media*", and 0 for earlier years (Kaplan & Haenlein, 2010). This adjustment assesses whether social media platforms can fill the information void left by the decline of local newspapers, as highlighted by Shaker (2014), Miller and Skinner (2015), and Baloria and Heese (2018). Including this variable in analyses examining firm visibility, firm size, or local newspaper availability helps determine if social media provides sufficient transparency to counterbalance the effects of newspaper closures, thus offering a comprehensive view of how changes in media consumption influence corporate governance and earnings management (Ang et al., 2021; Sun et al., 2022).

Table (22) Impact of Media Visibility and Availability on Earnings Management

The following table presents the results of the analysis examining the cross-sectional impact of media visibility and availability on earnings management. **$High\_Media\_Visibility_{i,t}$** a dummy variable set to **1** for S&P 500 firms with high media coverage, and **0** for all others. The triple interaction term **$Treat\_firm_{i,t} * Post_{i,t} * High\_Media\_Visibility_{i,t}$** captures the effects of local newspaper closures on the earnings management behaviour of S&P 500 firms. **$Large\_Firm_{i,t}$** defined as **1** for companies whose asset size is above the median within our sample, and **0** otherwise. The interaction term **$Treat\_firm_{i,t} * Post_{i,t} * Large\_Firm_{i,t}$** assesses the differential impact of newspaper closures on earnings management activities of these firms. **$News\_Desert_{i,t}$** a dummy variable set to **1** for firms located in regions classified as news deserts, where local newspapers have closed, and **0** for those in areas still served by at least one local newspaper. The triple interaction term **$Treat\_firm_{i,t} * Post_{i,t} * News\_Desert_{i,t}$** assesses the impact of being in a news desert on firms' earnings management's practices post-newspaper closure. **$Social\_Media\_Entry_{i,t}$** a dummy variable, set to **1** from 2004 onwards, marking the entry of Facebook, and **0** for earlier years. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (20) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (3)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	AEM (1)	REM1 (2)	REM2 (3)	AEM (4)	REM1 (5)	REM2 (6)	AEM (7)	REM1 (8)	REM2 (9)
$Treat\_firm_{i,t}$	0.029	0.015	0.005	0.040	0.021	0.007	0.037	0.019	0.007
	(0.034)	(0.018)	(0.006)	(0.032)	(0.017)	(0.006)	(0.035)	(0.018)	(0.007)
$Post_{i,t}$	0.002	0.001	0.000	0.006	0.003	0.001	-0.020	-0.011	-0.004
	(0.017)	(0.009)	(0.003)	(0.017)	(0.009)	(0.003)	(0.017)	(0.009)	(0.003)
$Treat\_firm_{i,t} * Post_{i,t}$	0.041*	0.022*	0.008*	0.050**	0.026**	0.009**	0.043**	0.022**	0.008**
	(0.022)	(0.012)	(0.004)	(0.024)	(0.013)	(0.004)	(0.022)	(0.011)	(0.004)
$High\_Media\_Visibility_{i,t}$	-0.050**	-0.026**	-0.009**						
	(0.020)	(0.011)	(0.004)						
$Treat\_firm_{i,t} * Post_{i,t} * High\_Media\_Visibility_{i,t}$	0.122*	0.063*	0.023*						
	(0.063)	(0.033)	(0.012)						
$Large\_Firm_{i,t}$				-0.022	-0.012	-0.004			
				(0.019)	(0.010)	(0.003)			
$Treat\_firm_{i,t} * Post_{i,t} * Large\_Firm_{i,t}$				0.172***	0.090***	0.032***			
				(0.026)	(0.014)	(0.005)			
$News\_Desert_{i,t}$							0.045*	0.024*	0.008*
							(0.024)	(0.012)	(0.004)
$Treat\_firm_{i,t} * Post_{i,t} * News\_Desert_{i,t}$							0.059***	0.031***	0.011***
							(0.017)	(0.009)	(0.003)
$Social\_Media\_Entry_{i,t}$	0.006	0.003	0.001	0.005	0.003	0.001	0.005	0.002	0.001
	(0.019)	(0.010)	(0.004)	(0.019)	(0.010)	(0.004)	(0.019)	(0.010)	(0.004)
$Size_{t-1}$	-0.032**	0.016**	0.006**	-0.027*	0.014*	0.005*	-0.031**	0.016**	0.006**
	(0.014)	(0.007)	(0.003)	(0.014)	(0.007)	(0.003)	(0.014)	(0.007)	(0.003)
LEV_{t-1}	0.035**	0.018**	0.006**	0.035**	0.018**	0.007**	0.035**	0.018**	0.006**
	(0.014)	(0.007)	(0.003)	(0.014)	(0.007)	(0.003)	(0.014)	(0.007)	(0.003)
ROA_{t-1}	-0.002***	-0.001***	-0.000***	-0.002***	-0.001***	-0.000***	-0.002***	-0.001***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTB_{t-1}	0.023**	-0.012**	-0.004**	0.025**	-0.013**	-0.005***	0.024**	-0.012***	-0.004***
	(0.009)	(0.005)	(0.002)	(0.009)	(0.005)	(0.002)	(0.009)	(0.005)	(0.002)
SG_{t-1}	0.001***	0.000***	-0.000***	0.001***	0.000***	-0.000***	0.001***	0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SGV_{t-1}	-0.001***	0.001***	0.000***	-0.001***	0.001***	0.000***	-0.001***	0.001***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CF_{t-1}	-0.060***	-0.031***	-0.011***	-0.058**	-0.030**	-0.011**	-0.060**	-0.031**	-0.011**
	(0.023)	(0.012)	(0.004)	(0.023)	(0.012)	(0.004)	(0.023)	(0.012)	(0.004)
CFV_{t-1}	0.002**	-0.001**	-0.000**	0.002**	-0.001**	-0.000**	0.002**	-0.001**	-0.000**
	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)
AZ_{t-1}	-0.004***	0.002***	0.001***	-0.004***	0.002***	0.001***	-0.004***	0.002***	0.001***
	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)
LOS_{t-1}	-0.090***	-0.047***	-0.017***	-0.087***	-0.045***	-0.016***	-0.091***	-0.048***	-0.017***
	(0.020)	(0.011)	(0.004)	(0.020)	(0.011)	(0.004)	(0.020)	(0.011)	(0.004)
SR_{t-1}	0.011***	0.006***	-0.002***	0.011***	0.006***	-0.002***	0.011***	0.006***	-0.002***
	(0.003)	(0.002)	(0.001)	(0.003)	(0.002)	(0.001)	(0.003)	(0.002)	(0.001)
SRV_{t-1}	0.012***	0.006***	-0.002***	0.012***	0.006***	-0.002***	0.012***	0.006***	-0.002***
	(0.003)	(0.001)	(0.001)	(0.003)	(0.001)	(0.001)	(0.003)	(0.001)	(0.001)
Constant	-1.104	-0.360	-0.137	-0.990	-0.300	-0.116	-1.093	-0.354	-0.135
	(0.963)	(0.502)	(0.179)	(0.955)	(0.497)	(0.177)	(0.963)	(0.502)	(0.179)
R-squared	0.135	0.135	0.135	0.137	0.137	0.137	0.135	0.135	0.135
No. of Firms	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240	25,240	25,240	25,240	25,240	25,240	25,240

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The results from Table (22) reveal the impact of media visibility and availability on earnings management. The interaction term $Treat\_firm_{i,t} * Post_{i,t}$ consistently exhibits significant positive effects across all models (columns 1 to 9), with coefficients ranging from 0.008 (p<0.01) to 0.050 (p<0.05). This highlights a notable increase in earnings management activities following newspaper closures, particularly in high-profile firms such as those in the S&P 500 (Tetlock et al., 2008; Bushee et al., 2010; Tsileponis et al., 2020). This pattern indicates an elevated risk of opportunistic behaviours in the absence of the watchful eye of local journalism (Guest, 2021; Kim et al., 2021; Heese et al., 2022).

The variable $High\_Media\_Visibility_{i,t}$ negatively correlates with earnings management (*AEM*: -0.050, p<0.05; *REM1*: -0.026, p<0.05; *REM2*: -0.009, p<0.05), indicating that increased media scrutiny generally restrains such practices (Miller, 2006; Dyck et al., 2010). However, the interaction term $Treat\_firm_{i,t} * Post_{i,t} * High\_Media\_Visibility_{i,t}$ is positively associated across all measures (*AEM*: 0.122, p<0.1; *REM1*: 0.063, p<0.1; *REM2*: 0.023, p<0.1), highlighting intensified effects of newspaper closures on earnings management in high-visibility S&P 500 firms. This aligns with findings by Tetlock et al. (2008) and Tsileponis et al. (2020), which emphasise the critical role of media as an external monitor. Additionally, Hao and Li, (2021) argue that press coverage serves as an effective information intermediary and monitoring mechanism, mitigating agency problems in highly visible firms.

$Large\_Firm_{i,t}$ exhibit insignificant changes in earnings management without local newspaper closures. However, the triple interaction term $Treat\_firm_{i,t} * Post_{i,t} * Large\_Firm_{i,t}$ displays a significantly positive impact (*AEM*: 0.172, p<0.01; *REM1*: 0.090, p<0.01; *REM2*: 0.032, p<0.01), indicating increased earnings management with reduced external monitoring (Gentzkow et al., 2004; Siregar & Utama, 2008; Chahine et al., 2015). Fang and Peress (2009), suggest that larger firms, which receive more media coverage, face more scrutiny and have less incentive to manipulate earnings (Watts & Zimmerman, 1986; Baker et al., 1998; Gunny, 2010). Reduced media scrutiny increases agency conflict and earnings management (Jensen, 1993; Core et al., 2008; Kim et al., 2021).

The variable $News\_Desert_{i,t}$, representing areas with no local newspaper coverage, displays a positive impact on earnings management (*AEM*: 0.045, p<0.1; *REM1*: 0.024, p<0.1; *REM2*: 0.008, p<0.1), suggesting that regions transforming into news deserts experience a surge in such practices (Abernathy, 2018; Mathews, 2020). Furthermore, the triple interaction term $Treat\_firm_{i,t} * Post_{i,t} * News\_Desert_{i,t}$ demonstrates more pronounced effects, with earnings

management coefficients ranging from 0.011 to 0.059 (p<0.01). This indicates a significantly higher likelihood of earnings management in areas lacking local newspapers, where diminished information flow likely exacerbates agency conflicts (Kim et al., 2021; Heese et al., 2022). An et al. (2020) further support this, noting that the disappearance of local news sources undermines monitoring quality and increases the risk of misconduct.

Lastly, $Social\_Media\_Entry_{i,t}$ shows negligible effects on mitigating earnings management post-newspaper closure, with coefficients between 0.001 and 0.006 (p>0.1), implying that social media platforms, while prevalent, do not effectively compensate for the decline in traditional local newspaper scrutiny, as posited by Shaker (2014), Miller and Skinner (2015), and Baloria and Heese (2018). This suggests that the nature of social media coverage might not provide the same level of detailed and accountable reporting typically associated with traditional newspapers (Trenz, 2009; Fletcher & Nielsen, 2018).

The findings from Table (22) affirm both the baseline results and the study's hypothesis, underscoring the critical role of traditional media in monitoring and curbing earnings management. The absence of rigorous newspaper oversight is linked to increased governance misconduct, underscoring the need for robust alternative monitoring mechanisms.

5.6.2 *Media Closure, Local Economic Conditions and Earnings Management*

To mitigate concerns that local economic factors may confound the baseline findings on the effects of newspaper closures on earnings management, this analysis examines the relationship between the Economic Policy Uncertainty (EPU) Index[15], state-level economic indicators such as unemployment[16], GDP, and GDP growth[17], and both newspaper closures and corporate earnings management practices. By incorporating controls for the EPU and local economic conditions into the baseline regression model, as guided by the methodology of Gulen and Ion (2016), this study aims to isolate the unique impact of newspaper closures on earnings management. This method ensures that the observed effects are attributed to the lack of local journalistic monitoring, rather than broader economic trends.

Table (23) investigates the impact of the Economic Policy Uncertainty (EPU) Index, developed by Baker et al. (2016), which measures economic policy uncertainty by analysing the frequency

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[15] The U.S. state-level Economic Policy Uncertainty (EPU) data is sourced from www.policyuncertainty.com
[16] Unemployment data is obtained from the U.S. Bureau of Labor Statistics at www.bls.gov
[17] GDP and GDP Growth data are downloaded from the U.S. Bureau of Economic Analysis at www.bea.gov

of newspaper articles on policy uncertainty, tax law changes, and divergent economic forecasts. In addition, it assesses the impact of state-level economic conditions on earnings management in the context of local newspaper closures. Across columns (1) to (12), Table (23) shows how factors such as $EPUI_{i,t}$, $Unemployment\_Rate_{i,t}$, $GDP_{i,t}$, (log-transformed for normalisation), and $GDP\_Growth_{i,t}$ relate to the interaction term $Treat\_firm_{i,t} * Post_{i,t}$, which represents the effect of local newspaper closures. The analysis aims to isolate the effects of media closure from economic influences on accrual-based earnings management (**AEM**) and two types of real earnings management (**REM1** and **REM2**).

VARIABLES	AEM (1)	REM1 (2)	REM2 (3)	AEM (4)	REM1 (5)	REM2 (6)	AEM (7)	REM1 (8)	REM2 (9)	AEM (10)	REM1 (11)	REM2 (12)
Treat_firm$_{i,t}$	0.048	0.025	0.009	0.047	0.024	0.009	0.048	0.025	0.009	0.047	0.024	0.009
	(0.034)	(0.018)	(0.006)	(0.034)	(0.018)	(0.006)	(0.034)	(0.018)	(0.006)	(0.034)	(0.018)	(0.006)
Post$_{i,t}$	-0.003	-0.002	-0.001	-0.003	-0.002	-0.001	-0.003	-0.002	-0.001	-0.003	-0.002	-0.001
	(0.017)	(0.009)	(0.003)	(0.017)	(0.009)	(0.003)	(0.017)	(0.009)	(0.003)	(0.017)	(0.009)	(0.003)
Treat_firm$_{i,t}$ * Post$_{i,t}$	0.039*	0.021*	0.007*	0.048**	0.025**	0.009**	0.049**	0.025**	0.009**	0.048**	0.025**	0.009**
	(0.021)	(0.011)	(0.004)	(0.022)	(0.011)	(0.004)	(0.022)	(0.011)	(0.004)	(0.022)	(0.011)	(0.004)
EPUI$_{i,t}$	-0.036	-0.019	-0.007									
	(0.023)	(0.012)	(0.004)									
Unemployment_Rate$_{i,t}$				0.004	0.002	0.001						
				(0.015)	(0.008)	(0.003)						
LN_GDP$_{i,t}$							-0.048	-0.025	-0.009			
							(0.054)	(0.028)	(0.010)			
GDP_Growth$_{i,t}$										0.000	0.000	0.000
										(0.003)	(0.002)	(0.001)
Size$_{i,t-1}$	-0.032**	0.017**	0.006**	-0.032**	0.017**	0.006**	-0.032**	0.016**	0.006**	-0.032**	0.016**	0.006**
	(0.014)	(0.007)	(0.003)	(0.014)	(0.007)	(0.003)	(0.014)	(0.007)	(0.003)	(0.014)	(0.007)	(0.003)
LEV$_{i,t-1}$	0.035**	0.018**	0.007**	0.035**	0.018**	0.007**	0.035**	0.018**	0.007**	0.035**	0.018**	0.007**
	(0.014)	(0.007)	(0.003)	(0.014)	(0.007)	(0.003)	(0.014)	(0.007)	(0.003)	(0.014)	(0.007)	(0.003)
ROA$_{i,t-1}$	-0.002***	-0.001***	-0.000***	-0.002***	-0.001***	-0.000***	-0.002***	-0.001***	-0.000***	-0.002***	-0.001***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTB$_{i,t-1}$	0.022**	-0.012**	-0.004**	0.023**	-0.012**	-0.004**	0.023**	-0.012**	-0.004**	0.023**	-0.012**	-0.004**
	(0.009)	(0.005)	(0.002)	(0.009)	(0.005)	(0.002)	(0.009)	(0.005)	(0.002)	(0.009)	(0.005)	(0.002)
SG$_{i,t-1}$	0.001***	0.000***	-0.000***	0.001***	0.000***	-0.000***	0.001***	0.000***	0.000***	0.001***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SGV$_{i,t-1}$	-0.001***	0.001***	0.000***	-0.001***	0.001***	0.000***	-0.001***	0.001***	0.000***	-0.001***	0.001***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CF$_{i,t-1}$	-0.060**	-0.031**	-0.011**	-0.060**	-0.031**	-0.011**	-0.060**	-0.031**	-0.011**	-0.060**	-0.031**	-0.011**
	(0.023)	(0.012)	(0.004)	(0.023)	(0.012)	(0.004)	(0.023)	(0.012)	(0.004)	(0.023)	(0.012)	(0.004)
CVF$_{i,t-1}$	0.002**	-0.001**	-0.000**	0.002**	-0.001**	-0.000**	0.002**	-0.001**	-0.000**	0.002**	-0.001**	-0.000**
	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)
AZ$_{i,t-1}$	-0.004***	0.002***	0.001***	-0.004***	0.002***	0.001***	-0.004***	0.002***	0.001***	-0.004***	0.002***	0.001***
	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)
LOS$_{i,t-1}$	-0.090***	-0.047***	-0.017***	-0.090***	-0.047***	-0.017***	-0.090***	-0.047***	-0.017***	-0.090***	-0.047***	-0.017***
	(0.020)	(0.011)	(0.004)	(0.020)	(0.011)	(0.004)	(0.020)	(0.011)	(0.004)	(0.020)	(0.011)	(0.004)
SR$_{i,t-1}$	0.011***	0.006***	-0.002***	0.011***	0.006***	-0.002***	0.011***	0.006***	-0.002***	0.011***	0.006***	-0.002***
	(0.003)	(0.002)	(0.001)	(0.003)	(0.002)	(0.001)	(0.003)	(0.002)	(0.001)	(0.003)	(0.002)	(0.001)
SRV$_{i,t-1}$	0.012***	0.006***	-0.002***	0.012***	0.006***	-0.002***	0.012***	0.006***	-0.002***	0.012***	0.006***	-0.002***
	(0.003)	(0.001)	(0.001)	(0.003)	(0.001)	(0.001)	(0.003)	(0.001)	(0.001)	(0.003)	(0.001)	(0.001)
Constant	-1.024	-0.318	-0.122	-1.102	-0.359	-0.137	-0.494	-0.042	-0.024	-1.092	-0.354	-0.135
	(0.958)	(0.499)	(0.178)	(0.960)	(0.500)	(0.178)	(1.162)	(0.606)	(0.216)	(0.961)	(0.501)	(0.179)
R-squared	0.134	0.134	0.134	0.134	0.134	0.134	0.134	0.134	0.134	0.134	0.134	0.134
No. of Firms	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240	25,240	25,240	25,240	25,240	25,240	25,240	25,240	25,240	25,240

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table (23) findings reveal that the closure of local newspapers consistently leads to an increase in earnings management activities, as evidenced by the significant positive coefficients for the $Treat\_firm_{i,t} * Post_{i,t}$ interaction across various measures (**AEM, REM1, REM2**; columns 1-12 ranging from 0.039 to 0.049; p<0.1 to p<0.05). These findings highlight the crucial role local media plays in monitoring corporate behaviours and deterring malpractices (Miller, 2006; Heese et al., 2022)..

Further examination focuses on the role of the Economic Policy Uncertainty Index $EPUI_{i,t}$. Despite presenting negative coefficients (-0.036, -0.019, -0.007) across the initial columns, suggesting a potential deterrent to aggressive financial reporting, these impacts are statistically insignificant. This observation highlights that while economic uncertainty might naturally deter aggressive financial reporting (El Ghoul et al., 2021; Chauhan & Jaiswall, 2023), its influence is limited compared to the profound effect of local media oversight (Dyck et al., 2008; Bednar, 2012).

The analysis also indicates that slight positive coefficients for the $Unemployment\_Rate_{i,t}$ (0.004, 0.002, 0.001) suggest a minor influence on earnings management, though these effects remain statistically insignificant. Similarly, negative coefficients for log-transformed $GDP_{i,t}$ (-0.048, -0.025, -0.009) and negligible coefficients for $GDP\_Growth_{i,t}$ (0.000 for all) indicate minimal impact on earnings management. These findings suggest that while economic conditions may influence corporate behaviour, neither GDP size nor short-term economic growth significantly affects earnings management in the absence of local newspapers (Miller, 2006; Kim et al., 2021). Control variables in the models maintain consistent associations with earnings management across various model specifications, further verifying the robustness of the baseline results.

Overall, the findings of Table (23) confirm the lasting impact of local newspaper closures on earnings management practices, emphasising the vital role of local media as a vigilant monitor of corporate activity and an external governance mechanism. This role is crucial for upholding financial integrity and accountability within firms, irrespective of prevailing economic trends, and supports the methodology used by Gulen and Ion (2016).

5.6.3 Instrumental Variables Approach

To address potential endogeneity and enhance the identification of the effects of local newspaper closures on earnings management, this section introduces broadband entry and

Craigslist's market entry as instrumental variables.

The expansion of broadband internet provided a digital alternative to print media consumption, significantly reducing the demand for print newspapers and leading to a surge in local newspaper closures (George, 2008; Gentzkow et al., 2014; Cho et al., 2016). This reduction in media oversight creates opportunities for nearby firms to engage in aggressive earnings management practices due to diminished scrutiny (Healy & Palepu, 2001; Miller, 2006; Dyck et al., 2010). To analyse this relationship, the study employs an instrumental variable approach, coding broadband services entry as a binary variable. It is coded as (1) if broadband entry occurs within five years before a newspaper's closure and is matched with the ZIP codes of the closed newspaper and affected firms within a 50-mile radius; otherwise, it is coded as (0). Broadband availability provides an exogenous instrumental variable to address potential endogeneity when assessing the causal effects of local newspaper closures.

Further strengthening the identification strategy, the entry of Craigslist into the classified ads market serves as a second instrumental variable, as discussed by Gao et al. (2020) and Heese et al. (2022). Craigslist's emergence has been linked to significant revenue shifts within the newspaper industry, with Gurun and Butler (2012) and Seamans and Zhu (2013) highlighting its role in the decline of newspaper advertising revenues. By implementing Craigslist's market entry as a binary variable coded as (1) if it occurs within five years before a newspaper's closure and within a 50-mile radius, and (0) otherwise, this strategy isolates Craigslist's exogenous influence on newspaper viability and indirectly on earnings management, aligning with the empirical analysis framework.

Table (24) employs a two-stage least squares (2SLS-IV) approach, using broadband entry and Craigslist's market entry as instrumental variables. This method addresses potential endogeneity in the relationship between local newspaper closures and earnings management. By isolating the direct impact of reduced media scrutiny on corporate behaviour, this approach underscores the critical role of newspapers in corporate monitoring. The instrumental variables allow a more precise estimation of the causal relationship by minimising confounding bias and reinforcing the robustness of the analysis.

VARIABLES	Broadband-1st Stage Newspaper Closure (1)	Braodband-2nd Stage AEM (2)	REM1 (3)	REM2 (4)	Craigslist-1st Stage Newspaper Closure (5)	Craigslist -2nd Stage AEM (6)	REM1 (7)	REM2 (8)
Braodband_Entry$_{i,t}$(1)/Craigslist_Entry$_{i,t}$(5)	0.825***				0.533***			
	(0.013)				(0.016)			
Predicted_Closure$_{i,t}$		0.063**	0.033**	0.012**		0.105***	0.055***	0.020***
		(0.025)	(0.013)	(0.005)		(0.040)	(0.021)	(0.007)
Size$_{t-1}$	0.011**	-0.032***	0.016***	0.006***	0.007	-0.031***	0.016***	0.006***
	(0.005)	(0.007)	(0.004)	(0.001)	(0.006)	(0.008)	(0.004)	(0.001)
LEV$_{t-1}$	-0.009**	0.035***	0.018***	0.007***	-0.007	0.036***	0.019***	0.007***
	(0.004)	(0.007)	(0.003)	(0.001)	(0.005)	(0.007)	(0.003)	(0.001)
ROA$_{t-1}$	0.000	-0.002***	-0.001***	-0.000***	0.000	-0.002***	-0.001***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTB$_{t-1}$	0.002	0.022***	-0.012***	-0.004***	0.001	0.022***	-0.012***	-0.004***
	(0.004)	(0.006)	(0.003)	(0.001)	(0.004)	(0.006)	(0.003)	(0.001)
SG$_{t-1}$	-0.000	0.001***	0.000***	-0.000***	-0.000	0.001***	0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SGV$_{t-1}$	0.000	-0.001***	0.001***	0.000***	-0.000	-0.001***	0.001***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CF$_{t-1}$	0.003	-0.060***	-0.032***	-0.011***	0.005	-0.061***	-0.032***	-0.011***
	(0.005)	(0.010)	(0.005)	(0.002)	(0.006)	(0.010)	(0.005)	(0.002)
CFV$_{t-1}$	0.000*	0.002***	-0.001***	-0.000***	-0.000	0.002***	-0.001***	-0.000***
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
AZ$_{t-1}$	-0.000	-0.004***	0.002***	0.001***	-0.000	-0.004***	0.002***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LOS$_{t-1}$	0.008	-0.090***	-0.047***	-0.017***	0.009	-0.090***	-0.047***	-0.017***
	(0.007)	(0.016)	(0.009)	(0.003)	(0.009)	(0.016)	(0.009)	(0.003)
SR$_{t-1}$	-0.000	0.011***	0.006***	-0.002***	0.000	0.011***	0.006***	-0.002***
	(0.001)	(0.002)	(0.001)	(0.000)	(0.001)	(0.002)	(0.001)	(0.000)
SRV$_{t-1}$	0.001	0.012***	0.006***	-0.002***	-0.000	0.012***	0.006***	-0.002***
	(0.001)	(0.003)	(0.001)	(0.001)	(0.002)	(0.003)	(0.001)	(0.001)
Constant	-0.936***	-1.005***	-0.309*	-0.119*	-0.829***	-0.962***	-0.286	-0.110*
	(0.160)	(0.356)	(0.185)	(0.066)	(0.163)	(0.357)	(0.186)	(0.066)
R-squared	0.728	0.134	0.134	0.134	0.604	0.134	0.134	0.134
No. of Firms	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240	25,240	25,240	25,240	25,240	25,240
Sargan-Hansen Overidentification Test Chi-sq p-value		0.469	0.469	0.469		0.159	0.159	0.159

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table (24) displays the results of the 2SLS-IV analysis, employing broadband services and Craigslist entry as instrumental variables. The first stage of the analysis verifies the adequacy of these instruments for assessing the impact of local newspaper closures on both accrual-based and real earnings management measures. The Sargan-Hansen overidentification test, following the methodology initially proposed by Sargan (1958) and extended by Hansen (1982), produced p-values of 0.469 for broadband services entry and 0.159 for Craigslist entry. These results affirm the exogeneity of the instruments. Given that these p-values are significantly above typical significance thresholds, the instruments are validated. Therefore, there is no statistical basis to question their appropriateness for this analysis.

The coefficient for broadband entry (Column 1) is positive and significant (0.825, $p<0.01$), aligning with prior research indicating that broadband expansion significantly reduced print media consumption and contributed to the closure of local newspapers (e.g., Gentzkow et al., 2014; Cho et al., 2016). Similarly, Craigslist's market entry (Column 5) strongly predicts local newspaper closures with a coefficient of 0.533 ($p<0.01$), reinforcing its suitability as an instrumental variable due to its disruptive impact on newspaper advertising revenues (Gurun & Butler, 2012; Seamans & Zhu, 2013).

In the second-stage results, the coefficient for predicted newspaper closure positively influences discretionary accruals (*AEM*, Columns 2 and 6, $p<0.01$), suggesting that firms increase financial manipulation following a predicted closure. This aligns with Miller (2006) and Dyck et al. (2010) findings that reduced media scrutiny encourages firms to engage in earnings management. Real earnings management metrics (*REM1* and *REM2*, Columns 3, 4, 7, and 8) also show statistically significant positive effects from predicted newspaper closures ($p<0.05$ or $p<0.01$), revealing that firms manipulate real activities when media oversight diminishes. Control variables such as size, leverage, and profitability remain influential across models, consistent with Healy and Palepu (2001) and Roychowdhury (2006) findings, validating the necessity of their inclusion.

Overall, the first-stage results validate broadband and Craigslist market entry as instrumental variables, given their strong predictive power over local newspaper closures. The subsequent second-stage findings establish that diminished media monitoring leads to increased earnings management practices among nearby firms, confirming the causal relationship between local newspaper closures and corporate financial manipulation.
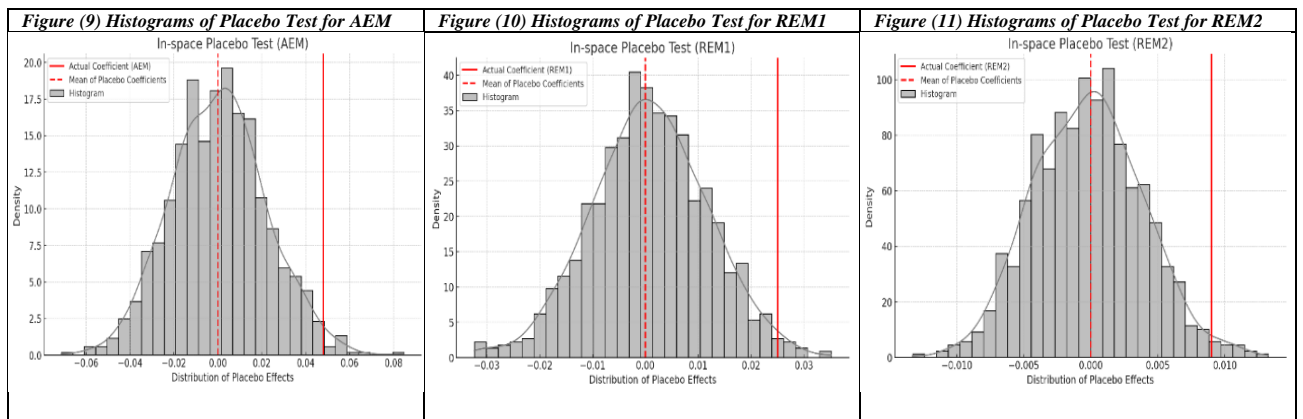
5.6.4 Placebo (Falsification) Test

To ensure the robustness of the findings from the Difference-in-Differences (DID) analysis regarding the impact of local newspaper closures on earnings management, a placebo test involving a randomisation procedure is conducted (Abadie et al., 2010), aligning with methodologies proposed by Chen et al. (2020) and Heese et al. (2022). This test aims to provide additional evidence that the results are not merely driven either by unobservable characteristics of the treatment group or by chance. Utilising a uniform distribution to generate 1000 random placebo iterations of the newspaper closure interaction term verifies the robustness of the actual results obtained from the DID analysis. The results, detailed in Table (25), compare the actual coefficients, which are derived from the baseline results reported in Table (20), with outcomes from the placebo iterations for each earnings management measure.

Table (25) Placebo (Falsification) Test Results

The below table presents falsification tests on earnings management in response to the closure of local newspapers. The randomisation process involves using a uniform distribution to determine the timing of newspaper closures. This involves generating 1000 random draws of the randomised element. The p-values reflect the probability that the coefficient estimated using the randomised data ($\boldsymbol{Placebo\ Treat\_firm_{i,t}} * \boldsymbol{Post_{i,t}}$) is greater than the coefficient estimated using the actual data from Table (20) (columns 3, 4 and 5), ($\widehat{AEM}_{i,t} = 0.048$), ($\widehat{REM1}_{i,t} = 0.025$), and ($\widehat{REM2}_{i,t} = 0.009$). Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (3)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

Dependent Variable	$Actual\_Treat\_\widehat{firm_{i,t}} * Post_{i,t}$	$Placebo\_Treat\_firm_{i,t} * Post_{i,t}$		
		P-value		
		Two-sided	Left-sided	Right-sided
$AEM_{i,t}$ (1)	0.048**	0.003	0.997	0.003
	(0.022)			
$REM1_{i,t}$ (2)	0.025**	0.009	0.991	0.009
	(0.011)			
$REM2_{i,t}$ (3)	0.009**	0.048	0.952	0.048
	(0.004)			

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Figure (9) Histograms of Placebo Test for AEM	*Figure (10) Histograms of Placebo Test for REM1*	*Figure (11) Histograms of Placebo Test for REM2*

Figures (9), (10), and (11) show histograms of earnings management measures (AEM, REM1, REM2) with red dashed lines marking actual coefficients. These plots reveal that actual coefficients are outside most of the 1000 placebo-generated coefficients, highlighting the significant impact of local newspaper closures on earnings management practices.

The placebo test with 1000 iterations confirms the robustness of the DID analysis on the impact of local newspaper closures on earnings management. The actual coefficients for earnings management measures (*AEM*: 0.048, *REM1:* 0.025, *REM2:* 0.009, $p<0.05$), as reported in Table (20), columns 4, 5, and 6, differ significantly from the placebo distributions. Left-sided p-values (*AEM:* 0.997, *REM1:* 0.991, *REM2:* 0.952) indicate that most placebo coefficients are lower than the actual ones. Right-sided p-values (*AEM:* 0.003, *REM1:* 0.009, *REM2:* 0.048) show that few placebo iterations match or exceed the actual effects. This underscores the genuine impact of media presence on curbing earnings management activities.

Figures (9), (10), and (11) show the histogram plots for the earnings management measures, with actual coefficients marked by red dashed lines. These plots clearly illustrate that the actual coefficients are outside the bulk of the 1000 placebo-generated coefficients, confirming the significant and genuine impact of local newspaper closures on earnings management.

Overall, the placebo analysis ensures that the DID design effectively captures the significant role of media in limiting earnings management practices, reinforcing the importance of local newspapers in the corporate governance ecosystem as external monitors. This confirms that the observed relationships are due to the real impact of local newspaper closures rather than external unobserved economic factors.

5.6.5   *Propensity Score Matching (PSM)*

To mitigate concerns regarding the influence of firm and industry characteristics on the findings, the study employs Propensity Score Matching (PSM) following Caliendo and Kopeinig (2008). This method enhances the validity of the baseline results, addressing endogeneity and misestimation in the relationship between local newspaper closures and earnings management. By comparing firms in areas with and without newspaper closures, the approach aims to ensure comparability, thereby reinforcing the critical role of local newspapers in curbing earnings management practices.

Table (26) Propensity Score Matching

Panel A shows the findings of a First Stage Probit Regression and Propensity Score Matching (PSM) to evaluate the quality of matching for covariate balance. In this matching process, each treated firm is paired with a control firm without replacement, using a predefined propensity score caliper of (0.02). This matching procedure results in a sample consisting of 7,010 firm-year observations, comprising 3,505 treated and 3,505 control observations. Panel B reports the second stage of regression analysis, re-estimating the baseline Model (18) utilising a propensity score-matched sample from the first stage to provide more robust and reliable treatment effect estimates. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (20) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (3)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

Panel A: First Stage (Probit) Regression & PSM - Quality of Matching (Covariate Balance)

Control Variables	Treatment Firm*Post (1)		Mean Treated (2)	Mean Control (3)	Mean Difference (4)	T-Stat. (5)
$Size_{t-1}$	0.015	(0.012)	5.756	5.741	0.015	0.230
LEV_{t-1}	-0.024	(0.026)	0.070	0.057	0.012	0.400
ROA_{t-1}	0.000	(0.000)	0.061	-0.448	0.509	0.710
MTB_{t-1}	-0.008	(0.021)	2.545	2.563	-0.018	-0.520
SG_{t-1}	0.000**	(0.000)	-3.301	-3.769	0.468	0.430
SGV_{t-1}	0.000	(0.001)	-1.575	-1.034	-0.541	-1.910
CF_{t-1}	0.015	(0.040)	-0.096	-0.101	0.005	0.380
CFV_{t-1}	0.001	(0.002)	0.376	0.336	0.040	0.230
AZ_{t-1}	0.000	(0.002)	-2.756	-2.929	0.173	0.300
LOS_{t-1}	-0.043	(0.061)	-0.235	-0.245	0.010	0.950
SR_{t-1}	-0.002	(0.005)	-0.369	-0.374	0.006	0.110
SRV_{t-1}	0.006	(0.011)	0.810	0.847	-0.037	-0.720
Constant	-0.309	(0.415)	Target Variable			
			AEM	-0.214	-0.214	0.000	0.030
Pseudo R-squared	0.3562		REM1	0.104	0.104	0.000	0.030
Area under ROC curve	0.8821		REM2	0.028	0.028	0.000	0.030
Observations	21,648		7,010	7,010		

Panel B: Propensity Score Estimates – Second Stage Regression Results

VARIABLES	AEM Matched (1)	REM1 Matched (2)	REM2 Matched (3)
Treatment Firm*Post	0.039**	0.020**	0.007**
	(0.018)	(0.009)	(0.003)
$Size_{t-1}$	-0.029**	0.015**	0.005**
	(0.013)	(0.007)	(0.002)
LEV_{t-1}	0.032**	0.017**	0.007**
	(0.014)	(0.007)	(0.003)
ROA_{t-1}	-0.002***	-0.001***	-0.000***
	(0.000)	(0.000)	(0.000)
MTB_{t-1}	0.023**	-0.012**	-0.004**
	(0.009)	(0.005)	(0.002)
SG_{t-1}	0.001***	0.000***	-0.000***
	(0.000)	(0.000)	(0.000)
SGV_{t-1}	-0.001***	0.001***	0.000***
	(0.000)	(0.000)	(0.000)
CF_{t-1}	-0.060**	-0.031**	-0.011**
	(0.023)	(0.012)	(0.004)
CFV_{t-1}	0.002**	-0.001**	-0.000**
	(0.001)	(0.001)	(0.000)
AZ_{t-1}	-0.004***	0.002***	0.001***
	(0.001)	(0.001)	(0.000)
LOS_{t-1}	-0.090***	-0.047***	-0.017***
	(0.020)	(0.011)	(0.004)
SR_{t-1}	0.011***	0.006***	-0.002***
	(0.003)	(0.002)	(0.001)
SRV_{t-1}	0.012***	0.006***	-0.002***
	(0.003)	(0.001)	(0.001)
Constant	-1.090	-0.353	-0.134
	(0.960)	(0.500)	(0.178)
R-squared	0.150	0.150	0.150
No. of Firms	2,119	2,119	2,119
Firm FE	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes
Firm-Year Observations	7,010	7,010	7,010

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The matching process employs a Probit regression to calculate the propensity score, following established methodologies (e.g., He & Wintoki, 2016; Chen et al., 2020; Heese et al., 2022). This score, derived from $Treat\_firm_{i,t} * Post_{i,t}$ regressed on control variables from baseline Model (18), indicates the probability of firms being near a closed newspaper and operating post-closure. Matching treated firms to control firms, without replacement and using a (0.02) caliper, ensures comparability between groups. This process results in a balanced dataset of 7,010 firm-year observations, evenly divided between 3,505 treated and 3,505 control units, effectively isolating the influence of local media oversight from confounding variables.

Panel A of Table (26) presents the initial Probit regression and Propensity Score Matching (PSM) analysis results, aimed at ensuring a balanced distribution of covariates across treated and control groups. This segment confirms the matching process's success, evidenced by negligible mean differences in control variables, thus establishing comparable groups of firms.

Subsequently, the baseline Model (18) is re-estimated using this matched sample. Results in Panel B for Accrual-Based Earnings Management (*AEM*) show a significant post-closure increase in earnings management, with a coefficient of 0.039 (p<0.05). Real Earnings Management measures, (*REM1* and *REM2*), also display significant increases, with coefficients of 0.020 and 0.007 respectively (both p<0.05), underlining the crucial role of local newspapers in monitoring corporate practices.

The PSM approach detailed in Table (26) not only supports the initial findings but also reinforces the DID design, highlighting the significant impact of local newspaper closures on earnings management. This method underlines the crucial role of local media in ensuring corporate transparency and governance integrity. By controlling of potential confounders, the PSM analysis strengthens the reliability of the conclusions, providing strong evidence that the observed effects are directly attributable to the absence of local newspapers, rather than being influenced by uncontrolled firm or industry characteristics.

5.6.6   Dynamic Effects

To address concerns about pre-existing trends potentially influencing the observed effects of local newspaper closures on earnings management practices, this study extends the analysis to examine the temporal dynamics surrounding the closure events (Callaway & Sant'Anna, 2021). By adopting a methodological approach similar to that used in seminal works by Bertrand and Mullainathan (2003), Chen et al. (2020), and Heese et al. (2022), this section introduces ten

new dummy variables to dissect the periods preceding and following the closure events within a ten-year span. These variables are introduced in place of the $Post_{i,t}$ variable in the interaction term $Treat\_firm_{i,t} * Post_{i,t}$, ensuring adherence to the 50-mile radius criterion for identifying impacted firms.

This refined approach allows for a detailed observation of earnings management behaviours across different timeframes, outlining the shifts that occur both before and after newspaper closures. The analysis period is divided into a control window (t_{-5} to t_{-1}, representing one to five years before the closure) and a treatment window (t_{+1} to t_{+4}, covering up to four years after the closure), with the year of closure serving as a baseline. By separating the analysis across these distinct periods, the study aims to isolate the direct impact of local newspaper closures from any underlying trends in earnings management practices that existed prior to the closures.

By evaluating the impact across these temporal windows, Table (27), seeks to provide a more granulated understanding of how the absence of local newspaper oversight influences corporate earnings management tactics over time. This dynamic analysis is pivotal for affirming the causal relationship between local newspaper closures and shifts in earnings management practices, further validating the study's findings against potential confounding pre-trend biases.

Employing the baseline Model from Eq. (18), Table (27), outlines the regression results assessing the impact of local newspaper closures, represented by the $Treat\_firm_{i,t} * Post_{i,t}$ interaction, on three distinct earnings management measures. This analysis spans from five years before (t_{-5} to t_{-1}) to four years after (t_{+1} to t_{+4}) the closures, with the closure year (t_0) serving as a reference point.
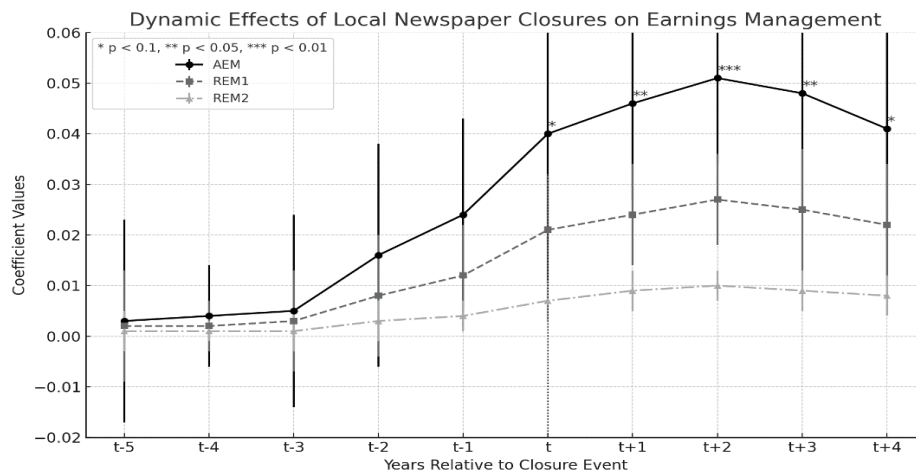

Figure (12) visualises the dynamic impact of newspaper closures on earnings management over time

Figure (12) plot visualises the dynamic effect of newspaper closures on the three earnings management measures, highlighting the temporal aspect of this relationship. Pre-closure coefficients are near zero. Post-closure, both measures increase, peaking around year t_{+2}, indicating firms raise earnings management after reduced media oversight.

Table (27) Dynamic Effects Results

The following table shows the results from a temporal dynamic effects model, indicating the impact of media closure on earnings management. It assesses single-year treatment windows from (t_{-5}, t_{-1}) years before newspaper closure to (t_{+1}, t_{+4}) years after the closure, comparing them to the closure year (t_0) as the benchmark. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (20) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (3)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	AEM (1)	REM1 (2)	REM2 (3)
Treatment Firm $*$ Post$_{t-5}$	0.003	0.002	0.001
	(0.020)	(0.011)	(0.004)
Treatment Firm $*$ Post$_{t-4}$	0.004	0.002	0.001
	(0.010)	(0.005)	(0.002)
Treatment Firm $*$ Post$_{t-3}$	0.005	0.003	0.001
	(0.019)	(0.010)	(0.004)
Treatment Firm $*$ Post$_{t-2}$	0.016	0.008	0.003
	(0.022)	(0.012)	(0.004)
Treatment Firm $*$ Post$_{t-1}$	0.024	0.012	0.004
	(0.019)	(0.010)	(0.003)
Treatment Firm $*$ Post$_t$	0.040*	0.021*	0.007*
	(0.022)	(0.011)	(0.004)
Treatment Firm $*$ Post$_{t+1}$	0.046**	0.024**	0.009**
	(0.019)	(0.010)	(0.004)
Treatment Firm $*$ Post$_{t+2}$	0.051***	0.027***	0.010***
	(0.017)	(0.009)	(0.003)
Treatment Firm $*$ Post$_{t+3}$	0.048**	0.025**	0.009**
	(0.023)	(0.012)	(0.004)
Treatment Firm $*$ Post$_{t+4}$	0.041*	0.022*	0.008*
	(0.022)	(0.012)	(0.004)
Size$_{t-1}$	-0.035**	0.018**	0.007**
	(0.015)	(0.008)	(0.003)
LEV$_{t-1}$	0.033**	0.017**	0.006**
	(0.014)	(0.007)	(0.003)
ROA$_{t-1}$	-0.002***	-0.001***	-0.000***
	(0.000)	(0.000)	(0.000)
MTB$_{t-1}$	0.023**	-0.012**	-0.004**
	(0.009)	(0.005)	(0.002)
SG$_{t-1}$	0.001***	0.000***	-0.000***
	(0.000)	(0.000)	(0.000)
SGV$_{t-1}$	-0.001***	0.001***	0.000***
	(0.000)	(0.000)	(0.000)
CF$_{t-1}$	-0.061***	-0.032***	-0.011***
	(0.023)	(0.012)	(0.004)
CFV$_{t-1}$	0.002**	-0.001**	-0.000**
	(0.001)	(0.001)	(0.000)
AZ$_{t-1}$	-0.004***	0.002***	0.001***
	(0.001)	(0.001)	(0.000)
LOS$_{t-1}$	-0.090***	-0.047***	-0.017***
	(0.020)	(0.011)	(0.004)
SR$_{t-1}$	0.011***	0.006***	-0.002***
	(0.003)	(0.002)	(0.001)
SRV$_{t-1}$	0.012***	0.006***	-0.002***
	(0.003)	(0.001)	(0.001)
Constant	-1.139	-0.378	-0.143
	(0.961)	(0.501)	(0.179)
R-squared	0.135	0.135	0.135
No. of Firms	2,726	2,726	2,726
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The examination of single-year intervals shows no significant changes in earnings management in the years leading up to the closure, indicating the absence of pre-existing trends. However, in the closure year (t_0), significant increases in *AEM*, and *REM1* and *REM2* are observed, with coefficients of 0.040 (p<0.05), 0.021 (p<0.05), and 0.007 (p<0.05) respectively. These effects not only persist but also grows in the following years, peaking in the second-year post-closure for *AEM* (0.051, p<0.01), *REM1* (0.027, p<0.01), and *REM2* (0.010, p<0.01), indicating a sustained impact of newspaper closures on earnings management activities.

These findings justify our use of a ten-year window (t_{-5}, t_0, t_{+4}), extending methodologies from Kim et al. (2021) and Heese et al. (2022). This strategy captures pre- and post-event trends around local newspaper closures and allows us to observe staggered shocks on corporate monitoring. Corporate practices, especially earnings management behaviour, do not change instantly. They take time to adapt to new conditions, and their effects can only be accurately measured over an extended period. This longer window ensures that we capture the gradual implementation and eventual outcomes of these changes. Therefore, using a ten-year window provides a rigorous examination of the dynamic temporal effects on earnings management behaviour before and after the closures, addressing endogeneity and confounding issues (Huang et al., 2020). Overall, Table (27), and Figure (12) indicate that earnings management significantly increases after newspaper closures, highlighting their role as a watchdog. No significant differences are observed in the pre-closure periods, confirming the robustness of the results and validating the study's DID design.

5.7 Exploring Monitoring Channels and Governance Mechanisms

5.7.1 Empirical Results through Institutional Ownership

The recent increase in institutional investors' ownership in U.S. firms has established them as major shareholders, profoundly impacting corporate governance (Aghion et al., 2013; Chung et al., 2024). This development underscores their critical role in supervising corporate management and influencing decision-making, especially in areas like earnings management (e.g., Chung et al., 2002; Garel et al., 2021). Entities like pension and mutual funds, due to their substantial stakes in companies, are pivotal in directing firms' financial strategies, highlighting the significant influence these institutional investors hold in shaping corporate practices (Duggal & Millar, 1999).

Institutional shareholders, with their significant equity investments, possess the capability to guide companies toward adopting practices that promote long-term shareholder value, thus improving accountability and overall performance (Gillan & Starks, 2000; Mccahery et al., 2016). The empirical research uniformly acknowledges the beneficial effect of institutional ownership on corporate governance, associating it with enhanced company performance and stronger governance frameworks (e.g., Elyasiani & Jia, 2010; Chung & Zhang, 2011; Borochin & Yang, 2017).

Furthermore, institutional investors actively monitor and discipline corporate managers to mitigate opportunistic behaviour and agency problems, especially during times of uncertainty or following negative shocks (Shleifer & Vishny, 1986; Maug, 1998; McConnell & Servaes, 1990; Appel et al., 2016; Schmidt & Fahlenbrach, 2017). In their working paper, Kang and Nam (2022) demonstrate that institutional investors react to heightened information opacity by decreasing their holdings in companies located near recently closed newspapers. Their push for greater transparency and information disclosure is crucial for informed decision-making among investors, potentially reducing risk exposure (Boone & White, 2015).

The literature underscores the significant role of institutional ownership in curbing earnings management practices within corporations (e.g., Chung et al., 2002; Hadani et al., 2011). Bushee (1998) and Frankel et al. (1995) demonstrate that firms with substantial institutional ownership are less likely to engage in earnings management, highlighting the preventive impact of such ownership on aggressive accounting strategies. This oversight is key to limiting managerial discretion in financial reporting and ensuring alignment with actual corporate performance (Liu et al., 2018).

However, the dynamics between institutional ownership and earnings management are complex. While institutional ownership generally correlates with enhanced monitoring and potentially lower discretionary accruals, there's evidence suggesting that managerial efforts to meet the earnings expectations of influential investors might lead to increased earnings manipulation (Cornett et al., 2008; Chung et al., 2024). Kim et al. (2021) highlight the potential for institutional investors' monitoring role to become increasingly crucial in maintaining financial reporting integrity amid the decline of local media in the U.S. This underscores the importance of limiting earnings management practices in the absence of traditional media oversight.

The study adapts the baseline Model (18) to assess the interplay between institutional ownership, local newspaper closures, and earnings management. This model investigates how institutional ownership might compensate for the decrease in corporate governance and monitoring following newspaper closures, potentially mitigating earnings management practices. Through this enhanced model, the study aims to uncover the effectiveness of institutional shareholders in upholding corporate accountability in the absence of local media scrutiny. The extended Model (19) is presented as follows:

$$EM_{i,t} = a_0 + a_1 Treat\_firm_{i,t} * Post_{i,t} + a_2 Post_{i,t} + a_3 Treat\_firm_{i,t} + a_4 Institutional\ Ownership_{i,t} + a_5 Treat\_firm_{i,t} * Post_{i,t} * Institutional\ Ownership_{i,t} + a_6 Controls_{i,t-1} + Firm\ FE + Industry\ FE + Year\ FE + Year * State\ FE + \varepsilon_{i,t} \qquad (19)$$

Table (28) Empirical Results through Institutional Ownership

The following table reports the empirical results of the study through Institutional Ownership. Where $EM_{i,t}$ is the model dependent variable examines earnings management at the firm level i over time t, measured through either accrual-based earnings management ($AEM_{i,t}$), or real earnings management ($REM1_{i,t}$, $REM2_{i,t}$). The primary independent (explanatory) variable is the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. This binary variable is set to 1 if the firm is part of the treatment group (i.e., experiencing media closure) during the post-treatment period (i.e., after the media closure) and 0 otherwise. This variable captures the treatment effect of media closure on cash holdings. $Treat\_firm_{i,t}$ is a binary variable that equals 1 if firm i belongs to the treatment group, and 0 otherwise. $Post_{i,t}$ is a binary variable that equals 1 for years after the media closure event, and 0 otherwise. $Institutional\ Ownership_{i,t}$ denotes for the proportion of the firm's shares held by institutional investors for firm i at time t. $Treat\_firm_{i,t} * Post_{i,t} * Institutional\ Ownership_{i,t}$ is an interaction term between the $Treat\_firm_{i,t} * Post_{i,t}$ and $Institutional\ Ownership_{i,t}$. This triple-interaction term captures the joint effect of the media closure shock and the institutional ownership on the level of earnings management. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (20) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (3)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	AEM (1)	REM1 (2)	REM2 (3)
Treat_firm$_{i,t}$	0.048	0.025	0.009
	(0.033)	(0.017)	(0.006)
Post$_{i,t}$	-0.003	-0.001	-0.000
	(0.017)	(0.009)	(0.003)
Institutional Ownership$_{i,t}$	-0.012	-0.006	-0.002
	(0.009)	(0.005)	(0.002)
Treat_firm$_{i,t}$ * Post$_{i,t}$	0.045**	0.023**	0.008**
	(0.021)	(0.011)	(0.004)
Treat_firm$_{i,t}$ * Post$_{i,t}$ * Institutional Ownership$_{i,t}$	-0.041*	-0.021*	-0.007*
	(0.022)	(0.012)	(0.004)
Size$_{t-1}$	-0.036**	0.019**	0.007**
	(0.015)	(0.008)	(0.003)
LEV$_{t-1}$	0.031**	0.016**	0.006**
	(0.015)	(0.008)	(0.003)
ROA$_{t-1}$	-0.002***	-0.001***	-0.000***
	(0.000)	(0.000)	(0.000)
MTB$_{t-1}$	0.022**	-0.011**	-0.004**
	(0.009)	(0.005)	(0.002)
SG$_{t-1}$	0.001***	0.000***	-0.000***
	(0.000)	(0.000)	(0.000)
SGV$_{t-1}$	-0.001***	0.001***	0.000***
	(0.000)	(0.000)	(0.000)
CF$_{t-1}$	-0.059**	-0.031**	-0.011**
	(0.023)	(0.012)	(0.004)
CFV$_{t-1}$	0.002**	-0.001**	-0.000**
	(0.001)	(0.001)	(0.000)
AZ$_{t-1}$	-0.004***	0.002***	0.001***
	(0.001)	(0.001)	(0.000)
LOS$_{t-1}$	-0.090***	-0.047***	-0.017***
	(0.020)	(0.011)	(0.004)
SR$_{t-1}$	0.011***	0.006***	-0.002***
	(0.003)	(0.002)	(0.001)
SRV$_{t-1}$	0.012***	0.006***	-0.002***
	(0.003)	(0.001)	(0.001)
Constant	-1.044	-0.329	-0.126
	(0.957)	(0.499)	(0.178)
R-squared	0.134	0.134	0.134
No. of Firms	2,726	2,726	2,726
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The analysis presented in Table (28) extends the baseline Model (18) by incorporating institutional ownership and its interaction with the effects of local newspaper closures, denoted as $Treat\_firm_{i,t} * Post_{i,t} * Institutional\ Ownership_{i,t}$. This approach enables an investigation into how institutional ownership influences the relationship between local newspaper closures and earnings management practices, aligning with the concerns of agency theory regarding

conflicts between managers and shareholders, potentially leading to earnings management (Jensen & Meckling, 1976; Chung et al., 2005; Chung et al., 2024).

Interestingly, Table (28) findings indicate that institutional ownership, when considered in isolation, does not significantly impact earnings management, suggesting that its effect is not straightforward without the exogenous shock of local newspaper closures (Khurana et al., 2018; Garel et al., 2021). Nevertheless, the closure of local newspapers correlates significantly with a rise in earnings management across different metrics. Specifically, for *AEM*, the impact of media closures is evident with a coefficient of 0.045 ($p<0.05$), suggesting that firms are more inclined to manipulate earnings when external scrutiny declines (Dyck et al., 2010). However, this trend is mitigated by the presence of institutional investors, as evidenced by a moderating coefficient of -0.041 ($p<0.1$), highlighting the important role of these investors in constraining such practices (Shleifer & Vishny, 1997; Gillan & Starks, 2000; Chung et al., 2002).

Similarly, in the realm of *REM1*, a similar effect is observed, with a closure effect coefficient of 0.023 ($p<0.05$), signifying an increase in this form of earnings management, which is again moderated by institutional ownership, represented by a coefficient of -0.021 ($p<0.1$). Although the pattern for *REM2* remains consistent, the effect is smaller, with a closure impact of 0.008 ($p<0.05$) and a mitigating effect from institutional ownership of -0.007 ($p<0.1$). These findings underscore the role of institutional investors in counteracting the reduction in oversight typically provided by local newspapers (Bushee & Noe, 2000; Cornett et al., 2007; Mccahery et al., 2016).

Consequently, the analysis underline the critical role of institutional ownership in strengthening corporate governance and reducing the potential for opportunistic financial reporting, particularly when traditional mechanisms of external monitoring, such as local newspapers, are weakened. Institutional investors emerge as pivotal stakeholders in ensuring transparency and accountability within corporations, highlighting the importance of a comprehensive governance approach that upholds the integrity of financial reporting and safeguards shareholder interests (Hartzell & Starks, 2003; Hadani et al., 2011; Kazemian & Sanusi, 2015; Chung et al., 2024).

5.7.2 *Empirical Results through Analysts Coverage*

Analysts play a critical role in monitoring corporate behaviour and financial reporting practices (Yu, 2008). With local newspapers no longer serving as watchdogs, analysts' coverage gains

heightened importance (Kim et al., 2021). They scrutinise financial statements, engage directly with management, and participate in earnings release conferences, positioning themselves as de facto external monitors (Jensen & Meckling, 1976; Healy & Palepu, 2001). Their expertise not only aids in maintaining corporate transparency but also in safeguarding investor interests in an environment where traditional forms of oversight are weakening.

The influence of analysts on corporate behaviour, particularly concerning earnings management, is multifaceted (Chen et al., 2015; Almaharmeh et al., 2024). On one hand, their rigorous analysis and direct communication with management act as deterrents against aggressive earnings management practices. Analysts' ability to uncover financial discrepancies and their history of exposing corporate fraud underscore their role in promoting corporate accountability (Dyck et al., 2010, 2023).

Business press articles, as noted by Matsumoto (2002), emphasise managers' focus on meeting or exceeding analysts' expectations. This often leads to tactics like manipulating earnings or influencing forecasts. Extensive academic research explores the consequences, with firms facing stock price penalties for underperformance, potentially compromising long-term health and ethical standards (Degeorge et al., 1999; Irani & Oesch, 2016). Additionally, the media highlights the importance of forecast guidance, revealing the complex interplay between analyst pressure and managerial decisions (Nimark & Pitschner, 2019; Ardia et al., 2022).

The governance role of analysts in the context of local newspaper closures and its effect on earnings management is complex. While analysts can serve as effective external monitors, their influence is nuanced by the capital market dynamics and their own professional pressures. These include the pursuit of investment banking business, the need for access to private information from management, and the avoidance of downgrades that might conflict with the interests of significant clients (Lin & McNichols, 1998; Michaely & Womack, 1999; Dechow et al., 2000).

The closure of local newspapers presents a significant challenge to corporate governance (Kim et al., 2021; Heese et al., 2022), potentially increasing the risk of earnings management among firms. However, the coverage provided by financial analysts offers a form of oversight that, while influenced by its own set of dynamics, contributes to the governance landscape. Their role as external monitors is crucial, yet the impact of their coverage on earnings management is influenced by a range of factors, including the pressures inherent in the capital markets and

the analysts' own professional environments. Understanding this balance is vital for assessing the overall effectiveness of analysts' coverage as a governance mechanism in the absence of traditional media oversight.

Building on Model (18), the analysis introduces Model (20) to explore the interaction between the number of analysts following a firm, local newspaper closures, and earnings management. This model investigates whether analysts' coverage can offset the decline in corporate governance and monitoring triggered by the exogenous shock of local newspapers disappearance, potentially curbing earnings management. Model (20) hypothesises that financial analysts could play a vital role in maintaining corporate accountability when traditional media oversight is reduced. The model is specified as follows:

$$EM_{i,t} = a_0 + a_1 Treat\_firm_{i,t} * Post_{i,t} + a_2 Post_{i,t} + a_3 Treat\_firm_{i,t} + a_4 Analysts_{i,t} + a_5 Treat\_firm_{i,t} * Post_{i,t} * Analysts_{i,t} + a_6 Controls_{i,t-1} + Firm\ FE + Industry\ FE + Year\ FE + Year * State\ FE + \varepsilon_{i,t} \ (20)$$

Model (20) investigates the impact of financial analyst coverage on earnings management, particularly when local newspaper monitoring, diminishes. It uses $Analysts_{i,t}$, defined as the natural logarithm of one plus the yearly number of analysts forecasting a firm's earnings, to measure analyst involvement (He & Tian, 2013; Du & Shen, 2018). The triple-interaction term $Treat\_firm_{i,t} * Post_{i,t} * Analysts_{i,t}$ assesses how newspaper closures combined with analyst scrutiny affect earnings management. This key term helps explore how the decrease in media oversight and the role of analysts collectively influence agency problem and corporate financial reporting practices, highlighting the importance of external governance in ensuring financial reporting integrity.

Table (29) Empirical Results through Analysts Coverage

The following table reports the empirical results of the study through Analysts Coverage. Where $EM_{i,t}$ is the model dependent variable examines earnings management at the firm level i over time t, measured through either accrual-based earnings management ($AEM_{i,t}$), or real earnings management ($REM1_{i,t}$, $REM2_{i,t}$). The primary independent (explanatory) variable is the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. This binary variable is set to 1 if the firm is part of the treatment group (i.e., experiencing media closure) during the post-treatment period (i.e., after the media closure) and 0 otherwise. This variable captures the treatment effect of media closure on cash holdings. $Treat\_firm_{i,t}$ is a binary variable that equals 1 if firm i belongs to the treatment group, and 0 otherwise. $Post_{i,t}$ is a binary variable that equals 1 for years after the media closure event, and 0 otherwise. $Analysts_{i,t}$ is the natural logarithm of one plus the annual number of analysts forecasting a firm's earnings for firm i at time t. $Treat\_firm_{i,t} * Post_{i,t} * Analysts_{i,t}$ is an interaction term between the $Treat\_firm_{i,t} * Post_{i,t}$ and $Analysts_{i,t}$. This triple-interaction term measures the combined effect of newspaper closures and analyst coverage on earnings management. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (20) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (3)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	AEM (1)	REM1 (2)	REM2 (3)
$Treat\_firm_{i,t}$	0.033	0.017	0.006
	(0.032)	(0.017)	(0.006)
$Post_{i,t}$	-0.037	-0.019	-0.007
	(0.033)	(0.017)	(0.006)
$Analysts_{i,t}$	-0.018*	-0.009*	-0.003*
	(0.009)	(0.005)	(0.002)
$Treat\_firm_{i,t} * Post_{i,t}$	0.049**	0.025**	0.009**
	(0.020)	(0.011)	(0.004)
$Treat\_firm_{i,t} * Post_{i,t} * Analysts_{i,t}$	-0.037**	-0.019**	-0.007**
	(0.018)	(0.010)	(0.003)
$Size_{t-1}$	-0.031**	0.016**	0.006**
	(0.014)	(0.007)	(0.003)
LEV_{t-1}	0.035**	0.018**	0.007**
	(0.014)	(0.007)	(0.003)
ROA_{t-1}	-0.002***	-0.001***	-0.000***
	(0.000)	(0.000)	(0.000)
MTB_{t-1}	0.024***	-0.012***	-0.004***
	(0.009)	(0.005)	(0.002)
SG_{t-1}	0.001***	0.000***	-0.000***
	(0.000)	(0.000)	(0.000)
SGV_{t-1}	-0.001***	0.001***	0.000***
	(0.000)	(0.000)	(0.000)
CF_{t-1}	-0.060***	-0.031***	-0.011***
	(0.023)	(0.012)	(0.004)
CFV_{t-1}	0.002**	-0.001**	-0.000**
	(0.001)	(0.001)	(0.000)
AZ_{t-1}	-0.004***	0.002***	0.001***
	(0.001)	(0.001)	(0.000)
LOS_{t-1}	-0.090***	-0.047***	-0.017***
	(0.020)	(0.011)	(0.004)
SR_{t-1}	0.011***	0.006***	-0.002***
	(0.003)	(0.002)	(0.001)
SRV_{t-1}	0.011***	0.006***	-0.002***
	(0.003)	(0.001)	(0.001)
Constant	-1.091	-0.353	-0.134
	(0.959)	(0.500)	(0.178)
R-squared	0.135	0.135	0.135
No. of Firms	2,726	2,726	2,726
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes
Firm-Year Observations	25,240	25,240	25,240

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The findings from Table (29) show how financial analyst coverage and the closure of local newspapers affect corporate earnings management practices. The analysis exposes that when local newspaper stop operations, there is a noticeable increase in nearby corporate earnings management activities. This is demonstrated by the positive and significant correlation of the $Treat\_firm_{i,t} * Post_{i,t}$ interaction across all metrics (*AEM*: 0.049, p<0.05; *REM1*: 0.025, p<0.05; *REM2*: 0.009, p<0.05), suggesting that the absence of local newspapers acting as

watchdogs might encourage firms to engage more in earnings management (Miller, 2006; Dyck et al., 2008; Bednar, 2012), potentially leading to increased agency conflicts as managers might prioritise personal benefits over shareholder interests (Jensen & Meckling, 1976; Moyer et al., 1989; Kim et al., 2021).

However, the analysis also reveals that financial analysts, indicated by the negative coefficients of $Analysts_{i,t}$, significantly deter such practices (**AEM**: -0.018, p<0.1; **REM1**: -0.009, p<0.1; **REM2**: -0.003, p<0.1). This suggests that analysts, through their expert analysis and ongoing monitoring, serve as external checks on financial reporting, helping to discourage aggressive earnings management (Yu, 2008; Chen et al., 2015; Almaharmeh et al., 2024).

More critically, the negative and statistically significant coefficients for the triple-interaction term across all forms of earnings management (**AEM:** -0.037, p<0.05; **REM1:** -0.019, p<0.05; **REM2:** -0.007, p<0.05) underscore that the presence and vigilance of financial analysts can significantly counter the increase in earnings management driven by the loss of media oversight. This interaction indicates that the impact of analysts becomes particularly pronounced and effective in curbing earnings management in situations where firms might otherwise exploit the absence of media scrutiny for opportunistic reporting. The results align with Yu (2008), Bradley et al. (2017), and Almaharmeh et al. (2024) finding that firms subject to greater analyst coverage tend to engage in less earnings management, further reinforcing the conclusions articulated above.

Through Table (29) analysis, financial analysts are established as a vital channel through which the impact of local newspaper closures on corporate earnings management is mediated. Their external monitoring function emerges as a key governance mechanism, crucial for mitigating increased risks of earnings management and agency conflicts in the absence of traditional media oversight. This analysis highlights the critical contribution of financial analysts to preserving checks and balances in the corporate governance framework, ensuring financial reporting integrity amid changing monitoring conditions.

5.7.3 *Empirical Results through Executive Compensation*

Another channel explored in this section aims to better understand the relationship between local newspaper closures and their potential impact on earnings management, focusing particularly on executive compensation as a crucial factor in corporate monitoring and agency

conflict. This aspect of governance is likely to be significantly impacted by the discontinuance of local media scrutiny.

Executive compensation, specifically CEO and CFO pay, is a fundamental element of corporate governance (Baker et al., 1988; Caglio et al., 2018). It profoundly influences executive behaviours and aligns their interests with those of shareholders (Fahlenbrach, 2009; Conyon, 2014). Properly structured compensation for CEOs and CFOs can mitigate agency conflicts by aligning their financial incentives with long-term shareholder value (Bebchuk & Fried, 2003). Jensen and Murphy (1990) underscore the importance of such alignment in reducing agency problems. Furthermore, the transparency and scrutiny traditionally provided by media outlets play an essential role in ensuring these compensation packages are justifiable and aligned with sound corporate governance practices (Larcker et al., 2007; Core et al., 2008).

The media shapes public opinion and influences corporate governance standards, while also serving as a critical monitor of executive actions (Bebchuk et al., 2002; Kuhnen & Niessen, 2012). Negative media coverage deters excessive CEO and CFO compensation, particularly for stock option exercises (Abowd & Kaplan, 1999; Core et al., 2008). Local newspapers serve as watchdogs, scrutinising executive compensation and preventing excessive rewards (Miller, 2006; Bushee et al., 2010; Tetlock, 2011). Media acts as an external auditor, positively influencing corporate behaviour, particularly regarding top management compensation (Dyck & Zingales, 2002; Dyck et al., 2008).

Evidence linking executive compensation, especially performance-based incentives for CEOs and CFOs, to earnings management is well-documented (e.g., Healy, 1985; Jiang et al., 2010; Adut et al., 2013; Friedman, 2014; Cabezon, 2024). Studies such as those by Bergstresser and Philippon (2006), Cheng and Warfield (2005), and Laux and Laux (2009) point out that firms where executive wealth is more closely tied to stock prices show a higher magnitude of discretionary accruals. This linkage often stems from pressures of capital markets and career-related motives, incentivising executives to adjust earnings to meet short-term financial targets (Healy & Wahlen, 1999; Dichev et al., 2013).

In their study surveying 401 corporate executives in the U.S., Graham et al. (2005) uncovered a trend among managers to shift business practices towards short-term earnings targets, potentially at the cost of long-term firm value. This research points out a prevalent conflict for CEOs and CFOs, choosing between immediate financial outcomes and optimal long-term

business strategies. Over half (55.3%) of the surveyed managers expressed willingness to abandon projects with positive net present value (NPV) in favour of increasing current earnings to meet analyst expectations, underscoring a focus on short-term financial performance over long-term corporate wellbeing.

Extending the baseline Model (18), Model (21) is introduced to examine the interplay between CEO and CFO compensation, the closures of local newspapers, and corporate earnings management practices. This model posits that the disappearance of local newspapers could undermine their critical watchdog role, consequently reducing the effectiveness of monitoring executive compensation, which might, in turn, lead to increased earnings management activities. In line with Hartzell and Starks (2003) and Cheng and Farber (2008) methodologies, the compensation measure employed includes both salary and total direct compensation, sourced from the ExecuComp database. This total direct compensation includes salary, bonuses, stock and option grants, long-term incentive plan payouts, and other forms of compensation.

Where $\Delta(CEO\ or\ CFO)Comp_{i,t}$ is defined as the percentage change in total direct compensation from the previous year $t-1$ to the current year t for either the CEO or CFO of firm i as follows:

$$\Delta(CEO\ or\ CFO)Comp_{i,t} = \frac{\left((CEO\ or\ CFO)Comp_{i,t} - (CEO\ or\ CFO)Comp_{i,t-1}\right)}{(CEO\ or\ CFO)Comp_{i,t-1}}$$

This measure is important for assessing how executive compensation evolves over time and understanding its potential impacts on earnings management behaviours, particularly in contexts where local media scrutiny is shrinking. Data has been available since 1992, although there are some missing observations for CFO compensation.

Model (21) can be defined as follows:

$$EM_{i,t} = a_0 + a_1 Treat\_firm_{i,t} * Post_{i,t} + a_2 Post_{i,t} + a_3 Treat\_firm_{i,t} + a_4 \Delta(CEO\ or\ CFO)Comp_{i,t} +$$
$$a_5 Treat\_firm_{i,t} * Post_{i,t} * \Delta(CEO\ or\ CFO)Comp_{i,t} + a_6 Controls_{i,t-1} + Firm\ FE + Industry\ FE +$$
$$Year\ FE + Year * State\ FE + \varepsilon_{i,t} \tag{21}$$

Table (30) Empirical Results through Executive Compensation

The below table shows the empirical results of the study through Executive Compensation. Where $EM_{i,t}$ is the model dependent variable examines earnings management at the firm level i over time t, measured through either accrual-based earnings management ($AEM_{i,t}$), or real earnings management ($REM1_{i,t}$, $REM2_{i,t}$). The primary independent (explanatory) variable is the interaction term $Treat\_firm_{i,t} * Post_{i,t}$. This binary variable is set to $\mathbf{1}$ if the firm is part of the treatment group (i.e., experiencing media closure) during the post-treatment period (i.e., after the media closure) and $\mathbf{0}$ otherwise. This variable captures the treatment effect of media closure on cash holdings. $Treat\_firm_{i,t}$ is a binary variable that equals $\mathbf{1}$ if firm i belongs to the treatment group, and $\mathbf{0}$ otherwise. $Post_{i,t}$ is a binary variable that equals $\mathbf{1}$ for years after the media closure event, and $\mathbf{0}$ otherwise. $\Delta(CEO\ or\ CFO)Comp_{i,t}$ is the change in compensation for either the CEO or the CFO of a firm i from the previous year $t-1$ to the current year t. $Treat\_firm_{i,t} * Post_{i,t} * \Delta(CEO\ or\ CFO)Comp_{i,t}$ is an interaction term between the $Treat\_firm_{i,t} * Post_{i,t}$ and $\Delta(CEO\ or\ CFO)Comp_{i,t}$. This triple-interaction term measures the combined effect of newspaper closures and change in compensation for either the CEO or the CFO on earnings management. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (20) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (3)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

VARIABLES	AEM (1)	REM1 (2)	REM2 (3)
$Treat\_firm_{i,t}$	0.038	0.018	0.007
	(0.035)	(0.018)	(0.006)
$Post_{i,t}$	-0.002	-0.001	-0.001
	(0.028)	(0.009)	(0.003)
$\Delta CEO\_Comp_{i,t}$	0.015*	0.008*	0.003*
	(0.008)	(0.004)	(0.001)
$\Delta CFO\_Comp_{i,t}$	0.002**	0.001**	0.000**
	(0.001)	(0.001)	(0.000)
$Treat\_firm_{i,t} * Post_{i,t}$	0.048**	0.025**	0.009**
	(0.020)	(0.011)	(0.004)
$Treat\_firm_{i,t} * Post_{i,t} * \Delta CEOComp_{i,t}$	0.054***	0.028***	0.010***
	(0.017)	(0.009)	(0.003)
$Treat\_firm_{i,t} * Post_{i,t} * \Delta CFOComp_{i,t}$	0.033***	0.017***	0.006***
	(0.008)	(0.004)	(0.001)
$Size_{t-1}$	-0.030**	0.016**	0.006**
	(0.014)	(0.007)	(0.003)
LEV_{t-1}	0.031**	0.016**	0.006**
	(0.014)	(0.007)	(0.003)
ROA_{t-1}	-0.002***	-0.001***	-0.000***
	(0.000)	(0.000)	(0.000)
MTB_{t-1}	0.023**	-0.012**	-0.004**
	(0.009)	(0.005)	(0.002)
SG_{t-1}	0.001***	0.000***	-0.000***
	(0.000)	(0.000)	(0.000)
SGV_{t-1}	-0.001***	0.001***	0.000***
	(0.000)	(0.000)	(0.000)
CF_{t-1}	-0.059**	-0.031**	-0.011**
	(0.023)	(0.012)	(0.004)
CFV_{t-1}	0.002**	-0.001**	-0.000**
	(0.001)	(0.001)	(0.000)
AZ_{t-1}	-0.004***	0.002***	0.001***
	(0.001)	(0.001)	(0.000)
LOS_{t-1}	-0.090***	-0.047***	-0.017***
	(0.020)	(0.011)	(0.004)
SR_{t-1}	0.011***	0.006***	-0.002***
	(0.003)	(0.002)	(0.001)
SRV_{t-1}	0.012***	0.006***	-0.002***
	(0.003)	(0.001)	(0.001)
Constant	-1.130	-0.373	-0.142
	(0.946)	(0.493)	(0.176)
R-squared	0.137	0.137	0.137
No. of Firms	2,390	2,390	2,390
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes
Firm-Year Observations	22,076	22,076	22,076

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The findings from Table (30) clarify how local newspaper closures impact corporate earnings management practices through changes in executive compensation. The analysis indicates that in light of local newspapers closures, corporate earnings management activities in nearby firms

increase. This is demonstrated by the positive and significant correlation of the $Treat\_firm_{i,t} * Post_{i,t}$ interaction across all measures (*AEM:* 0.048, p<0.05; *REM1:* 0.025, p<0.05; *REM2:* 0.009, p<0.05), suggesting that the absence of media oversight encourages firms to engage in more aggressive earnings management, potentially leading to greater agency conflicts as managers prioritise personal benefits over shareholder interests. This finding aligns with Miller (2006), who argues that media presence curbs financial manipulation, Heese et al. (2022), who emphasise that local newspapers are vital in monitoring firms' misconduct, and An et al. (2020), who underline the role of media monitoring in reducing agency conflicts.

Changes in executive compensation are also positively linked to earnings management practices (Friedman, 2014). For instance, the coefficient for changes in CEO compensation $\Delta CEO\_Comp_{i,t}$ is positive and significant (*AEM*: 0.015, p<0.1; *REM1:* 0.008, p<0.1; *REM2:* 0.003, p<0.1), suggesting that higher performance-based incentives increase earnings manipulation and exacerbate agency conflicts. This is consistent with Cheng and Warfield (2005), Bergstresser and Philippon (2006), and Cabezon (2024), who observed that discretionary accruals are higher in firms where CEO wealth is closely tied to stock performance. Similarly, changes in CFO compensation $\Delta CFO\_Comp_{i,t}$ exhibit significant and positive coefficients (*AEM:* 0.002, p<0.05; *REM1:* 0.001, p<0.05; *REM2:* 0.000, p<0.05), confirming the findings of Jiang et al. (2010) on the influential role of CFOs in financial reporting.

The triple interaction terms $Treat\_firm_{i,t} * Post_{i,t} * \Delta CEOComp_{i,t}$ and $Treat\_firm_{i,t} * Post_{i,t} * \Delta CFOComp_{i,t}$ also show positive and significant effects across all earnings management metrics (*AEM:* 0.054, p<0.01; *REM1:* 0.028, p<0.01; *REM2:* 0.010, p<0.01 for CEOs, and *AEM:* 0.033, p<0.01; *REM1:* 0.017, p<0.01; *REM2:* 0.006, p<0.01 for CFOs). This indicates that the combination of reduced media scrutiny and changes in executive compensation amplifies earnings manipulation, reinforcing the findings of Holthausen et al. (1995), Healy and Wahlen (1999), and Graham et al. (2005) that executives often prioritise short-term incentives over long-term value, increasing the risk of agency conflicts.

Overall, these results underscore how the closures of local newspapers reduce media scrutiny and weaken corporate governance. When combined with performance-driven compensation, this situation fosters increased earnings management and escalates the likelihood of agency conflicts as executives put their interests ahead of those of shareholders.

5.8 Further Analysis

To address concerns that the observed increase in earnings management practices might be due to omitted variables not captured in the baseline Model eq. (18), this section adopts a rigorous approach. By integrating several additional control variables into the regression analysis, the aim is to mitigate the risk of correlated omitted variables influencing the results. This methodical adjustment allows a broader and more heterogeneous examination of alternative internal and external monitoring and governance mechanisms (such as audit and board qualities), as well as firm characteristics that could potentially substitute for the traditional monitoring role played by local media.

5.8.1   Audit Characteristics

The inclusion of a Big 4[18] dummy as a control variable (***BIG_4***), which is equal to 1 if a company's audit was conducted by a Big 4 firm and 0 otherwise, is instrumental in suggesting a higher standard of audit quality and external scrutiny (Francis et al., 1999; Krishnan, 2003). This aligns with the findings of Becker et al. (1998) and Eshleman and Guo (2014), who assert that Big 6 auditors play an important role in enhancing audit quality and, by extension, corporate governance standards.

Audit fees (***AUD_FEE***) are pivotal in evaluating audit quality and the potential for earnings management (Nelson et al., 2002; Abbott et al., 2006). Higher fees, above the median, typically indicate more rigorous audits, reducing audit and litigation risks through accurate financial reporting (Khurana & Raman, 2004; DeFond & Zhang, 2014). Conversely, lower fees, below the median, may suggest less thorough audits, increasing risks of undetected earnings management and subsequent litigation due to compromised financial reporting (Simunic & Stein, 1996; Kim et al., 2003; Venkataraman et al., 2008).

Further, auditor tenure (***AUD_TNR***), calculated as the natural logarithm of the number of years the auditor has been contracted by the firm, significantly influences earnings management (Carcello & Nagy, 2004; Chi & Huang, 2005; Chen et al., 2008). Extended auditor-client relationships, as indicated by longer tenure, are associated with more constrained discretionary accruals and higher quality financial reporting, reducing the likelihood of earnings manipulation (Geiger & Raghunandan, 2002; Myers et al., 2003; Gul et al., 2009). Ghosh and

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[18] Consistent with previous research (e.g., Becker et al., 1998; Krishnan, 2003; Francis & Wang, 2008), the term "*Big 4*" refers to the four largest accounting firms globally. Historically, this group has been known by different names, including the Big 5, Big 6, and Big 8, reflecting various mergers and changes in the industry over time.

Moon (2005) further support this, showing that firms with long-tenured auditors are perceived by investors as having more reliable earnings. In contrast, shorter tenures are often correlated with higher unexpected accruals, highlighting challenges in maintaining rigorous financial oversight (Johnson et al., 2002).

The expertise of the audit committee (*AC_EXPERT*) is measured with a dummy variable, where 1 indicates the presence of a "*financial expert*" as defined by Sarbanes-Oxley, and 0 otherwise (Xie et al., 2003). This approach highlights the critical role of financial expertise in governance, particularly important when external monitoring like media coverage decreases due to local newspaper closures. The importance of financial experts on audit committees in enhancing oversight is well-documented (Bédard et al., 2004; Badolato et al., 2014). This setup is crucial for evaluating how well internal controls can mitigate earnings management in the absence of media surveillance (Zalata et al., 2018; Kim et al., 2021; Xia et al., 2024).

Table (31) Panels A, B, and C offer a detailed cross-sectional analysis of audit characteristics, highlighting the roles of Big 4 auditors, audit fees, auditor tenure, and the expertise of audit committees. This analysis investigates the interplay between these audit characteristics and various earnings management measures across different firms, particularly focusing on the context of local newspaper closures.

Table (31) Audit Characteristics

Table (31) Panels A, B, and C provide a detailed cross-sectional analysis of audit characteristics, examining the roles of Big 4 auditors, audit fees, auditor tenure, and the expertise of the audit committee, and their relationship with various earnings management measures, particularly in the context of local newspaper closures. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (20) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in Appendix (3), and all continuous variables are winsorised at the 1st and 99th percentiles.

Panel A				AEM				
VARIABLES	BIG_4		AUD_FEE		Log AUD_TNR		AC_EXPERT	
	(1) Non-BIG_4 Dummy (0)	(2) BIG_4 Dummy (1)	(3) Low Fees Below Median	(4) High Fees Above Median	(5) Short Tenure Below Median	(6) Long Tenure Above Median	(7) Expert Absent Dummy (0)	(8) Expert Present Dummy (1)
$Treat\_firm_{i,t}$	0.045	0.219	0.052	0.038	0.108	0.040	0.047	0.070
	(0.031)	(0.269)	(0.037)	(0.035)	(0.101)	(0.035)	(0.034)	(0.046)
$Post_{i,t}$	-0.024	-0.044	-0.011	0.024	-0.004	-0.004	-0.003	-0.001
	(0.020)	(0.040)	(0.024)	(0.023)	(0.022)	(0.026)	(0.017)	(0.042)
$Treat\_firm_{i,t} * Post_{i,t}$	0.067***	-0.023	0.077***	0.006	0.050**	0.034	0.059***	0.042
	(0.022)	(0.045)	(0.027)	(0.031)	(0.023)	(0.031)	(0.022)	(0.046)
$Size_{t-1}$	-0.002	-0.074***	0.040**	-0.069***	0.043**	-0.070***	0.021	-0.071***
	(0.018)	(0.022)	(0.020)	(0.018)	(0.021)	(0.019)	(0.017)	(0.022)
LEV_{t-1}	-0.051*	0.030*	-0.070**	0.035**	0.011	0.035**	0.014	0.034**
	(0.027)	(0.016)	(0.034)	(0.014)	(0.038)	(0.014)	(0.030)	(0.015)
ROA_{t-1}	-0.003	-0.002***	0.011	-0.002***	-0.022	-0.002***	-0.007	-0.002***
	(0.012)	(0.000)	(0.007)	(0.000)	(0.032)	(0.000)	(0.012)	(0.000)
MTB_{t-1}	0.018*	0.029	0.011	0.037***	0.023	0.030**	0.008	0.037**
	(0.010)	(0.019)	(0.015)	(0.013)	(0.015)	(0.013)	(0.012)	(0.015)
SG_{t-1}	0.000***	0.001***	0.000	0.001***	-0.000	0.001***	0.000	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SGV_{t-1}	-0.000	-0.003**	-0.000	-0.002**	-0.000	-0.002***	-0.000	-0.003***
	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)
CF_{t-1}	-0.049	-0.059**	-0.061	-0.055**	-0.099	-0.051**	-0.035	-0.054**
	(0.042)	(0.024)	(0.077)	(0.023)	(0.065)	(0.024)	(0.061)	(0.025)
CFV_{t-1}	0.009	0.000	-5.620	0.001	0.157	0.001	0.003	0.001
	(0.016)	(0.001)	(8.077)	(0.001)	(0.245)	(0.001)	(0.002)	(0.001)
AZ_{t-1}	0.001	-0.003**	0.001	-0.002**	-0.003	-0.002**	-0.002	-0.003**
	(0.002)	(0.001)	(0.004)	(0.001)	(0.003)	(0.001)	(0.002)	(0.001)
LOS_{t-1}	-0.074***	-0.079***	-0.032	-0.095***	-0.073***	-0.108***	-0.080***	-0.095***
	(0.027)	(0.029)	(0.030)	(0.024)	(0.028)	(0.026)	(0.029)	(0.026)
SR_{t-1}	0.009***	0.016**	0.009**	0.014***	0.007**	0.012**	0.012***	0.011*
	(0.004)	(0.007)	(0.004)	(0.005)	(0.004)	(0.005)	(0.004)	(0.006)
SRV_{t-1}	0.013***	0.001	0.015***	0.002	0.010**	0.006	0.014***	0.002
	(0.003)	(0.007)	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Constant	-1.926**	-0.235	-2.235***	1.756	-1.856***	0.678	-2.590**	1.123
	(0.966)	(0.982)	(0.488)	(1.423)	(0.446)	(1.180)	(1.097)	(1.438)
R-squared	0.220	0.140	0.251	0.129	0.214	0.135	0.190	0.148
No. of Firms	1,203	2,062	1,518	1,615	1,568	1,543	1,263	1,724
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Observations	8,465	16,775	12,619	12,621	12,383	12,857	9,773	15,467

Panel B					REM1			
VARIABLES	BIG_4		AUD_FEE		Log AUD_TNR		AC_EXPERT	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Non-BIG_4	BIG_4	Low Fees	High Fees	Short Tenure	Long Tenure	Expert Absent	Expert Present
	Dummy (0)	Dummy (1)	Below Median	Above Median	Below Median	Above Median	Dummy (0)	Dummy (1)
$Treat\_firm_{i,t}$	0.016	0.027	0.002	0.021	0.056	0.021	0.018	0.036
	(0.015)	(0.018)	(0.012)	(0.013)	(0.053)	(0.018)	(0.034)	(0.024)
$Post_{i,t}$	-0.002	0.026	0.009	-0.006	0.004	0.024	-0.001	-0.001
	(0.020)	(0.023)	(0.015)	(0.014)	(0.012)	(0.014)	(0.013)	(0.022)
$Treat\_firm_{i,t} * Post_{i,t}$	0.035***	0.019	0.041***	0.003	0.026**	0.018	0.031***	0.022
	(0.012)	(0.023)	(0.014)	(0.016)	(0.012)	(0.016)	(0.011)	(0.024)
$Size_{t-1}$	0.001	0.038***	-0.020*	0.036***	-0.023**	0.037***	-0.011	0.037***
	(0.009)	(0.011)	(0.010)	(0.009)	(0.011)	(0.010)	(0.009)	(0.011)
LEV_{t-1}	-0.026*	0.016*	-0.037**	0.018**	0.006	0.018**	0.007	0.018**
	(0.014)	(0.008)	(0.018)	(0.007)	(0.020)	(0.007)	(0.016)	(0.008)
ROA_{t-1}	-0.001	-0.001***	0.006	-0.001***	-0.011	-0.001***	-0.004	-0.001***
	(0.006)	(0.000)	(0.004)	(0.000)	(0.017)	(0.000)	(0.006)	(0.000)
MTB_{t-1}	-0.009*	-0.015	-0.006	-0.019***	-0.012	-0.016**	-0.004	-0.019**
	(0.005)	(0.010)	(0.008)	(0.007)	(0.008)	(0.007)	(0.006)	(0.008)
SG_{t-1}	0.000***	0.001***	0.000	0.001***	-0.000	0.001***	0.000	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SGV_{t-1}	0.000	0.001**	0.000	0.001**	0.000	0.001***	0.000	0.002***
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
CF_{t-1}	-0.025	-0.031**	-0.033	-0.028**	-0.052	-0.026**	-0.018	-0.028**
	(0.022)	(0.013)	(0.040)	(0.012)	(0.034)	(0.013)	(0.032)	(0.013)
CFV_{t-1}	-0.005	-0.000	2.985	-0.001	-0.082	-0.001	-0.001	-0.001
	(0.008)	(0.001)	(4.206)	(0.001)	(0.128)	(0.001)	(0.001)	(0.001)
AZ_{t-1}	-0.000	0.001**	-0.001	0.001**	0.002	0.001**	0.001	0.001**
	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)
LOS_{t-1}	-0.038***	-0.041***	-0.016	-0.049***	-0.038***	-0.057***	-0.041***	-0.049***
	(0.014)	(0.015)	(0.016)	(0.013)	(0.014)	(0.014)	(0.015)	(0.014)
SR_{t-1}	0.005***	0.008**	0.005**	0.007***	0.004**	0.006**	0.006***	0.006*
	(0.002)	(0.004)	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)	(0.003)
SRV_{t-1}	0.007***	0.001	0.008***	0.001	0.005**	0.003	0.007***	0.001
	(0.002)	(0.004)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Constant	-0.789	0.087	-0.942***	1.154	-0.753***	0.580	-1.135**	0.800
	(0.503)	(0.512)	(0.254)	(0.746)	(0.232)	(0.620)	(0.571)	(0.749)
R-squared	0.220	0.140	0.251	0.129	0.214	0.135	0.190	0.148
No. of Firms	1,203	2,062	1,518	1,615	1,568	1,543	1,263	1,724
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Observations	8,465	16,775	12,619	12,621	12,383	12,857	9,773	15,467

Panel C					REM2			
VARIABLES	BIG_4		AUD_FEE		Log AUD_TNR		AC_EXPERT	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Non-BIG_4 Dummy (0)	BIG_4 Dummy (1)	Low Fees Below Median	High Fees Above Median	Short Tenure Below Median	Long Tenure Above Median	Expert Absent Dummy (0)	Expert Present Dummy (1)
$Treat\_firm_{i,t}$	0.008	0.009	0.001	0.008	0.006	0.008	0.002	0.013
	(0.006)	(0.007)	(0.004)	(0.007)	(0.020)	(0.007)	(0.004)	(0.009)
$Post_{i,t}$	-0.001	0.010	0.003	-0.000	0.002	0.001	0.006	-0.000
	(0.007)	(0.008)	(0.005)	(0.006)	(0.006)	(0.006)	(0.012)	(0.008)
$Treat\_firm_{i,t} * Post_{i,t}$	0.012***	0.004	0.021***	0.001	0.017***	0.006	0.011***	0.008
	(0.004)	(0.008)	(0.005)	(0.006)	(0.005)	(0.006)	(0.004)	(0.009)
$Size_{t-1}$	0.000	0.014***	-0.007**	0.013***	-0.008**	0.013***	-0.004	0.013***
	(0.003)	(0.004)	(0.004)	(0.003)	(0.004)	(0.004)	(0.003)	(0.004)
LEV_{t-1}	-0.009*	0.006*	-0.013**	0.007**	0.002	0.007**	0.003	0.006**
	(0.005)	(0.003)	(0.006)	(0.003)	(0.007)	(0.003)	(0.006)	(0.003)
ROA_{t-1}	-0.000	-0.000***	0.002*	-0.000***	-0.004	-0.000***	-0.001	-0.000***
	(0.002)	(0.000)	(0.001)	(0.000)	(0.006)	(0.000)	(0.002)	(0.000)
MTB_{t-1}	-0.003*	-0.005	-0.002	-0.007***	-0.004	-0.005**	-0.002	-0.007**
	(0.002)	(0.004)	(0.003)	(0.002)	(0.003)	(0.002)	(0.002)	(0.003)
SG_{t-1}	-0.000***	-0.000***	-0.000	-0.000***	0.000	-0.000***	-0.000	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SGV_{t-1}	0.000	0.001**	0.000	0.000**	0.000	0.000***	0.000	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CF_{t-1}	-0.009	-0.011**	-0.012	-0.010**	-0.019	-0.009**	-0.006	-0.010**
	(0.008)	(0.005)	(0.014)	(0.004)	(0.012)	(0.004)	(0.011)	(0.005)
CFV_{t-1}	-0.002	-0.000	1.075	-0.000	-0.028	-0.000	-0.001	-0.000
	(0.003)	(0.000)	(1.506)	(0.000)	(0.046)	(0.000)	(0.000)	(0.000)
AZ_{t-1}	-0.000	0.000**	-0.000	0.000**	0.001	0.000**	0.000	0.000**
	(0.000)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)
LOS_{t-1}	-0.014***	-0.015***	-0.006	-0.018***	-0.014***	-0.020***	-0.015***	-0.018***
	(0.005)	(0.005)	(0.006)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)
SR_{t-1}	-0.002***	-0.003**	-0.002**	-0.003***	-0.001**	-0.002**	-0.002***	-0.002*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
SRV_{t-1}	-0.002***	-0.000	-0.003***	-0.000	-0.002**	-0.001	-0.003***	-0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Constant	-0.290	0.025	-0.347***	0.396	-0.273***	0.193	-0.413**	0.277
	(0.179)	(0.182)	(0.090)	(0.265)	(0.084)	(0.219)	(0.204)	(0.267)
R-squared	0.220	0.140	0.252	0.129	0.215	0.135	0.190	0.148
No. of Firms	1,203	2,062	1,518	1,615	1,568	1,543	1,263	1,724
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Observations	8,465	16,775	12,619	12,621	12,383	12,857	9,773	15,467

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Starting with firms audited by non-Big 4 auditors, a significant increase in earnings management activities was observed across all metrics (*AEM:* 0.067, p<0.01; *REM1:* 0.035, p<0.01; *REM2:* 0.012, p<0.01), suggesting less stringent controls compared to Big 4 auditors, whose influence was not significant across the measures (*AEM:* -0.023, ns; *REM1:* 0.019, ns; *REM2:* 0.004, ns). This pattern aligns with assertions by Becker et al. (1998) and DeFond & Zhang (2014), who highlight the reputational concerns and litigation risks that motivate Big 4 firms to enforce rigorous audit standards.

Regarding audit fees, the analysis reveals that low audit fees correlate significantly with increased earnings management (*AEM*: 0.077, p<0.01; *REM1:* 0.041, p<0.01; *REM2:* 0.021, p<0.01), indicating potentially less thorough audits. In contrast, high audit fees did not significantly deter earnings management, suggesting that increased fees reflect more rigorous audits. This relationship is supported by findings from Khurana and Raman (2004) and Abbott et al. (2006), who argue that higher audit fees compensate for greater auditor effort and risk, potentially reducing earnings management.

Auditor tenure (logarithmically transformed) also significantly affects earnings management, with shorter tenures associated with higher levels of irregularities (*AEM:* 0.050, p<0.05; *REM1:* 0.026, p<0.05; *REM2:* 0.017, p<0.05). This suggests that while longer auditor-client relationships are generally believed to foster deeper understanding and stronger oversight, they do not consistently translate into better financial reporting, as evidenced by the non-significant impact of longer tenures. Myers et al. (2003) and Carcello and Nagy (2004) support this view, suggesting that longer engagements enhance auditors' abilities to detect and deter accounting irregularities through deeper familiarity with the firm's operations.

Lastly, consistent with Klein (2002) findings, the results underline the crucial role of audit committee expertise. The presence of financial experts significantly reduces earnings management (*AEM*: 0.059, p<0.01; *REM1:* 0.031, p<0.01; *REM2:* 0.011, p<0.01), emphasising the importance of skilled oversight in curbing such practices as highlighted by Bédard et al. (2004), Badolato et al. (2014) and Xia et al. (2024). However, the presence of these experts did not significantly impact earnings management in this analysis, possibly due to the complex interplay of governance factors that go beyond the mere presence of expertise.

These understandings reinforce the necessity for robust audit practices and highlight the pivotal role of audit characteristics in mitigating risks associated with earnings management,

particularly in environments lacking external monitoring mechanisms like media oversight. This analysis underscores the complexities of corporate governance and the essential role of audit characteristics in addressing potential agency conflicts within firms.

5.8.2   *Board Characteristics and Corporate Governance Score*

This analysis further explores board heterogeneous characteristics to address potential hidden drivers of baseline results, as highlighted in prior research (e.g., Xie et al., 2003; García-Meca & Sánchez-Ballesta, 2009). Starting by examining CEO duality (*CEO_DUAL*), defined as a situation where the CEO also holds the position of board chairman (Kamarudin et al., 2012; Duru et al., 2016). Such consolidation of roles centralises decision-making power, which could exacerbate agency conflicts by compromising governance effectiveness and potentially facilitating earnings management through opportunities for financial misreporting (Jensen, 1993; Boyd, 1995; Dalton et al., 2007). This test assesses the impact of CEO duality on earnings management, underscoring the need for robust internal controls in contexts where external scrutiny is reduced, to mitigate agency problems and enhance accountability (Efendi et al., 2007; Di Meo et al., 2017; Aktas et al., 2019).

Board size (*BD_SIZE*) impacts corporate governance. Jensen (1993) and Yermack (1996) argue smaller boards are more efficient, improving corporate monitoring. Conversely, Beasley and Salterio (2001) suggest larger boards provide more diverse viewpoints and expertise, making the effect of board size on earnings management uncertain. *BD_SIZE* is calculated as the natural logarithm of the number of directors, with a large board being above the median and a small board being below the median (Yermack, 1996).

Board independence (*BD_IND*), measured by the proportion of board members independent of executives, is essential for effective oversight (Fama & Jensen, 1983). Low board independence is defined as below the median, and high board independence is defined as above the median. This independence is critical in ensuring impartial decision-making (Klein, 2002; Xie et al., 2003), especially in contexts where external monitoring, such as media scrutiny, is reduced. In the absence of media coverage due to local newspaper closures, the role of independent board members becomes even more crucial in mitigating potential increases in earnings management, as they help maintain transparency and accountability within the corporation (Ghosh et al., 2010; Wang et al., 2024).

Additionally, the study considers board gender diversity (**BD_GEND**), which is measured by the ratio of female to male board members. Low gender diversity is defined as below the median, and high gender diversity is defined as above the median, to reflect a broader range of perspectives and approaches in governance (Adams & Ferreira, 2009; Arun et al., 2015; Gull et al., 2023). Lastly, the corporate governance score (**CGS**), introduced by Gompers et al. (2003), is a composite measure of corporate governance quality, capturing various governance mechanisms. It evaluates a company's governance practices and their effectiveness in monitoring and curbing earnings management (Brown & Caylor, 2006; Jiang et al., 2008).

Table (32) Panels A, B, and C present a detailed analysis of board characteristics and corporate governance scores across various firms. These panels explore key governance attributes including CEO duality, board size, independence, gender diversity, and corporate governance scores. The analysis is focused on understanding how these factors may impact different earnings management metrics, especially in scenarios where traditional media monitoring is limited.

Table (32) Board Characteristics and Corporate Governance Score

Table (32) Panels A, B, and C analyse board characteristics and corporate governance scores, examining attributes such as CEO duality, board size, independence, gender diversity, and corporate governance scores, to understand their impact on earnings management metrics, particularly where media monitoring is limited. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (20) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (3)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

Panel A					AEM					
VARIABLES	CEO_DUAL		Log BD_SIZE		BD_IND%		BD_GEND%		Corporate Governance Score	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Duality Absent Dummy (0)	Duality Present Dummy (1)	Small Board Below Median	Large Board Above Median	Low BD IND Below Median	High BD IND Above Median	Low Gend-diverse Below Median	High Gend-Diverse Above Median	Low CGS Below Median	High CGS Above Median
$Treat\_firm_{i,t}$	0.036	-0.012	-0.019	0.034	-0.014	0.020	0.012	0.015	0.023	0.029
	(0.027)	(0.035)	(0.037)	(0.028)	(0.028)	(0.033)	(0.035)	(0.031)	(0.036)	(0.027)
$Post_{i,t}$	-0.026	0.006	0.044	-0.024	-0.016	0.024	0.024	-0.020	0.015	-0.013
	(0.026)	(0.024)	(0.032)	(0.021)	(0.023)	(0.025)	(0.026)	(0.023)	(0.034)	(0.020)
$Treat\_firm_{i,t} * Post_{i,t}$	0.010	0.077***	0.056*	0.038	0.086***	-0.014	0.051*	0.019	0.072**	0.022
	(0.029)	(0.027)	(0.033)	(0.026)	(0.024)	(0.032)	(0.028)	(0.029)	(0.034)	(0.025)
$Size_{t-1}$	-0.059***	0.016	-0.037*	-0.033*	0.020	-0.052***	0.036*	-0.057***	-0.008	-0.041**
	(0.018)	(0.023)	(0.022)	(0.018)	(0.016)	(0.019)	(0.020)	(0.019)	(0.025)	(0.017)
LEV_{t-1}	0.039***	0.028	0.058	0.038**	0.070*	0.030**	0.004	0.032**	0.031	0.042***
	(0.014)	(0.045)	(0.036)	(0.015)	(0.039)	(0.015)	(0.047)	(0.014)	(0.037)	(0.015)
ROA_{t-1}	-0.002***	-0.027	-0.016	-0.002***	-0.009	-0.002***	-0.117**	-0.002***	-0.050	-0.002***
	(0.000)	(0.043)	(0.014)	(0.000)	(0.005)	(0.000)	(0.054)	(0.000)	(0.031)	(0.000)
MTB_{t-1}	0.034***	0.016	0.038**	0.014	0.003	0.026*	0.015	0.021	0.018	0.027**
	(0.012)	(0.017)	(0.015)	(0.012)	(0.013)	(0.014)	(0.014)	(0.013)	(0.015)	(0.012)
SG_{t-1}	0.001***	0.000	0.000	0.001***	0.000	0.001***	0.000	0.001***	0.000	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SGV_{t-1}	-0.002***	-0.000	-0.001	-0.001**	-0.000	-0.003***	-0.001**	-0.001*	-0.000	-0.002***
	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
CF_{t-1}	-0.061**	-0.021	-0.077	-0.056**	0.065	-0.070***	0.006	-0.064***	-0.055	-0.056**
	(0.024)	(0.096)	(0.057)	(0.026)	(0.079)	(0.025)	(0.056)	(0.025)	(0.057)	(0.025)
CFV_{t-1}	0.002*	-0.003	-0.006	0.003***	-0.001	0.002	0.218***	0.002	-0.004	0.002**
	(0.001)	(0.004)	(0.004)	(0.001)	(0.002)	(0.001)	(0.066)	(0.001)	(0.004)	(0.001)
AZ_{t-1}	-0.003***	-0.004	-0.003	-0.004***	0.001	-0.003***	-0.002	-0.003***	-0.004*	-0.003***
	(0.001)	(0.004)	(0.002)	(0.001)	(0.002)	(0.001)	(0.003)	(0.001)	(0.002)	(0.001)
LOS_{t-1}	-0.091***	-0.086**	-0.139***	-0.064***	-0.064**	-0.097***	-0.081**	-0.075***	-0.152***	-0.063***
	(0.023)	(0.039)	(0.040)	(0.024)	(0.032)	(0.026)	(0.039)	(0.024)	(0.040)	(0.023)
SR_{t-1}	0.012**	0.011**	0.009*	0.013***	0.008**	0.014**	0.010**	0.011***	0.006*	0.016***
	(0.005)	(0.005)	(0.005)	(0.004)	(0.004)	(0.005)	(0.004)	(0.004)	(0.004)	(0.005)
SRV_{t-1}	0.007**	0.021**	0.010**	0.011**	0.012***	0.007	0.013***	0.008*	0.013***	0.010**
	(0.003)	(0.009)	(0.005)	(0.004)	(0.003)	(0.005)	(0.004)	(0.004)	(0.005)	(0.005)
Constant	0.988	-1.450***	0.102	-0.508	-2.025***	0.373	-2.543**	0.758	-3.614**	-0.395
	(1.213)	(0.483)	(0.196)	(0.989)	(0.539)	(1.423)	(1.100)	(1.314)	(1.612)	(1.035)
R-squared	0.124	0.213	0.153	0.139	0.201	0.132	0.198	0.128	0.197	0.130
No. of Firms	1,760	1,269	977	2,132	1,494	1,583	1,280	1,951	1,231	2,075
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Observations	14,357	10,883	7,076	18,164	12,710	12,530	9,959	15,281	8,643	16,597

Panel B					REM1					
VARIABLES	CEO_DUAL		Log BD_SIZE		BD_IND%		BD_GEND%		Corporate Governance Score	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Duality Absent Dummy (0)	Duality Present Dummy (1)	Small Board Below Median	Large Board Above Median	Low BD IND Below Median	High BD IND Above Median	Low Gend-diverse Below Median	High Gend-Diverse Above Median	Low CGS Below Median	High CGS Above Median
Treat_firm$_{i,t}$	0.019	-0.006	-0.010	0.018	-0.007	0.010	0.006	0.008	0.012	0.015
	(0.014)	(0.018)	(0.019)	(0.015)	(0.015)	(0.017)	(0.018)	(0.016)	(0.019)	(0.014)
Post$_{i,t}$	-0.014	0.003	0.023	-0.013	-0.008	0.013	0.013	-0.010	0.008	-0.007
	(0.013)	(0.012)	(0.017)	(0.011)	(0.012)	(0.013)	(0.013)	(0.012)	(0.018)	(0.010)
Treat_firm$_{i,t}$ * Post$_{i,t}$	0.005	0.040***	0.029*	0.020	0.045***	-0.007	0.027*	0.010	0.037**	0.011
	(0.015)	(0.014)	(0.017)	(0.014)	(0.012)	(0.017)	(0.015)	(0.015)	(0.018)	(0.013)
Size$_{t-1}$	0.031***	-0.009	0.019*	0.017*	-0.011	0.027***	-0.019*	0.030***	0.004	0.021**
	(0.009)	(0.012)	(0.012)	(0.010)	(0.009)	(0.010)	(0.010)	(0.010)	(0.013)	(0.009)
LEV$_{t-1}$	0.020***	0.015	0.030	0.020**	0.037*	0.016**	0.002	0.017**	0.016	0.022***
	(0.007)	(0.024)	(0.019)	(0.008)	(0.020)	(0.008)	(0.025)	(0.007)	(0.019)	(0.008)
ROA$_{t-1}$	-0.001***	-0.014	-0.008	-0.001***	-0.005	-0.001***	-0.061**	-0.001***	-0.026	-0.001***
	(0.000)	(0.022)	(0.008)	(0.000)	(0.003)	(0.000)	(0.028)	(0.000)	(0.016)	(0.000)
MTB$_{t-1}$	-0.018***	-0.009	-0.020**	-0.007	-0.001	-0.014*	-0.008	-0.011	-0.009	-0.014**
	(0.006)	(0.009)	(0.008)	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)	(0.008)	(0.006)
SG$_{t-1}$	0.001***	0.000	0.000	0.000***	0.000	0.001***	0.000	0.000***	0.000	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SGV$_{t-1}$	0.001***	0.000	0.000	0.001**	0.000	0.001***	0.001**	0.001*	0.000	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CF$_{t-1}$	-0.032**	-0.011	-0.040	-0.029**	0.034	-0.037***	0.003	-0.033***	-0.029	-0.029**
	(0.013)	(0.050)	(0.030)	(0.013)	(0.041)	(0.013)	(0.029)	(0.013)	(0.030)	(0.013)
CFV$_{t-1}$	-0.001*	0.002	0.003	-0.001***	0.001	-0.001	-0.113***	-0.001	0.002	-0.001**
	(0.001)	(0.002)	(0.002)	(0.000)	(0.001)	(0.001)	(0.034)	(0.001)	(0.002)	(0.001)
AZ$_{t-1}$	0.001***	0.002	0.002	0.002***	-0.000	0.002***	0.001	0.002***	0.002*	0.001***
	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)
LOS$_{t-1}$	-0.047***	-0.045**	-0.072***	-0.033***	-0.034**	-0.050***	-0.042**	-0.039***	-0.079***	-0.033***
	(0.012)	(0.020)	(0.021)	(0.013)	(0.016)	(0.013)	(0.020)	(0.013)	(0.021)	(0.012)
SR$_{t-1}$	0.006**	0.006**	0.005*	0.007***	0.004**	0.007**	0.005**	0.006***	0.003*	0.008***
	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)
SRV$_{t-1}$	0.004**	0.011**	0.005**	0.005**	0.006***	0.004	0.007***	0.004*	0.007***	0.005**
	(0.002)	(0.005)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)
Constant	0.730	-0.540**	0.269***	-0.049	-0.840***	0.410	-1.110*	0.610	-1.668**	0.009
	(0.632)	(0.252)	(0.102)	(0.515)	(0.281)	(0.742)	(0.573)	(0.685)	(0.840)	(0.539)
R-squared	0.124	0.213	0.153	0.139	0.201	0.132	0.198	0.128	0.197	0.130
No. of Firms	1,760	1,269	977	2,132	1,494	1,583	1,280	1,951	1,231	2,075
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Observations	14,357	10,883	7,076	18,164	12,710	12,530	9,959	15,281	8,643	16,597

Panel C					REM2					
VARIABLES	CEO_DUAL		Log BD_SIZE		BD_IND%		BD_GEND%		Corporate Governance Score	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Duality Absent Dummy (0)	Duality Present Dummy (1)	Small Board Below Median	Large Board Above Median	Low BD IND Below Median	High BD IND Above Median	Low Gend-diverse Below Median	High Gend-Diverse Above Median	Low CGS Below Median	High CGS Above Median
Treat_firm$_{i,t}$	0.006	-0.002	-0.004	0.006	-0.003	0.004	0.002	0.003	0.004	0.005
	(0.005)	(0.006)	(0.007)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)	(0.007)	(0.005)
Post$_{i,t}$	0.000	-0.002	0.008	-0.004	-0.003	0.005	0.004	-0.004	0.003	-0.003
	(0.004)	(0.005)	(0.006)	(0.004)	(0.004)	(0.005)	(0.005)	(0.004)	(0.006)	(0.004)
Treat_firm$_{i,t}$ * Post$_{i,t}$	0.005	0.016***	0.010*	0.007	0.016***	-0.003	0.010*	0.004	0.013**	0.004
	(0.005)	(0.005)	(0.006)	(0.005)	(0.004)	(0.006)	(0.005)	(0.005)	(0.006)	(0.005)
Size$_{t-1}$	0.011***	-0.003	0.007*	0.006*	-0.004	0.010***	-0.007*	0.011***	0.001	0.008**
	(0.003)	(0.004)	(0.004)	(0.003)	(0.003)	(0.004)	(0.004)	(0.003)	(0.005)	(0.003)
LEV$_{t-1}$	0.007***	0.005	0.011	0.007**	0.013*	0.006**	0.001	0.006**	0.006	0.008***
	(0.003)	(0.008)	(0.007)	(0.003)	(0.007)	(0.003)	(0.009)	(0.003)	(0.007)	(0.003)
ROA$_{t-1}$	-0.000***	-0.005	-0.003	-0.000***	-0.002	-0.000***	-0.022**	-0.000***	-0.009	-0.000***
	(0.000)	(0.008)	(0.003)	(0.000)	(0.001)	(0.000)	(0.010)	(0.000)	(0.006)	(0.000)
MTB$_{t-1}$	-0.006***	-0.003	-0.007**	-0.003	-0.000	-0.005*	-0.003	-0.004	-0.003	-0.005**
	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)	(0.003)	(0.002)
SG$_{t-1}$	-0.000***	-0.000	-0.000	-0.000***	-0.000	-0.000***	-0.000	-0.000***	-0.000	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SGV$_{t-1}$	0.000***	0.000	0.000	0.000**	0.000	0.000***	0.000**	0.000*	0.000	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CF$_{t-1}$	-0.011**	-0.004	-0.014	-0.010**	0.012	-0.013***	0.001	-0.012***	-0.010	-0.010**
	(0.004)	(0.018)	(0.011)	(0.005)	(0.015)	(0.005)	(0.010)	(0.005)	(0.011)	(0.005)
CFV$_{t-1}$	-0.000*	0.001	0.001	-0.001***	0.000	-0.000	-0.040***	-0.000	0.001	-0.000**
	(0.000)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.012)	(0.000)	(0.001)	(0.000)
AZ$_{t-1}$	0.000**	0.001	0.001	0.001***	-0.000	0.001***	0.000	0.001***	0.001*	0.001***
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)
LOS$_{t-1}$	-0.017***	-0.016**	-0.026***	-0.012***	-0.012**	-0.018***	-0.015**	-0.014***	-0.028***	-0.012***
	(0.004)	(0.007)	(0.007)	(0.004)	(0.006)	(0.005)	(0.007)	(0.004)	(0.007)	(0.004)
SR$_{t-1}$	-0.002**	-0.002**	-0.002*	-0.002***	-0.002**	-0.003**	-0.002**	-0.002***	-0.001*	-0.003***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
SRV$_{t-1}$	-0.001**	-0.004**	-0.002**	-0.002**	-0.002***	-0.001	-0.002***	-0.002*	-0.002***	-0.002**
	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Constant	0.240	-0.218**	0.087**	-0.026	-0.308***	0.137	-0.404**	0.209	-0.603**	-0.005
	(0.224)	(0.090)	(0.036)	(0.184)	(0.100)	(0.264)	(0.204)	(0.244)	(0.299)	(0.192)
R-squared	0.124	0.213	0.153	0.139	0.201	0.132	0.198	0.128	0.197	0.130
No. of Firms	1,760	1,269	977	2,132	1,494	1,583	1,280	1,951	1,231	2,075
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Observations	14,357	10,883	7,076	18,164	12,710	12,530	9,959	15,281	8,643	16,597

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The presence of CEO duality significantly increases earnings management across all metrics (*AEM:* 0.077, p<0.01; *REM1:* 0.040, p<0.01; *REM2:* 0.016, p<0.01), indicating that centralised leadership may compromise governance effectiveness, potentially facilitating financial misreporting and thus exacerbating agency conflicts (Jensen, 1993; Dalton et al., 2007; Aktas et al., 2019). Conversely, the absence of CEO duality demonstrates a neutral effect, supporting the literature's suggestion that separating the roles of CEO and board chair can enhance accountability and transparency in governance (e.g., Kamarudin et al., 2012; Duru et al., 2016).

Regarding board size, logarithmically transformed, smaller boards are associated with an increase in earnings management at the 10% significance level (*AEM:* 0.056, p<0.1; *REM1:* 0.029, p<0.1; *REM2:* 0.010, p<0.1), contradicting claims by Jensen (1993) and Yermack (1996) that smaller boards enhance corporate monitoring efficiency. In contrast, larger boards did not significantly affect earnings management, aligning with Beasley and Salterio (2001) and Xie et al. (2003), who argue that larger boards can offer valuable diverse perspectives and experience, potentially reducing levels of discretionary accruals.

Low board independence correlates with an increase in earnings management (*AEM:* 0.086, p<0.01; *REM1:* 0.045, p<0.01; *REM2:* 0.016, p<0.01), underscoring the crucial role of independent directors in maintaining corporate integrity (Fama & Jensen, 1983; Klein, 2002). Although high board independence did not show significant results, this might reflect the complex dynamics of governance where other factors also play roles in influencing earnings management (Xie et al., 2003; Ghosh et al., 2010).

Additionally, boards with lower gender diversity are correlated with increased earnings management at the 10% significance level (*AEM*: 0.051, p<0.1; *REM1:* 0.027, p<0.1; *REM2:* 0.010, p<0.1), indicating challenges in oversight and financial reporting. Research by Lara et al. (2017) and Gull et al. (2018) supports that gender-diverse boards enhance decision-making through varied perspectives. Although higher gender diversity did not significantly impact earnings management here, aligning with Zalata and Abdelfattah (2021), it is posited to strengthen governance and reduce discretionary accruals, emphasising the importance of diversity in strong corporate governance, especially when external oversight is limited (Adams & Ferreira, 2009; Arun et al., 2015).

Lastly, the corporate governance score (*CGS*) reveals that lower governance standards are linked with higher levels of earnings management (*AEM:* 0.072, p<0.05; *REM1:* 0.037, p<0.05; *REM2:* 0.013, p<0.05), reinforcing the importance of robust governance frameworks as

discussed by Gompers et al. (2003) and Jiang et al. (2008). While higher governance scores did not show a significant influence on earnings management, they are widely recognised for enhancing corporate monitoring and financial reporting quality (Rezaee, 2004; Brown & Caylor, 2006; Boachie & Mensah, 2022).

In summary, these findings underline the complex interplay of board characteristics in influencing corporate governance outcomes, particularly in contexts where traditional external oversight mechanisms are weakened. Enhancing board diversity and independence is crucial for mitigating risks associated with earnings management and effectively addressing potential agency conflicts.

5.8.3   Firm Characteristics

In this section, following the approach of Farrell et al. (2014), a cross-sectional heterogeneity analysis is conducted to examine how financially constrained and unconstrained firms engage in earnings management in the context of reduced external monitoring, particularly due to the closure of local newspapers. The perception is that the absence of local watchdogs can differentially impact firms' misleading behaviour based on their characteristics such as dividend policies, financial constraints, investment levels, and leverage status. Financially constrained firms, measured using the *SA Index*[19] (firm size and age) as developed by Hadlock and Pierce (2010), may resort to more aggressive earnings management due to their limited access to external capital and heightened need to present favourable financial statements (Hennessy & Whited, 2007; Gunny, 2010; Linck et al., 2013). Conversely, unconstrained firms might have more flexibility in financial strategies, such as issuing debt, paying dividends, or making significant investments, potentially mitigating the need for aggressive earnings manipulation (Korajczyk & Levy, 2003; Kurt, 2018). This in-depth understanding is critical for identifying which firms are most likely to exploit the absence of external scrutiny and engage in earnings management (Graham et al., 2005). Detailed analyses of these heterogeneous effects are presented in Table (33), highlighting the different patterns across various firm characteristics.

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[19] Following Hadlock and Pierce (2010), the *SA Index* is calculated using the formula: $(-0.737 \times Size + 0.043 \times Size^2 - 0.040 \times Age)$.

Table (33) Firm Characteristics

Table (33) Panels A, B, and C present the findings from regressions that investigate the cross-sectional heterogeneity in the correlation between local newspaper closures and earnings management measures. In columns (1), (2), and (5) through (10) of our analysis, companies are divided into two distinct categories based on the median breakpoint of various firm characteristics to evaluate financial constraints. Columns (1) and (2) classify firms into two groups based on whether they are *Dividend* payers or not. Notably, columns (3) and (4) feature the *SA Index* of financial constraints, as detailed by Hadlock and Pierce (2010), which is calculated through the formula: (-0.737 times *Size* plus 0.043 times *Size* squared, minus 0.040 times *Age*). Further, columns (5), (6), (7), and (8) focus on *Investment* metrics (defined as the sum of R&D and Capex) and *Leverage*. Finally, Columns (9) and (10) categorise firms based on their *Debt* status, distinguishing between those with and without debt. The model includes fixed effects (Firm, Year, and Year*State) to control for unobserved heterogeneity, time variation, and location-specific influences, while also incorporating control variables from Table (20) to account for other firm-specific characteristics. Standard errors, presented below the respective coefficients, are clustered at the firm level to account for within-firm correlation and heteroskedasticity, enhancing the reliability of the inference. Significance levels are denoted by asterisks: *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests. All variables used in the empirical models are defined in *Appendix (3)*, and all continuous variables are winsorised at the 1st and 99th percentiles.

Panel A					AEM					
VARIABLES	Dividend Pay		SA (Size-Age) Index		Investment		Leverage		Debt	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Non-Payer Dummy (0)	Payer Dummy (1)	Constrained <= Median	Unconstrained > Median	Low INVST <= Median	Large INVST > Median	Low LEV <= Median	High LEV > Median	Zero Debt Dummy (0)	With Debt Dummy (1)
Treat_firm$_{i,t}$	0.027	0.012	0.005	0.022	0.027	0.011	-0.002	0.053	-0.013	0.032
	(0.030)	(0.030)	(0.029)	(0.030)	(0.031)	(0.036)	(0.028)	(0.035)	(0.050)	(0.024)
Post$_{i,t}$	0.012	-0.032	-0.003	-0.034	-0.027	-0.018	-0.026	-0.033	-0.051	-0.020
	(0.025)	(0.025)	(0.020)	(0.026)	(0.026)	(0.026)	(0.022)	(0.028)	(0.036)	(0.020)
Treat_firm$_{i,t}$ * Post$_{i,t}$	0.063**	0.037	0.055**	0.016	0.073***	-0.016	0.019	0.065**	-0.059	0.056***
	(0.028)	(0.030)	(0.026)	(0.031)	(0.027)	(0.031)	(0.031)	(0.030)	(0.058)	(0.021)
Size$_{t-1}$	0.008	-0.058***	0.015	-0.058***	-0.022	-0.055***	-0.043**	-0.003	-0.099***	-0.028*
	(0.028)	(0.016)	(0.024)	(0.019)	(0.022)	(0.019)	(0.019)	(0.021)	(0.031)	(0.016)
LEV$_{t-1}$	0.041**	0.035**	0.022	0.032**	0.038	0.045***	0.021	0.042**	0.055	0.037**
	(0.019)	(0.015)	(0.082)	(0.014)	(0.026)	(0.016)	(0.058)	(0.019)	(0.102)	(0.016)
ROA$_{t-1}$	0.005	-0.002***	0.085	-0.002***	-0.002***	-0.004*	-0.034	-0.001***	-0.031	-0.001***
	(0.073)	(0.000)	(0.067)	(0.000)	(0.000)	(0.003)	(0.021)	(0.000)	(0.025)	(0.000)
MTB$_{t-1}$	0.012	0.035***	0.026*	0.036***	0.024*	0.016	0.018	0.013	0.042	0.018**
	(0.014)	(0.012)	(0.015)	(0.013)	(0.014)	(0.013)	(0.016)	(0.012)	(0.030)	(0.009)
SG$_{t-1}$	0.000	0.001***	0.000**	0.001***	0.001***	0.001***	0.001***	0.001***	0.001**	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SGV$_{t-1}$	-0.001	-0.002***	-0.001	-0.002**	-0.001	-0.001***	-0.001*	-0.001**	-0.001	-0.001**
	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.000)
CF$_{t-1}$	0.014	-0.076***	25.634	-0.057**	-0.089*	-0.055**	-0.108**	-0.067**	-0.173***	-0.056**
	(0.074)	(0.026)	(19.910)	(0.023)	(0.049)	(0.026)	(0.047)	(0.028)	(0.057)	(0.026)
CFV$_{t-1}$	0.009*	0.002	0.002	0.001	0.002	0.003	0.003	0.003***	-0.001	0.003**
	(0.005)	(0.001)	(0.003)	(0.001)	(0.001)	(0.002)	(0.003)	(0.001)	(0.007)	(0.001)
AZ$_{t-1}$	-0.004	-0.003***	-0.013**	-0.003***	-0.008***	-0.001	-0.002	-0.004***	-0.003	-0.004***
	(0.002)	(0.001)	(0.006)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.003)	(0.001)
LOS$_{t-1}$	-0.086**	-0.094***	-0.086**	-0.084***	-0.090***	-0.095***	-0.069***	-0.100***	-0.115***	-0.086***
	(0.039)	(0.023)	(0.038)	(0.024)	(0.032)	(0.026)	(0.025)	(0.033)	(0.041)	(0.023)
SR$_{t-1}$	0.004	0.018***	0.009**	0.012***	0.012**	0.008**	0.014***	0.003	0.010	0.009***
	(0.003)	(0.005)	(0.004)	(0.005)	(0.006)	(0.004)	(0.005)	(0.004)	(0.006)	(0.003)
SRV$_{t-1}$	0.012*	0.007**	0.014***	0.006	0.011*	0.014***	0.012***	0.007	0.004	0.009***
	(0.006)	(0.004)	(0.004)	(0.004)	(0.007)	(0.003)	(0.004)	(0.006)	(0.005)	(0.003)
Constant	-1.097	-1.622***	-1.458***	0.956	-0.996**	-1.179	0.395	-1.625*	-0.098	-0.984
	(1.282)	(0.569)	(0.529)	(1.582)	(0.392)	(1.123)	(0.267)	(0.896)	(1.077)	(0.956)
R-squared	0.221	0.123	0.268	0.102	0.161	0.159	0.146	0.160	0.212	0.150
No. of Firms	2,034	1,591	1,651	1,546	1,866	1,936	2,003	2,070	929	2,611
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Observations	14,464	10,776	12,620	12,620	12,620	12,620	12,620	12,620	4,181	21,059

VARIABLES	Dividend Pay		SA (Size-Age) Index		Investment		Leverage		Debt	
Panel B					REM1					
	(1) Non-Payer Dummy (0)	(2) Payer Dummy (1)	(3) Constrained <= Median	(4) Unconstrained > Median	(5) Low INVST <= Median	(6) Large INVST > Median	(7) Low LEV <= Median	(8) High LEV > Median	(9) Zero Debt Dummy (0)	(10) With Debt Dummy (1)
$Treat\_firm_{i,t}$	0.014	0.006	0.003	0.012	0.014	0.006	-0.001	0.028	-0.007	0.017
	(0.016)	(0.015)	(0.015)	(0.016)	(0.016)	(0.019)	(0.015)	(0.018)	(0.026)	(0.013)
$Post_{i,t}$	0.006	-0.016	-0.002	-0.018	-0.014	-0.009	-0.014	-0.017	-0.027	-0.010
	(0.013)	(0.013)	(0.013)	(0.014)	(0.014)	(0.014)	(0.012)	(0.014)	(0.019)	(0.011)
$Treat\_firm_{i,t} * Post_{i,t}$	0.033**	0.019	0.029**	0.008	0.038***	-0.008	0.010	0.034**	-0.031	0.029***
	(0.015)	(0.016)	(0.013)	(0.016)	(0.014)	(0.016)	(0.016)	(0.016)	(0.030)	(0.011)
$Size_{t-1}$	0.004	-0.030***	0.008	-0.030***	-0.012	-0.028***	-0.023**	-0.001	-0.051***	-0.014*
	(0.015)	(0.009)	(0.012)	(0.010)	(0.011)	(0.010)	(0.010)	(0.011)	(0.016)	(0.008)
LEV_{t-1}	0.021**	0.018**	0.011	0.017**	0.020	0.024***	0.011	0.022**	0.029	0.019**
	(0.010)	(0.008)	(0.043)	(0.007)	(0.014)	(0.008)	(0.030)	(0.010)	(0.053)	(0.008)
ROA_{t-1}	0.003	-0.001***	0.044	-0.001***	-0.001***	-0.002*	-0.018	-0.001***	-0.016	-0.001***
	(0.038)	(0.000)	(0.035)	(0.000)	(0.000)	(0.001)	(0.011)	(0.000)	(0.013)	(0.000)
MTB_{t-1}	-0.006	-0.018***	-0.014*	-0.019***	-0.013*	-0.008	-0.009	-0.007	-0.022	-0.010**
	(0.007)	(0.006)	(0.008)	(0.007)	(0.007)	(0.007)	(0.008)	(0.006)	(0.016)	(0.005)
SG_{t-1}	0.000	0.000***	0.000**	0.000***	0.000***	0.000***	0.000***	0.000***	0.000**	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SGV_{t-1}	0.000	0.001***	0.000	0.001**	0.000	0.001***	0.000*	0.001**	0.001	0.001**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CF_{t-1}	0.007	-0.040***	13.358	-0.029**	-0.046*	-0.029**	-0.056**	-0.035**	-0.090***	-0.029**
	(0.039)	(0.013)	(10.375)	(0.012)	(0.025)	(0.014)	(0.024)	(0.015)	(0.029)	(0.013)
CFV_{t-1}	-0.005*	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.002***	0.000	-0.001**
	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.004)	(0.001)
AZ_{t-1}	0.002	0.002***	0.007**	0.001***	0.004***	0.001	0.001	0.002***	0.001	0.002***
	(0.001)	(0.001)	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
LOS_{t-1}	-0.045**	-0.049***	-0.045**	-0.044***	-0.047***	-0.049***	-0.036***	-0.052***	-0.060***	-0.045***
	(0.020)	(0.012)	(0.020)	(0.012)	(0.017)	(0.014)	(0.013)	(0.017)	(0.022)	(0.012)
SR_{t-1}	0.002	0.009***	0.005**	0.006***	0.007**	0.004**	0.007***	0.002	0.005	0.005***
	(0.002)	(0.003)	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)
SRV_{t-1}	0.006*	0.004**	0.007***	0.003	0.006*	0.007***	0.006***	0.004	0.002	0.005***
	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)
Constant	-0.356	-0.630**	-0.544**	0.713	-0.304	-0.399	0.421***	-0.632	0.164	-0.298
	(0.668)	(0.296)	(0.275)	(0.825)	(0.204)	(0.585)	(0.139)	(0.467)	(0.561)	(0.498)
R-squared	0.221	0.123	0.268	0.102	0.161	0.159	0.146	0.160	0.212	0.150
No. of Firms	2,034	1,591	1,651	1,546	1,866	1,936	2,003	2,070	929	2,611
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Observations	14,464	10,776	12,620	12,620	12,620	12,620	12,620	12,620	4,181	21,059

Panel C					REM2					
VARIABLES	Dividend Pay		SA (Size-Age) Index		Investment		Leverage		Debt	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Non-Payer Dummy (0)	Payer Dummy (1)	Constrained <= Median	Unconstrained > Median	Low INVST <= Median	Large INVST > Median	Low LEV <= Median	High LEV > Median	Zero Debt Dummy (0)	With Debt Dummy (1)
$\text{Treat\_firm}_{i,t}$	0.005	0.002	0.001	0.004	0.005	0.002	-0.000	0.010	-0.002	0.006
	(0.006)	(0.006)	(0.005)	(0.006)	(0.006)	(0.007)	(0.005)	(0.007)	(0.009)	(0.005)
$\text{Post}_{i,t}$	0.002	-0.006	-0.001	-0.006	-0.005	-0.003	-0.005	-0.006	-0.010	-0.004
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.004)	(0.005)	(0.007)	(0.004)
$\text{Treat\_firm}_{i,t} * \text{Post}_{i,t}$	0.012**	0.007	0.010**	0.003	0.014***	-0.003	0.003	0.012**	-0.011	0.010***
	(0.005)	(0.006)	(0.005)	(0.006)	(0.005)	(0.006)	(0.006)	(0.006)	(0.011)	(0.004)
Size_{t-1}	-0.002	0.011***	-0.003	0.011***	0.004	0.010***	0.008**	0.000	0.018***	0.005*
	(0.005)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.003)	(0.004)	(0.006)	(0.003)
LEV_{t-1}	0.008**	0.007**	0.004	0.006**	0.007	0.008***	0.004	0.008**	0.010	0.007**
	(0.004)	(0.003)	(0.015)	(0.003)	(0.005)	(0.003)	(0.011)	(0.003)	(0.019)	(0.003)
ROA_{t-1}	0.001	-0.000***	0.016	-0.000***	-0.000***	-0.001*	-0.006	-0.000***	-0.006	-0.000***
	(0.014)	(0.000)	(0.012)	(0.000)	(0.000)	(0.000)	(0.004)	(0.000)	(0.005)	(0.000)
MTB_{t-1}	-0.002	-0.006***	-0.005*	-0.007***	-0.004*	-0.003	-0.003	-0.003	-0.008	-0.003**
	(0.003)	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)	(0.006)	(0.002)
SG_{t-1}	-0.000	-0.000***	-0.000**	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000**	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SGV_{t-1}	0.000	0.000***	0.000	0.000**	0.000	0.000***	0.000*	0.000**	0.000	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CF_{t-1}	0.003	-0.014***	4.763	-0.011**	-0.017*	-0.010**	-0.020**	-0.013**	-0.032***	-0.010**
	(0.014)	(0.005)	(3.699)	(0.004)	(0.009)	(0.005)	(0.009)	(0.005)	(0.011)	(0.005)
CFV_{t-1}	-0.002*	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.001***	0.000	-0.001**
	(0.001)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)
AZ_{t-1}	0.001	0.001***	0.002**	0.001***	0.001***	0.000	0.000	0.001***	0.000	0.001***
	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LOS_{t-1}	-0.016**	-0.017***	-0.016**	-0.016***	-0.017***	-0.018***	-0.013***	-0.019***	-0.021***	-0.016***
	(0.007)	(0.004)	(0.007)	(0.004)	(0.006)	(0.005)	(0.005)	(0.006)	(0.008)	(0.004)
SR_{t-1}	-0.001	-0.003***	-0.002**	-0.002***	-0.002**	-0.001**	-0.003***	-0.001	-0.002	-0.002***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
SRV_{t-1}	-0.002*	-0.001**	-0.003***	-0.001	-0.002*	-0.003***	-0.002***	-0.001	-0.001	-0.002***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Constant	-0.136	-0.233**	-0.203**	0.246	-0.117	-0.151	0.142***	-0.234	0.050	-0.115
	(0.238)	(0.106)	(0.098)	(0.294)	(0.073)	(0.209)	(0.050)	(0.166)	(0.200)	(0.178)
R-squared	0.221	0.123	0.268	0.102	0.161	0.159	0.146	0.160	0.212	0.150
No. of Firms	2,034	1,591	1,651	1,546	1,866	1,936	2,003	2,070	929	2,611
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Observations	14,464	10,776	12,620	12,620	12,620	12,620	12,620	12,620	4,181	21,059

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

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The cross-sectional heterogeneity analysis in Table (33) Panels A, B, and C shows how different firm characteristics influence earnings management in the context of reduced external monitoring due to local newspaper closures.

Beginning with dividend policy, non-payer firms exhibit significant increases in earnings management across all measures (*AEM*: 0.063, $p<0.05$; *REM1:* 0.033, $p<0.05$; *REM2:* 0.012, $p<0.05$), suggesting earnings manipulation to appear financially stable, consistent with DeAngelo et al. (2006) and Skinner and Soltes (2011). Conversely, dividend-paying firms do not show significant increases, highlighting their reduced incentive for manipulation, as noted by He et al. (2017). This suggests less agency conflict in dividend payers due to the signalling effect of dividend payments (Jensen, 1986; Leary & Michaely, 2011; Hussain & Akbar, 2022).

Financial constraints, measured by the *SA Index*, show that constrained firms significantly increase earnings management (*AEM:* 0.055, $p<0.05$; *REM1:* 0.029, $p<0.05$; *REM2:* 0.010, $p<0.05$). Limited access to external capital drives these firms to manipulate earnings to present favourable financial statements (Hadlock & Pierce, 2010; Gunny, 2010; Linck et al., 2013). Unconstrained firms show no significant changes, reflecting better access to capital and reduced need for manipulation (Korajczyk & Levy, 2003; Graham et al., 2005; Kurt, 2018). This reflects an agency conflict where constrained firms prioritise short-term appearance over long-term value (Hennessy & Whited, 2007; Farrell et al., 2014).

Investment levels also affect earnings management. Low investment firms significantly increase earnings management (*AEM:* 0.073, $p<0.01$; *REM1:* 0.038, $p<0.01$; *REM2:* 0.014, $p<0.01$), aiming to enhance financial appearance (Roychowdhury, 2006; Dechow & Dichev, 2002). In contrast, firms with high investment levels do not show significant changes in earnings management, which might be attributed to their focus on growth opportunities, reducing the need for manipulation (Biddle & Hilary, 2006; McNichols & Stubben, 2008).

Regarding leverage, firms with high leverage display significant increases in earnings management (*AEM:* 0.065, $p<0.05$; *REM1:* 0.034, $p<0.05$; *REM2:* 0.012, $p<0.05$). High leverage firms are under more pressure to meet debt covenants, prompting them to engage in earnings management, a behaviour supported by Watts and Zimmerman (1986), DeFond and Jiambalvo (1994), and Sweeney (1994). Firms with low leverage, however, do not exhibit significant changes, indicating that less financial pressure might reduce the incentive to manage earnings (Bharath et al., 2008; Fields et al., 2018).

Lastly, firms with debt show significant increases in earnings management (*AEM:* 0.056, p<0.01; *REM1:* 0.029, p<0.01; *REM2:* 0.010, p<0.01), aligning with the literature that indicates firms with debt face greater pressure to meet obligations, leading to increased manipulation (e.g., Jensen, 1986; Zhang, 2008; Crabtree et al., 2014). Firms without debt do not show significant changes, underscoring the reduced financial pressure and thus a lower need for earnings manipulation (Myers, 1977; Jiang, 2008; Fung & Goodwin, 2013).

These findings underscore the varying impacts of firm characteristics on earnings management in the absence of external scrutiny, highlighting the complex behaviours firms adopt based on their financial conditions. This understanding is crucial for regulators and investors to identify and mitigate potential manipulative practices. The analysis also reflects agency conflicts, where managers might exploit reduced monitoring to prioritise short-term gains over long-term firm health.

In summary, the further analysis section incorporates additional control variables to mix internal and external governance mechanisms, including audit characteristics, board qualities, governance scores, and a range of firm characteristics. This enhanced cross-sectional approach ensures that the relationship between local media absence and increased earnings management is not concealed by unobserved factors. By expanding the baseline model, as detailed in Tables (31), (32), and (33), the heterogeneity analysis provides a deeper examination of how internal controls and governance practices might compensate for the diminished monitoring traditionally provided by local newspapers.

5.9 Conclusion

This study highlights the crucial role of local newspapers in corporate governance by examining the impact of the closure of 44 U.S. local newspapers from 1986 to 2021 on earnings management practices. Employing a difference-in-differences approach across 43 counties, the research shows that these closures lead to increased earnings management especially in firms that do not pay dividends, maintain low investment levels, are financially constrained, and are heavily reliant on debt. This underscores the key role of local media in maintaining the integrity of financial reporting, serving as essential external monitors for firms under significant financial stress.

Local newspapers have been essential for civic engagement and corporate accountability. However, digital media has challenged traditional journalism, altering news consumption and revenue models. Platforms like Craigslist have diverted advertising revenue, while online paywalls and broadband expansion have reshaped readership habits, diminishing the accountability role of newspapers. This decline has led to news deserts, where the lack of local coverage threatens civic engagement, promotes opportunistic behaviour, and weakens corporate monitoring.

This study provides new empirical evidence on the media's impact on corporate life, specifically focusing on earnings management and financial reporting quality. The closure of local newspapers, acting as an exogenous shock to the external monitoring function, prompts corporate managers to increase both accrual-based and real earnings management activities by 0.9% to 4.8%. This underscores that media coverage significantly enhances transparency and integrity in financial reporting, particularly in high-profile S&P 500 firms. As regions evolve into news deserts, there is a noticeable surge in earnings management, underlining the role of local newspapers in reducing agency conflicts and strengthening corporate governance. Despite its growth, social media has not filled the gap left by traditional journalism in ensuring ethical business practices.

By investigating the dynamics between media and corporate governance, including the influence of the Economic Policy Uncertainty (EPU) Index, state-level economic indicators, and newspaper closures on corporate earnings management, the study enhances its identification strategy. It effectively isolates the impact of newspaper closures by incorporating controls for economic uncertainty and local economic conditions, reinforcing the baseline findings. This approach not only highlights the fundamental role of local journalism in

corporate governance but also provides insights into the broader economic factors influencing corporate behaviour and financial transparency.

In addition, the research addresses endogeneity concerns by using broadband entry and Craigslist's market entry as instrumental variables, effectively predicting newspaper closures. The study finds that predicted closures correlate with increased discretionary accruals and real earnings management, suggesting heightened financial manipulation post-closure. This finding underscores the role of media monitoring in corporate governance.

Moreover, this study enriches the earnings management literature by identifying channels that interact with local media closures and assessing their impact on monitoring mechanisms and financial reporting quality. It underscores the roles of internal and external governance mechanisms, including institutional investors, financial analysts, executive compensation, auditors, and board qualities, finding that compromised monitoring leads to increased earnings manipulation. Additionally, it highlights the importance of understanding firms' heterogeneous characteristics in curbing earnings management practices.

The unique role of the media as a critical public watchdog is highlighted, showing how its absence can foster increased opportunistic behaviour among managers and exacerbate agency conflicts, undermining effective corporate governance and shareholder value. This study substantially contributes to reevaluating the media's fundamental role in detecting and mitigating earnings management practices, thereby advancing discussions on transparency and integrity in financial reporting.

In conclusion, this study underscores the importance of sustaining local newspapers to provide constant monitoring of firms' reporting quality. The findings indicate that local journalism plays an irreplaceable role in corporate governance, ensuring transparency and ethical business conduct. Future research should explore additional mechanisms through which local media influences corporate behaviour and capital market reactions, as well as the long-term effects of newspaper closures on various aspects of corporate governance and financial performance. Investigating the potential for other forms of media or technology to substitute the role of local newspapers could also provide valuable insights into maintaining corporate accountability in an evolving media landscape.

Appendix (3) Variable Definitions

Variable			Definition	Previous Studies
Dependent Variable		*Earnings Management* ($EM_{i,t}$)	Earnings Management ($EM_{i,t}$) is the study's dependent variable examines earnings management at the firm level i over time t, measured through either accrual-based earnings management ($AEM_{i,t}$) or real earnings management ($REM1_{i,t}$, $REM2_{i,t}$).	(Dechow et al., 1995; (Roychowdhury, 2006;
		Accrual-based Earnings Management ($AEM_{i,t}$)	Discretionary accruals, quantified as the absolute value of abnormal accruals, estimated using the modified Jones model as described by Dechow et al. (1995).	(Dechow et al., 1995)
		Real Earnings Management Index 1 ($REM1_{i,t}$)	Real Earnings Management Index 1, defined as the sum of abnormal production costs (**ABPROD**) and the negative of abnormal discretionary expenses (**ABDISX**).	(Roychowdhury, 2006; Cohen & Zarowin, 2010)
		Real Earnings Management Index 2 ($REM2_{i,t}$)	Real Earnings Management Index 2, defined as the negative sum of abnormal operating cash flows (**ABCFO**) and abnormal discretionary expenses (**ABDISX**).	(Roychowdhury, 2006; Cohen & Zarowin, 2010)
Independent Variables	**Local Media Closure**	$Treat\_firm_{i,t}$	Dummy variable: **1** if firm i is within a 50-mile radius of a closed newspaper (treatment), **0** otherwise (control).	(Kim et al., 2021)
		$Post_{i,t}$	Dummy variable: represents a ten-year closure window, with a value of **1** for the year of closure and the following four years, and **0** for all other years.	(Kim et al., 2021)
		$Treat\_firm_{i,t} * Post_{i,t}$ *(Local Newspaper Closure)*	The primary independent (explanatory) variable is a two-way binary variable essential for the Difference-in-Differences (DID) approach. It takes the value of **1** if the firm is in the treatment group (i.e., subjected to media closure) and is in the post-treatment period (i.e., during or after the media closure). If the firm is not in the treatment group or is not in the post-treatment period, it takes the value of **0**. This variable captures the treatment effect of media closure on earnings management.	(Feng et al., 2021; Kim et al., 2021)
	Corporate Monitoring Channels	$\Delta(CEO\ or\ CFO)Comp_{i,t}$	$\Delta(CEO\ or\ CFO)Comp_{i,t}$ is defined as the percentage change in total direct compensation from the previous year t_{-1} to the current year t for either the CEO or CFO of firm i.	(Hartzell & Starks, 2003; Cheng & Farber, 2008)
		Analysts Coverage ($Analysts_{i,t}$)	$Analysts_{i,t}$ is defined as the natural logarithm of one plus the yearly number of analysts forecasting a firm's earnings, measures analyst involvement.	(He & Tian, 2013; Du & Shen, 2018)
		Institutional Ownership$_{i,t}$	$Inst\_Own_{i,t}$ denotes the proportion of a firm's shares held by institutional investors (such as mutual funds and pension funds) for firm i at time t.	(Chung et al., 2002; Hadani et al., 2011)
Control Variables		*Firm Size (Size)*	Firm Size (*Size*) is typically measured by taking the natural logarithm of total assets.	(Watts & Zimmerman, 1986; Cheng et al., 2016)
		Leverage (LEV)	Leverage (**LEV**) is commonly calculated as the ratio of total debt to total assets.	(Peasnell et al., 2005; Raman & Shahrur, 2008)
		Profitability (ROA)	Return on Assets (**ROA**) is a financial ratio that evaluates a company's profitability based on its asset utilisation.	(Bedard & Johnstone, 2004; Kothari et al., 2005)
		Market-To-Book (MTB)	Market-to-Book Ratio (**MTB**) is calculated as the market value of equity divided by the book value of equity.	(Zang, 2012; Cheng et al., 2016)
		Sales Growth (SG)	Sales Growth (**SG**) is measured as the annual percentage change in a firm's sales revenue.	Cohen & Zarowin, 2010; Collins et al., 2017
		Sales Growth Volatility (SGV)	Sales Growth Volatility (**SGV**) is calculated by dividing the standard deviation of sales growth over the previous three years by the mean sales growth over the same period.	(Gong et al., 2009; Shi et al., 2018)

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Cash Flow (CF)	Cash Flow (**CF**) is defined as the firm's operational cash flow divided by its book assets.	(Bédard et al., 2004; Fung & Goodwin, 2013)
Cash Flow Volatility (CFV)	Cash Flow Volatility (**CFV**), calculated as the standard deviation of a firm's +cash flow over a three-year period.	(Jiang et al., 2008; Bilinski, 2014)
Altman's Z-score (AZ)	Altman's Z-score (**AZ**) is calculated as: $((3.3 * Operating\ Income + Sales + 1.4 * Retained\ Earnings + 1.2 * (Current\ Assets - Current\ Liability))/Total\ Assets)$	(Altman, 1968; Pappas et al., 2019)
Loss dummy (LOS)	The Loss Dummy (**LOS**) variable is defined as a binary indicator that is set to one for firms with negative operating income and zero otherwise.	(Fung & Goodwin, 2013; Ali & Zhang, 2015)
Stock returns (SR)	Stock Returns (**SR**) are the cumulative monthly returns over a fiscal year.	(Chen et al., 2015; Chen et al., 2021)
Stock Return Volatility (SRV)	Stock Return Volatility (**SRV**) measures the stock's risk by calculating the standard deviation of monthly returns over two years.	(Chen et al., 2015; Chen et al., 2021)

Additional Variables	*High Media Visibility*	A dummy variable that takes the value of **1** for S&P 500 firms with significant media coverage and **0** for all other firms.	(Harris, 1989)
	News Desert	A dummy variable set to 1 for firms in regions where local newspapers have closed, and 0 for firms in areas still served by at least one local newspaper.	(Gao et al., 2020; Abernathy, 2023)
	Social Media Entry	A dummy variable is assigned a value of 1 starting in 2004, marking the rise of Facebook and the introduction of the term "social media", and is set to 0 for earlier years.	(Kaplan & Haenlein, 2010)
	American State-level Economic Policy Uncertainty (EPU) Index	This index measures economic policy uncertainty based on news frequency, tax code alterations, and economic forecasts, reflecting its impact on investment and business decisions across states. It is computed by scaling EPU data by 100, obtained from www.policyuncertainty.com	(Baker et al., 2016)
	American State-Level Unemployment Rate	Unemployment data is sourced from the U.S. Bureau of Labor Statistics at www.bls.gov, providing comprehensive and up-to-date information on labour market conditions across the U.S.	(Devos & Rahman, 2018; He, 2018)
	American State-Level GDP	The total monetary value of all goods and services produced within a state's borders in a given year, reflecting the state's overall economic output. Data for this measure are sourced from the U.S. Bureau of Economic Analysis at www.bea.gov	(Gulen & Ion, 2016; Goodell et al., 2021)
	American State-Level GDP Growth	The annual rate at which a state's economy expands or contracts, indicated by the year-over-year change in the value of all goods and services produced within the state. Data are obtained from the U.S. Bureau of Economic Analysis at www.bea.gov	(Gulen & Ion, 2016; Goodell et al., 2021)
	Broadband Services Entry	A binary variable coded as 1 if broadband entry occurs within five years before a newspaper's closure and is matched with the ZIP codes of the closed newspaper and affected firms within a 50-mile radius, otherwise coded as 0.	
	Craigslist Entry	An instrumental variable (IV) coded as a binary variable: (1) for Craigslist's entry within five years before a newspaper's closure and within a 50-mile radius, and (0) otherwise. The source of Craigslist's entry dates and locations is www.craigslist.org	(Gao et al., 2020; Heese et al., 2022)
	Big_4	A dummy variable equal to 1 if a company's audit was conducted by a Big 4 firm, and 0 otherwise.	(Becker et al., 1998; Francis & Wang, 2008)
	Audit fees (AUD_FEE)	*AUD_FEE* assess audit quality, with higher fees above the median indicating rigorous audits and lower fees below the median suggesting less thorough audits, impacting financial misreporting and earnings management risks.	(Venkataraman et al., 2008; DeFond & Zhang, 2014)

Auditor Tenure (AUD_TNR)	**AUD_TNR** is calculated as the natural logarithm of the number of years the auditor has been contracted by the firm.	(Chi & Huang, 2005; Chen et al., 2008)
Audit Committee Expert (AC_EXPERT)	**AC_EXPERT** is measured with a dummy variable, where 1 indicates the presence of a "financial expert" as defined by Sarbanes-Oxley, and 0 otherwise.	(Xie et al., 2003; Badolato et al., 2014)
CEO duality (CEO_DUAL)	**CEO_DUAL** is a dummy variable, where 1 indicates that the CEO also holds the position of board chairman, and 0 otherwise.	(Kamarudin et al., 2012; Duru et al., 2016)
Board size (BD_SIZE)	**BD_SIZE** is calculated as the natural logarithm of the number of directors, with a large board being above the median and a small board being below the median.	(Yermack, 1996; Beasley & Salterio, 2001)
Board Independence (BD_IND)	**BD_IND** is measured by the proportion of board members independent of executives. Low board independence is defined as below the median, and high board independence is defined as above the median.	(Klein, 2002; Xie et al., 2003)
Board Gender Diversity (BD_GEND)	**BD_GEND** is measured by the ratio of female to male board members. Low gender diversity is defined as below the median, and high gender diversity is defined as above the median.	(Adams & Ferreira, 2009; Arun et al., 2015)
Corporate Governance Score (CGS)	**CGS** is a composite measure evaluating a company's governance practices and their effectiveness in monitoring and curbing earnings management.	(Gompers et al., 2003; Jiang et al., 2008)
SA (firm size and age) Index	The **SA Index** is calculated using the formula: $(-0.737 \times \text{Size} + 0.043 \times \text{Size}^2 - 0.040 \times \text{Age})$	(Hadlock & Pierce, 2010)

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Chapter Six: Thesis Conclusion

This thesis investigates the profound impacts of local newspaper closures on corporate behaviour (Kim et al., 2021; Heese et al., 2022), specifically focusing on corporate cash holdings and earnings management. Using a difference-in-differences approach, the study analyses hand-collected data on the staggered closures of 44 local newspapers from 1986 to 2021 across 43 counties, providing compelling evidence of the significant role local newspapers play in maintaining corporate governance and financial transparency (Kyung & Nam, 2023).

The first essay reveals that the closure of local newspapers significantly affects American communities by reducing civic engagement and informed participation in elections, thereby creating environments prone to opportunistic behaviour and fraud (Shaker, 2014; Hamilton, 2016). This phenomenon leads to the emergence of "news deserts", where the absence of reliable journalism weakens the accountability of local businesses and government entities (Abernathy, 2020; Mathews, 2020). The study highlights the critical role local newspapers play as external governance mechanisms that monitor corporate activities and deter potential misconduct (Miller, 2006; Dyck et al., 2008; Bednar, 2012).

The findings consistently show a positive and significant relationship between local newspaper closures and an increase in corporate cash holdings. This outcome confirms the hypothesis that reduced media scrutiny leads to more opportunistic corporate behaviour (Jensen & Meckling, 1976; Fama, 1980; Jensen, 1986; Pinkowitz et al., 2006). These results align with established theories of cash holdings and agency problems, underscoring the importance of local media in preserving shareholder interests (Harford et al., 2008; Chung et al., 2015; Couzoff et al., 2022). Additionally, the study emphasises the moderating role of corporate governance and institutional shareholders in mitigating the negative effects of diminished media coverage (Gillan & Starks, 2000; Mccahery et al., 2016).

Moreover, the research demonstrates that in the absence of local newspapers, institutional shareholders play a crucial role in maintaining corporate transparency and responsibility (Kim et al., 2021). Strategies such as short-term borrowing and rollover mechanisms are essential in ensuring the proper allocation of reserved cash, thereby maintaining trust in corporate performance (Myers, 1977; Gao et al., 2013). The study's robustness tests further validate the impact of local newspaper closures on corporate cash holdings, addressing potential endogeneity concerns and enhancing the credibility of the findings.

In conclusion, the first essay underscores the vital importance of local newspapers in fostering corporate accountability and promoting community engagement. The findings provide valuable insights for policymakers, investors, and corporate managers, highlighting the need to support local media and explore alternative monitoring mechanisms to maintain a transparent and accountable corporate environment.

The second essay extends the analysis to the impact of local newspaper closures on corporate cash holdings through the lens of information asymmetry. The study finds that the cessation of local newspapers exacerbates information asymmetry, leading firms to increase their cash reserves as a defensive measure (Opler et al., 1999; Almeida et al., 2004; Han & Qiu, 2007). This behaviour is driven by the increased uncertainty and the need to mitigate agency conflicts and transaction costs associated with wider bid-ask spreads (Chung et al., 1995).

The research reveals a significant positive correlation between local media closures and increased cash holdings, particularly in firms with higher bid-ask spreads. These findings are consistent with the pecking order and free cash flow theories, which suggest that firms prioritise internal funds to avoid the costs associated with external financing in the face of significant information asymmetry (Myers & Majluf, 1984; Chung et al., 2015).

Additionally, the study highlights the role of financial analysts in mitigating the effects of information asymmetry (Frankel & Li, 2004; Chae, 2005). Analyst coverage can exert a statistically significant negative influence on corporate cash holding policies, acting as an effective governance mechanism that reduces agency costs and enhances financial management (Merton, 1987; Moyer et al., 1989; Kim et al., 2021). The results also underscore the importance of strategic short-term borrowing in improving transparency and stability amidst exogenous shocks like local media closures (Rajan & Zingales, 1998; Graham et al., 2008; Harford et al., 2008).

The second essay concludes that local newspapers play an essential role in promoting corporate transparency and mitigating information asymmetry, thereby influencing corporate cash management strategies. It contributes to a deeper understanding of the interplay between media coverage, governance, information asymmetry, and corporate cash management behaviour. The findings have practical implications for corporate managers and policymakers, offering guidance on refining cash management strategies and supporting governance practices in the face of media disruptions.

The third essay examines the impact of local newspaper closures on earnings management practices (Bushman & Smith, 2001; Healy & Palepu, 2001; Sloan, 2001; Cohen et al., 2008). The findings indicate that newspaper closures lead to increased earnings management, particularly in firms that do not pay dividends, maintain low investment levels, are financially constrained, and rely heavily on debt (Siregar & Utama, 2008; Gunny, 2010; Farrell et al., 2014).

Local newspapers have traditionally played a pivotal role in ensuring the integrity of financial reporting by serving as external monitors (Zyglidopoulos et al., 2012; Anderson et al., 2016). The study demonstrates that the absence of local newspapers prompts corporate managers to engage in earnings management activities, both accrual-based and real (Watts & Zimmerman, 1986; Dechow et al., 1995; Kothari et al., 2005; Roychowdhury, 2006; Cohen & Zarowin, 2010). This behaviour highlights the essential role of local media in maintaining the integrity of financial reporting by serving as external monitors (Miller, 2006; Tetlock, 2007).

The research shows that the lack of media oversight encourages nearby corporate managers to manipulate financial statements more frequently (Dyck & Zingales, 2002; Bushee et al., 2010; Tetlock, 2011). This highlights the importance of consistent media coverage in upholding financial transparency and integrity, especially within high-profile firms (Tsileponis et al., 2020; Guest, 2021). Despite the rise of digital media, traditional local newspapers remain essential in ensuring ethical business practices and mitigating agency conflicts (Shaker, 2014; Miller & Skinner, 2015; Baloria & Heese, 2018).

The study also examines the dynamics between media and corporate governance, incorporating the influence of the Economic Policy Uncertainty (EPU) Index and state-level economic indicators (Baker et al., 2016; Gulen & Ion, 2016; Chauhan & Jaiswall, 2023). By controlling for economic uncertainty and local economic conditions, the study effectively isolates the impact of newspaper closures, reinforcing the baseline findings. The results underscore the fundamental role of local journalism in maintaining corporate governance and financial transparency (Fang & Peress, 2009; Engelberg & Parsons, 2011; Peress, 2014; Shipilov et al., 2019).

Furthermore, the study addresses endogeneity concerns by using broadband entry and Craigslist's market entry as instrumental variables to predict newspaper closures (Seamans & Zhu, 2013; Gentzkow et al., 2014). The findings suggest that predicted closures correlate with increased discretionary accruals and real earnings management, indicating heightened financial manipulation post-closure (Gurun & Butler, 2012; Cho et al., 2016).

The study enriches the earnings management literature by identifying channels that interact with local media closures and assessing their impact on monitoring mechanisms and financial reporting quality. It underlines the roles of internal and external governance mechanisms, including institutional investors (Cornett et al., 2008; Hadani et al., 2011; Ho et al., 2024), financial analysts (Yu, 2008; Chen et al., 2015; AlmaharmehS et al., 2024), executive compensation (Bergstresser & Philippon, 2006; Adut et al., 2013; Cabezon, 2024), auditors (Becker et al., 1998; Krishnan, 2003; Francis & Yu, 2009; Xia et al., 2024), and board qualities (Klein, 2002; Xie et al., 2003; García-Meca & Sánchez-Ballesta, 2009; Gull et al., 2023), in curbing earnings management practices.

In conclusion, the third essay highlights the critical role of local newspapers in corporate governance, underscoring their irreplaceable role in ensuring transparency and ethical business conduct. The findings provide valuable insights for corporate managers, policymakers, and researchers, suggesting the need to explore additional mechanisms to maintain corporate accountability in an evolving media landscape.

Overall, the thesis delivers comprehensive empirical evidence on the significant role of local newspapers in corporate governance and financial transparency. By investigating the impact of local newspaper closures on corporate cash holdings and earnings management, the study highlights the critical importance of media coverage in promoting transparency, mitigating agency problems, and ensuring corporate accountability.

The findings consistently demonstrate that the absence of local newspapers leads to increased opportunistic behaviour (Kim et al., 2021; Heese et al., 2022; Kyung & Nam, 2023), as firms accumulate more cash and engage in earnings management to protect managerial interests. The study underscores the need for robust corporate governance mechanisms to mitigate the negative effects of diminished media coverage and stresses the importance of supporting local journalism to maintain a transparent and accountable corporate environment.

The decline of local newspapers presents significant policy implications. Policymakers need to recognise the vital role these newspapers play in maintaining corporate governance and civic engagement. Supporting local journalism through subsidies, grants, or tax incentives could be beneficial in sustaining their operations. Additionally, policies that encourage transparency and accountability in corporate practices should be reinforced, ensuring that alternative monitoring mechanisms are in place to compensate for the diminished role of local media.

For corporate managers, the findings suggest the necessity of strengthening internal governance mechanisms to compensate for the lack of external monitoring due to local newspaper closures. Institutional investors should remain vigilant and proactive in their oversight roles, ensuring that companies adhere to best practices in transparency and accountability. Companies should also consider leveraging financial analysts and short-term borrowing strategies to mitigate the negative impacts of reduced media scrutiny.

The thesis opens several avenues for future research. One potential direction is to explore the long-term effects of local newspaper closures on various aspects of corporate governance, financial and market performance. Investigating the impact on board diversity and structure, environmental and corporate social responsibility, and shareholder engagement can provide a more comprehensive understanding of the broader implications of media decline.

Additionally, future studies could examine the potential for other forms of media or technology to substitute the role of local newspapers. With the rise of digital media, social platforms, and other information dissemination tools, it is crucial to understand how these alternatives can maintain corporate accountability and transparency in an evolving media landscape.

The thesis advances the understanding of the complex relationships between media closure, corporate monitoring, cash management, financial reporting and governance frameworks. The findings provide valuable insights for practitioners and policymakers, offering guidance on refining cash management strategies, reporting quality, and enhancing governance practices amidst media disruptions. The study underscores the irreplaceable role of local newspapers in maintaining corporate accountability and financial transparency, and it calls for concerted efforts to support and preserve these critical institutions in an evolving media landscape.

In conclusion, local newspapers are more than just sources of news, they are essential components of a robust corporate governance system. Their decline poses significant challenges to maintaining transparency, accountability, and best business practices. This research highlights the need for continued support and innovation in media practices to ensure that the foundational principles of good governance are upheld, even in the face of changing media consumption patterns and technological advancements.

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