

**BOURDIEU-VEBLEN BIAS
IN CHINESE CONSUMER BEHAVIOUR
AND INEQUALITY**

by
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Abstract

This thesis examines culture and its impact on the choice of conspicuous consumption and economic outcomes. Conspicuous consumption was theorized by Veblen (1899) as a means for people to showcase their social distinction and to break social barriers by building their social capital.

While regional cultural capital, as conceptualized in Cultural Based Development (CBD), is endogenously acquired by people through the consumption of cultural goods and services, as well as social interactions, it determines the inclinations and preferences of economic choices of people in a locality and thus affects economic outcomes (Tubadji, 2012; 2023). Previous research has shown how culture shapes economic outcomes. Motivated by this research, I argue that cultural capital plays a pivotal role in driving conspicuous consumption, highlighting the significance of how individuals navigate through inequality by linking culture and inequality to their economic outcomes. I explore the complexity of the topic by breaking it down into the following questions:

- **Research Question 1:** Is there an impact of cultural friction on the movement of human capital?
- **Research Question 2:** Is there an impact of cultural milieu on the staying human capital?
- **Research Question 3:** The change of cultural milieu on consumer choice.

Firstly, I use a panel dataset covering 31 Chinese provinces over 7 years. Cultural heritage and living culture indicators are derived from Principal Component Analysis of 63 regional cultural metrics. Regional interest in conspicuous goods is assessed via internet research data on luxury fashion and jewellery brands, e-cigarettes, and collectible toys. I analyze this relationship using 3SLS estimation with both fixed effects and random effects. Secondly, I derive cultural entropy to explore its relationship with regional innovativeness, measured by the number of patents. Thirdly, I utilize a dataset comprising death tolls during the *Chinese Cultural Revolution* alongside survey data from the *Chinese General Social Survey* and employ a difference in difference identification strategy.

The main value-added of this work lies in clarifying the two mechanisms through which conspicuous consumption is linked to the outcomes of the economy. To do this, I augment the original CBD framework to show how conspicuous consumption influences human capital accumulation and innovativeness; I offer insights into the role of conspicuous consumption as a tool for accumulating social capital. Additionally, I also contribute to the understanding of the relationship between social mobility, political ideology, and well-being.

Declaration and Statements

Declaration

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Signed Yue Dai

Date 05.04.2024

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.

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I hereby give consent for my thesis, if accepted, to be available for photocopying and for inter-library loan, and for the title and summary to be made available to outside organisations.

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Declaration of Contributions

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Chapter 1

Introduction

1.1 Research Questions

Conspicuous consumption is a multifaceted phenomenon, profoundly influenced by social, psychological, and economic factors. It underscores both natural and acquired elements of human and the society. Consumption behaviors and what people consume are argued to be determined by the power dynamics of society. In another word, it is decided by the structure of society, as argued by Marx (1844) and furthered by sociologists such as Baudrillard (1970). While directly it is also under the influence of economic and social powers, as highlighted by Veblen (1899) and Bourdieu (1986).

Veblen argued that conspicuous consumption serves as a means for individuals to display their social distinction by showcasing goods that are not necessities but rather conspicuous and ostentatious. As a result, this behavior becomes desirable for those who seek to emulate lifestyles and consumption patterns in order to transcend social classes. In contrast, Bourdieu conceptualizes cultural and social capital as extensions of how wealth is transmitted across generations. According to him, social norms—including individual dressing styles, behavior, and occupational choices—can signal class distinctions and thus function as forms of capital. Their ideas provide the theoretical foundation for this thesis, particularly in understanding how conspicuous consumption acts as a booster of social capital and the role of the sociopolitical context related to this consumption.

The nature of conspicuous consumption, which often stems from the pursuit of individual wealth distinction, is closely linked to the existence of unbalanced wealth distribution and the resulting inequality. This inequality can hinder the realization of a "better" society. As Hayek (1982, p. 109) stated, "The Great Society arose through the discovery that men can live together in peace and mutually benefit each other without agreeing on the particular aims which they severally pursue." Therefore, it is crucial to address the inequality issues associated with the mentality of pursuing distinction. This need is reflected in Chapter Two, where the human needs for social distinction and social acceptance are discussed.

For individuals, achieving well-being involves meeting basic needs such as living with respect, avoiding feelings of inadequacy resulting from non-conformity to societal norms, participating in communal events, and preserving one's dignity. In contemporary society, the display of conspicuous goods serves dual purposes: demonstrating one's capability and social distinction, while also fostering a sense of belonging within specific social environment or classes, as emphasized by Veblen. Conversely, the absence of such "capital" can lead to feelings of social deprivation and inadequacy, akin to lacking essential material goods and nutrients. This psychological effect should not be downplayed, as described by Sen (1983), "In the commodity space, therefore, escape from poverty in the form of avoiding shame requires a varying collection of commodities-and it is this collection and the resources needed for it that happen to be relative vis-a-vis the situations of others."

In addition, while conspicuous consumption may not have received significant emphasis from mainstream economists, the nature of consumption remains a focal point

for economic analysis. This consumption pattern raises questions about whether economic growth is driven by innovation or sustained by material desires, such as the acquisition of luxury goods deemed 'wasteful' investments (Mason, 2000; Cooper et al., 2001). This phenomenon, termed the 'positional economy' by Hirsch (1976), highlights the potential 'social limits to growth.' Therefore, understanding the motives behind the fervor for conspicuous goods becomes crucial. From this perspective, this thesis aims to fill the gap with empirical evidence of how conspicuous consumption is motivated by cultural inequality and its consequent effects on the economy.

While based on the study of happiness and wellbeing, the standard of social well-being seems to advance in relative terms rather than in absolute terms. The Easterlin paradox (1974) proposes that even with consistent income growth, people's levels of happiness tend to remain relatively consistent. Kahneman and Deaton (2010) found that individuals' feelings of happiness are more closely tied to daily experiences of emotions, potentially related to factors such as engaging in active and fulfilling activities. They argue that health, caregiving, loneliness, and smoking are crucial determining factors of happiness. In addition, the Easterlin paradox is often directly attributed to the pervasive impact of social comparison (Clark et al., 2008), which might be a convincing direction for the answer. Recent studies indicate that when certain individuals conspicuously flaunt their wealth, it can reduce the overall happiness perceived by others (Nishi et al., 2023). While the impact of social comparison on people's mental health is pervasive in today's society, via various means including the use of social media (Braghieri et al., 2022).

Therefore, individuals' well-being is significantly influenced by their perceptions of

their standing within their social environment. Research indicates that in societies where inequality is pronounced, conspicuous consumption assumes greater importance, potentially offering those who are relatively disadvantaged a semblance of social well-being. This encompasses various forms of inequality, such as wealth and racial disparities (Charles et al., 2007; Jaikumar and Sarin, 2015).

This thesis mainly focuses on answering the questions of how inequality rooted in culture will have potential implications for the economy. As indicated by Bourdieu (1984, 1986), cultural capital itself can be seen as the manifestation of inequality, stemming from persistent disparities in wealth and social class. While previous research has also shown the effect of regional cultural capital in shaping economic outcomes (Tubadji, 2012; 2014). Motivated by the research, I argue that cultural capital plays a pivotal role in motivating conspicuous consumption. Consequently, how individuals navigate this inequality of cultural capital becomes a crucial mechanism in linking the relationship between inequality and individual and regional economic outcomes. Additionally, changes in the cultural, social, and political landscape will have effects on individuals' perception of well-being, which may manifest as changes in their choices and behaviors.

I will utilize three studies to address the aforementioned aspects of questions. I employ Cultural-Based Development paradigm (CBD) to delve into the intricate relationship between conspicuous consumption, local culture, and the regional economic development. Two pivotal pathways through which culture influences regional economic development are highlighted within the CBD: the impacts on human capital accumulation and the regional capacity to innovate. Previous research of CBD, which

primarily focuses on the links between culture and regional development, has laid the foundation. In addition, there are studies that delve into the relationship between culture and the propensity to consume conspicuous goods. The intermediate role of conspicuous consumption, as one crucial part of people's economic decision, has not been properly assessed. While using these two studies, I demonstrate the mediating role of conspicuous consumption in this process, which further contribute to the understanding of interplay of culture and individuals' strategic economic behaviours.

I hypothesize the following process: within contexts characterized by regional cultural inequality (as indicated by the distribution of cultural capital, living culture, and the index of cultural entropy), conspicuous consumption functions as a form of social capital that influences regional development by affecting human capital accumulation and innovation respectively. Thus, the present thesis unveils intriguing insights concerning inequality, social capital, and economic development that warrant deeper investigation. Moreover, the methodology employed to measure cultural capital within the CBD framework, illuminates the intricate mechanisms through which cultural influences manifest at the regional level, demanding further exploration.

For the last analysis, I investigate the attitudes towards conspicuous goods among individuals having experienced a decline in social status, particularly against the backdrop of the egalitarian communist ideology. To instantiate the context, I draw from the Chinese Cultural Revolution during the 1960s. This pivotal event promoted the ideology of egalitarianism and has been extensively studied for its effects on social trust, people's perceptions of inequality, and wealth. Furthermore, considering the event's economic underpinnings and violent nature, it is reasonable to hypothesize

that there exist intricate linkages with individuals' perceptions of well-being. Thus, I delved deeper into its relationship with individuals' views on interpersonal comparisons, a factor closely associated with the propensity for conspicuous consumption and the way individuals assess their social well-being.

In addition to answering these three main questions, I also conduct a pilot study on the relationship between cultural capital and regional entrepreneurship activities in China. This study helps to provide insights into regional culture and the distribution of economic activities in the context of China. Building upon this pilot study, the subsequent studies employ more comprehensive cultural indicators and sophisticated econometric techniques to investigate the proposed questions further.

In summary, these three main studies emphasize the significance of culture and the influence of ideology in shaping conspicuous consumption, while highlighting its profound implications for the economy. This thesis also touches on the interplay of cultural, political, and economic structures shaping individual behaviors and affecting their well-being.

In contemporary China, empirical studies on consumption play a crucial role in shedding light on the intricate relationship between economic development and overall well-being. Modern Chinese consumption patterns are often characterized as "restless" (Tong, 2014) with plenty studies indicating that individuals are increasingly consuming for personal enjoyment and to express their identity (see Zhang and He, 2012; Tsai et al., 2013), a departure from the frugality emphasized during the previous communist era. This phenomenon is often attributed to the success of economic reform. Undeniably, market reforms and economic openness have played a significant

role in alleviating poverty and contributing to the affluence of consumer goods.

However, the success of economy is also associated with the emergence of another type of class in post-Mao Chinese society, which is the economic class. Despite overall economic success, there are significant economic and social disparities between populations, especially between rural and urban areas (Treiman, 2012; Wang et al., 2019). Thus, the shift in consumer behavior might also be more nuanced than a mere change in people's consumption preference. Further explorations are also needed for understanding the potential effect of inequality as an underlying source of this shift in consumer behavior. From this perspective, this thesis explores a potentially overlooked aspect of the discussion: the overall well-being toll on Chinese individuals during the economic transformation and within the specific sociopolitical system. By doing so, it contributes to the literature on understanding issues related to people's wellbeing across different economic systems.

Additionally, this thesis contributes to the research on the socioeconomic impacts of conspicuous consumption, which is modeled as a result of social, economic, and political conditions. Rather than focusing solely on individual-level analysis, the study also enhances our understanding of its impact on regional economic development. In particular, Chapter Five contributes to CBD research by elucidating the mechanisms through which culture impacts regional human capital accumulation, influenced by individual choices. In the context of China, this specifically relates to the interprovincial migration of workers and their motives for using conspicuous goods.

Chapter Six examines provincial innovation capabilities and contributes to the literature on the cultural milieu effect in economic creativity and development, a concept

also highlighted in the CBD paradigm. The local cultural atmosphere plays a crucial role in providing the necessary cultural and social conditions for creative activities. An unbalanced cultural environment may lead individuals to utilize conspicuous goods as a means of building social capital within innovation activities, representing a further contribution of this chapter. Overall, these two mechanisms in economic development, originally proposed by Cultural Based Development, are validated in the context of China.

Finally, all three main chapters contribute to the literature by providing empirical evidence that conspicuous consumption is related to one's socioeconomic conditions and, potentially, sense of well-being, as originally indicated by Veblen (1899), Duesenberry, and Bourdieu.

1.2 Thesis Structure

The main body of this thesis comprises seven chapters. Conspicuous consumption has garnered attention from various disciplines due to its roots in psychology, sociology, and economics. In this regard, the thesis will first delve into theories from both economics and sociology to provide a solid theoretical foundation and coherence. It endeavors to review broad theories and discussions from various disciplines, emphasizing the human and societal motives behind consumption, along with economic theories related to demand and consumption analysis.

Specifically, for **the second chapter**, the introduction to theoretical backgrounds in this thesis will examine five aspects of studies relevant to the topic of interest. The initial focus will be on the insights that delve into human needs, laying the groundwork

to understand the motivations behind the consumption of conspicuous goods. In addition, with its connection to inequality, i also delve deep into theories centered on wealth distribution and inequality, aiming to uncover the roots and potential origins of such disparities. By examining empirical evidence about the source of wealth and income inequality, it offers critical insights into understanding the magnitude of improvement possible within contemporary societal structures. Understanding the evolution of inequality and the use of conspicuous goods acknowledging conspicuous consumption not merely as an inherent human tendency but as a consequence of evolving production modes in society.

Additionally, I dedicated a section to exploring the shifts brought about by industrialization in perspectives toward goods and its impact on human relationships, consequently influencing consumption behaviors. Central to this discussion is an examination of structural elements of society, shaping desires, aspirations, and the pursuit of specific commodities. These structural elements include several examinations about the influence of industrialization and the influence of changing societal culture. I also delve into the exploration of conspicuous consumption in China, elucidating its interaction and evolution within the country's cultural, social, and institutional landscapes. Furthermore, there exists the necessity to give a review of economic theories and research on consumption and conspicuous goods to provide a comprehensive theoretical background. By highlighting relevant aspects of assumptions, methodologies, and theories in economics concerning the conceptualization and modeling of conspicuous consumption, I attempt to discuss its limitations and the potential necessity of incorporating insights from wider disciplines such as sociology. This discussion is crucial because, as emphasized by Becker (1974), social factors play a significant role

in economics, sometimes challenging the assumptions and methodologies employed by economists.

It should be noted that since the above aspects of studies related to conspicuous consumption are extensive, I do not aim to delve into every detail. Instead, my focus is on discussing the most pertinent aspects of the studies relevant to the thesis. Also, while this thesis focuses on conspicuous consumption, each chapter places emphasis on the role of conspicuous consumption within its respective context. This means within each chapter, i will review works that emphasize the corresponding aspects of conspicuous consumption relevant to that context.

For **the third chapter**, as the primary analytical framework for this research, I introduce the CBD framework, along with its proposed mechanisms and its methodologies designed to comprehend and dissect culture-related inequalities and their economic consequences. This is crucial as the framework will serve as the analytical basis for the studies from chapter four to chapter seven.

Chapters four to seven encompass the three main studies and the pilot study conducted for this thesis. **Chapter eight** serves as the conclusion, providing discussions on the entire body of work along with its limitations. **Appendices** and **bibliographies** are included in the remaining parts of the thesis.

Chapter 2

Theoretical Backgrounds

2.1 Human Needs

2.1.1 General human needs

Like all living organisms, humans require resources and external support and adequate living conditions to survive and prosper. Therefore, comprehending human needs is essential for understanding human behaviors and choices. Meeting these needs is vital for individual all rounded well-being, which makes it a foundational and significant subject within economics and sociology studies.

Despite the complexity of human nature, there exists a universal pursuit of happiness and self-worth and a prevailing inclination towards goodness, righteousness. Thus, analyzing the innate human needs could shed lights on the potential human and social factors pertinent to the vision of an equal and prosperous society. Regarding the topic of this thesis, this endeavor will shed light on the underlying reasons for conspicuous consumption and how these innate human factors could potentially be amplified by societal influence.

Economic and political philosophy theories have delved into the concept of human needs, offering various frameworks, as summarized by Becker (1974). One of the most renowned is provided by psychologist Maslow's, known as hierarchy of needs (1943). His model suggests that needs are universal across humanity and are prioritized ac-

cording to their levels of urgency, reflecting their respective importance in achieving overall well-being. Despite the varied categorizations and analytical depths of these theories, a consensus on human needs emerges. Generally, humans require a safe environment, necessities for survival such as food and water, a social environment characterized by interactions and affections from other individuals, and finally, the opportunity to realize individual potential and a sense of personal value.

The value of material goods to us is determined by how they could be used to serve our needs (Menger, 1871 (2011), p.227). They are an essential part of human life. Humans inherently seek material well-being as a fundamental requirement for safety and comfort. The production of goods primarily aims to fulfill human needs, as emphasized by Marx (1867). The pursuit of material welfare is partly biologically instinctive and physiologically inherent as part of human drives (Maslow, 1943), transcending temporal and geographical boundaries of human history.

Taking the insight from Veblen(1899)'s analysis on the motive of conspicuous consumption and pecuniary emulation, conspicuous goods additionally address two additional human needs, which are social need and the need for being recognized as distinctive. Bentham (1789) identified these two needs as "friendship and a good reputation." Meanwhile, Maslow categorized them as "respect and esteem from others, love, and belonging." This underscores the innate human inclination, as social beings, to seek companionship and aspire to gain societal recognition for their value and accomplishments. For Marx, these two needs could be broadly incorporated into his framework as "meaningful community", "fulfilling work" or "egoistic" need, depending on his analysis of alienation (Marx, 1875; Chitty, 1993). It's worth noting that

this distinctive incentive sets conspicuous goods apart from mere possessions valued solely for their aesthetic appeal. The main point to emphasize is that luxurious or expensive goods, while they can often be aesthetically pleasing, primarily serve to fulfill social needs for acceptance and recognition.

Firstly, conspicuous goods serve social needs. Humans, by nature, are social creatures, inherently seeking companionship from friends, family, and engaging in frequent social interactions. As beings, our social connections are vital, offering safety, assistance, comfort, and support while minimizing the risks associated with solitude. Research indicates that social interactions yield both physical and psychological benefits (Baumeister and Leary, 1995). Moreover, individuals often require reference groups to navigate life, aiding in decision-making, especially amidst uncertainty (Festinger, 1964). From this standpoint, adhering to specific social consumption norms and aligning with peers' lifestyles becomes essential and enhances people's sense of belongingness and social connection, contributing significantly to individuals' well-being (Veblen, 1899; Duesenberry, 1949; Durkheim, 1893). Surveys have supported this observation, indicating that individuals who frequently consume conspicuous goods are influenced by interpersonal dynamics, driven by the desire to associate themselves with certain social groups (Han et al., 2010; O'Cass and McEwen, 2004).

The second inherent need is the desire for recognition of individual value, distinction and social prestige. From a biological and psychological perspective, receiving recognition for one's abilities and earning social respect can significantly boost one's emotional well-being, contributing to a heightened sense of individual self-worth and recognition. This need for recognition is vital for human survival and is extensively

documented in sociology and anthropology studies. Theories regarding this human need emphasize that undeniably individuals seek fulfillment through recognition of their abilities. In Maslow's word, it is "firmly based self-esteem, we mean that which is soundly based upon real capacity, achievement and respect from others." From this point of view, it is the subjective evaluation by society that individuals desire to have.

However, this drive potentially extends to aspects of human needs such as ego, where fulfillment is achieved through aspiring to attain high social status and compelling individuals to validate their distinctiveness. Alfred Marshall (1890, Chapter 2) encapsulated this sentiment, describing it as "a feeling which, if we consider its universality and its constancy, that it affects all men and at all times, that it comes with us from the cradle, and never leaves us till we go into the grave, may be pronounced to be the most powerful of human passions".

As a result, people would seek means to showcase distinction and display it to others. This is mirrored in how goods are valued. On one hand, humans inherently value scarcity as a symbol of uniqueness and distinction. It's a common observation that the rarity of an item often amplifies its appeal, serving as a marker of social status (Lynn, 1991). Conversely, individuals deliberately seek out and endorse high-priced goods to signify distinction. Veblen (1899, p. 60) also articulated this sentiment, stating, "Great as is the sensuous beauty of gems, their rarity and price add an expression of distinction to them, which they would never have if they were cheap." Therefore, a primary function of conspicuous goods is to satiate individuals' craving for distinction. Menger (1871) highlighted the importance of the relative attainability of goods in stimulating human desires. He stated that the value of a good is determined by its

capacity to satisfy specific human needs in relation to its availability. These points are validated by surveys indicating that motivations such as status representation, wealth affirmation, identity portrayal, and self-monitoring drive consumption patterns (Han et al., 2010; O’Cass and McEwen, 2004; Bronner and Hoog, 2018).

However, it should be noted that the desire for distinction and social esteem does not always align with the need to be recognized solely for one’s inherent value. The pursuit of distinction, articulated by Marx (1844) as "ego," arises as a result of the social structure rather than innate human desire. From this point of view, there is a disparity between being recognized for one’s objective ability and being evaluated in terms of importance based on one’s subjective idea. In other words, the need for recognition as a valuable member of society does not entail the idea that one should be superior or more distinctive than others. Rather, it emphasizes the importance of being acknowledged by others for one’s worth as a human being and contributions to society.

Insights from psychology suggest that the need for ego fulfillment may arise from the desire for social security and the experience of anxiety. However, it remains unclear to what extent the ego is truly shaped by social and environmental factors. Nonetheless, the urgency of the desire for distinction might be heightened in societies where an individual’s survival and worth are more dependent on societal evaluation. In other words, the "value" of an individual is more contingent on society’s judgment, thereby amplifying people’s innate inclination to seek social recognition. Consequently, it is reasonable to suggest that the desire for distinction is at least partly socially constructed.

In terms of the evaluation of the value of goods, within Marx's seminal framework, he delineated that material goods possess dual values: use value, which denotes their direct utility, and exchange value, determined by market exchange and reflecting the necessary labor input based on societal production standards within organized production and exchange system. Furthermore, as previously discussed, the utilization of goods according to their functions extends beyond merely serving basic physical needs. This extended use also imbues goods with the significance of signifying wealth and reflecting an individual's social standing and prestige (Veblen, 1899). Baudrillard (1976) introduced the notion of "sign value," suggesting that the significance of consumption transcends tangible properties and resides more in symbolic representation.

This concept underscores the essence of conspicuous consumption and aids in emphasizing a notable distinction between conspicuous consumption and Materialism. Materialism, as articulated by Belk (1984), is characterized by the importance consumers place on tangible possessions. While Materialism emphasizes the satisfaction and pleasure derived from owning and using goods, conspicuous consumption places greater emphasis on the symbolic or sign value associated with using conspicuous goods.

2.2 Wealth Inequality and Justice

To further understand the motivations and reasons behind this consumption choice, it could be useful to provide a review of the underlying sources of inequality and the associated discussions of justice surrounding it. As inequality in wealth possession is a significant source of conspicuous consumption. Conspicuous goods serve as symbols of individuals possessing more than what is necessary for mere survival. While

it would be overly simplistic to view wealth accumulation as the sole pathway to distinction, as human attitudes toward wealth and distinction are influenced by various factors including psychological, economic and social reasons. Nevertheless, based on observations of contemporary and historical human societies, it is evident that accumulating wealth is a primary method through which individuals achieve social distinction. As Senior (1836) noted in his analysis of human psychology, amassing significant wealth remains a predominant means of garnering recognition. Building on the discussion of human needs, the ability to accumulate resources for living may be the most direct reflection of an individual's innate capabilities and the human need to secure resources for survival. Thus, the accumulation of wealth serves as a highly desired form of displaying distinction. However, it is important to recognize that wealth accumulation is often accompanied by inequality and other socio-economic issues. These disparities in wealth distribution raise significant concerns for economics, as they can have far-reaching implications for social cohesion, economic stability, and overall well-being within societies.

On the other hand, it is also essential to recognize that wealth inequality does not always lead to conspicuous consumption. In societies with limited social mobility, such as feudal China, conspicuous consumption may be relatively subdued. Additionally, throughout history, conspicuous consumption has not always been associated with affluence; at times, it has been characterized by frivolity, corruption and waste rather than genuine wealth. Nevertheless, it remains undeniable that inequality plays a pivotal role in driving conspicuous consumption. Veblen's (1899) seminal theory posits that disparities in wealth and class serve as primary motivators for conspicuous consumption. Such disparities prompt individuals to emulate the consumption patterns

and lifestyles of their desired social class, thereby facilitating integration into specific social circles. While this thesis primarily delves into this latter relationship, it remains pertinent to allocate a segment exploring the origins of inequality. Scrutinizing the fundamental principles governing wealth distribution within societies can shed light on whether disparities predominantly stem from deep-rooted social and political structures or from economic dynamics that emphasize productivity. Such a nuanced examination not only provides clarity on the factors driving conspicuous consumption but also offers valuable insights into the intricate interplay of societal, economic, and cultural determinants shaping the mentality behind this consumption pattern.

Inequality can significantly impact people's mental and physical well-being, which, in turn, can potentially hinder economic growth. Research has shown that inequality influences well-being, as demonstrated by the well-known Easterlin paradox, which suggests that economic growth does not necessarily lead to increased happiness, despite alleviating poverty and providing comfort. Income has been found to be related to life satisfaction, reflecting one's perception of a good life, while emotional well-being is more directly associated with individuals' feelings and daily experiences (Kahneman and Deaton, 2010). There's direct evidence suggesting that inequality can negatively impact individuals' well-being and is often argued by some as the reason behind the Easterlin paradox (Clark et al., 2008). Studies indicate that people exhibit aversion to inequality (Tricomi et al., 2010). Additionally, the relationship between wealth and happiness isn't straightforward; happiness doesn't consistently increase with greater wealth. It has also been indicated that individuals tend to be happier in societies with less income inequality (Oishi et al., 2011; Martela et al., 2020).

The distribution of wealth and resources is a fundamental issue in every society. The debate over whether wealth distribution should be based on needs or capabilities directly impacts resource distribution and consequently influences social equality and economic progress. This discussion is often intertwined with moral considerations of individual rights and freedoms, as it involves recognizing that the equality of all individuals should be upheld as a moral principle and that people should be free to pursue their welfare.

Regarding the issue of differing moralities across people, Rawls (1975) suggested that the existence of "goodness" as a result of justice must also contend with the condition that people do not pursue their interests at the expense of others. Like Adam Smith and Marx, Rawls also indicated that the potential existence of the pursuit of individual distinction ("being wealthy," as he called it) might be an unresolved matter in terms of achieving goodness for the general populace. While Rawls suggested that these motives stem from psychological feelings of insecurity and anxiety.

With the widely accepted principle that human beings are born equal, it becomes imperative to avoid the abuse of power and establish universal orders and law as they are necessary to ensure that social justice is served, and people's rights are not violated. Upholding justice is essential for maintaining the functioning of society. Rawls (1971) argued that inequality lacks moral justification and advocated for a system that ensures equal opportunities for individuals of comparable merit.

While egalitarian ideals acknowledge individual differences in endowments, they advocate for resource allocation based on needs. However, Marx (1875) also emphasized that this stage of society must be predated by a time when significant social progress

and productivity advancements will have been made, which ultimately eliminated inequality stemming from natural endowment disparities between individuals. In other words, society should not dismiss the notion of prioritizing productivity improvements through the utilization of individual talents and capabilities. While in a more advanced society, where products can meet human material needs and individuals have the freedom to realize their potential and talents. Thus, even for egalitarian ideas, equal opportunity to contribute should also be regarded as a basic right for individuals.

Based on the principle of equal opportunity, it's evident that individuals should receive compensation in line with their efforts and achievements. This ensures that people can enjoy the fruits of their labor. This principle is not merely a matter of morality; it is also related to the discussion of efficiency within the economy. As equality of opportunity facilitates the optimal allocation and utilization of resources within an economy, it is widely regarded as an efficient mechanism, thus earning endorsement from proponents of a free-market system who value its ability to enhance overall productivity and prosperity.

This understanding is pivotal for how the economy should function. Hayek (1945) argued the rationale behind adopting a market system for the efficient allocation of resources and production lies in the acknowledgment that knowledge is dispersed among individuals. In other words, a free-market system works best when everyone contributes to the functioning of society by sharing their knowledge. As Hayek articulated, "The peculiar character of the problem of a rational economic order is determined precisely by the fact that the knowledge of the circumstances of which

we must make use never exists in concentrated or integrated form but solely as the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess.....it is a problem of the utilization of knowledge which is not given to anyone in its totality (Hayek, 1945).”

However, when discussing “ability” and “endowment”, it has to devote part of the discussion on the criteria society employs to evaluate "ability." In other words, it addresses the merits that might help answer the question of conflicts between allocation based on needs or ability. This argument is central to debates between egalitarianism, which advocates for equal distribution of resources, and liberalism, which supports wealth distribution based on individual merits. As it raises the question of whether we are using the end to justify the means, as some critics argue. Recent discussions on merits offer valuable insights into examining this issue.

Recognizing and utilizing merits are crucial. While human society has often operated on nepotism, social progress and transformation necessitate a meritocratic system that values intelligence and effort (Young, 1994). However, this raises the question of what qualifies as "merits" and whether some individuals are inherently more capable than others in terms of intelligence and effort towards success. Oversimplifying or mishandling the concept of "merits" and talents could exacerbate inequality. Studies suggest that implementing a meritocratic system tends to increase inequality within a society, highlighting the importance of distribution mechanisms to ensure equal opportunities for social mobility, such as education (Benabou, 1996; Roemer and Trannoy, 2015)

Sen (2000) emphasized that the establishment of a meritocratic system within a so-

ciety inherently stems from the perception of values. Following his argument, the perceived merits often reflect society's judgment regarding the characteristics of a "good" society. For example, in societies that prioritize the outcomes of economic development, individual contributions to economic growth are deemed as a great "merit". Such a focus on economic growth necessitates the efficient allocation of resources to enhance both human and technological productivity. Within this framework, competition propels the most "productive" individuals to prominence, potentially overshadowing others who excel in areas like arts or other pursuits which cannot contribute to the economy directly. Consequently, this approach accentuates the identification and categorization of individuals based on their perceived "merits," such as intelligence, educational achievements or specific skills, potentially marginalizing those whose talents lie outside these defined parameters. In addition, with the progress of technology and the changing landscape for human labour, at every stage of society, societies might only prioritize specific "merits" based on prevailing modes, potentially overlooking other diverse talents individuals possess.

Furthermore, delving into the objective identification of human "merits" in terms of the mechanism of biological inheritance of traits may not support the notion that the human species is evolving towards a "better" direction where certain "merits" are preserved and concentrated. Even if it is generally true that many productive traits are heritable, such as intelligence, physical fitness, beauty, and health, it is also true that for any valuable traits to be passed down in a systematic matter, individuals must engage in strategic breeding, which often encroaches upon the free will of people. Additionally, the complexity of human social interaction adds another layer of complexity. As social animals, we interact in ways that profoundly impact

our emotions and well-being. The intricate workings of the human brain and psyche indicate that any simplified measurement of an individual's value is unreliable.

This could also be seen from human history where the productivity demanded by society has always aligned with the prevailing production modes of its era. In hunting-gathering societies, physical strength might have been more prioritized over intelligence, even though both attributes are crucial for a functional society. This transformation was also evident during the industrial revolution. As capitalism emerged alongside technological advancements, wealth shifted across various demographics, leading to a reshaping of wealth distribution among groups (Wood, 2017). Indeed, factors contributing to wealth generation and accumulation, be the natural endowments or social given, continually evolve as societies advance (Beinhocker, 2007). In sum, societies often evaluate individuals or resources based on their perceived merits or "value" within limited parameters according to the development stage of the society. While the next section will focus on the economic studies of "merits" in today's society.

2.2.1 The assessment of Merits

Thus, the criteria for determining human "merits" and their corresponding rewards vary across societies and over time. Moreover, across the contemporary world, it is especially important to examine this issue, as the fairness of the system and the "traditional" merit-based system are being questioned. This has given rise to populist ideas and discontent. Even for the country that upholds the idea of the American dream, in the book "The Meritocracy Myth" (Sandel, 2020), the authors argue that conventional merits such as talent, hard work, and adherence to rules may not nec-

essarily promote social mobility for individuals in today's world.

It's challenging to argue for a subjective and universal qualification of merits (Sen, 2000), especially when we acknowledge the possibility that individuals possess different sets of talents and abilities. In addition, when it comes to the relationship between ability and the distribution of wealth or income. Mincer (1958) pointed out that even if we were to assume that "merit" or natural ability follows a normal distribution, the resulting income distribution would not mirror this pattern. Instead, income and wealth distributions typically conform to Pareto's Law of Distribution, highlighting a notable skewness in the distribution. Recent research by Gaillard et al. (2023) reaffirmed that the Pareto Distribution is prevalent in consumption, labor income, wealth, and capital income. Among these, consumption patterns exhibit the least dispersion among the population, which is particularly pertinent to the focus of this thesis, as it indicates consumption is not merely a linear function of wealth or income.

Acknowledging the importance of equal rights for all individuals across societies, there exists a general belief that fairness should serve as the foundation for wealth allocation. Despite that perspectives vary on what constitutes a fair allocation of resources and income (Miller, 1992; Fehr and Schmidt, 1999; Cappelen et al., 2020). Rawls (1971) posited that fairness in wealth distribution stands as the cornerstone of a just societal structure, asserting it as "the first virtue of social institutions." Research by Alesina and Angeletos (2005) suggests that individuals tend to view wealth accumulated through personal effort as justly earned. In contrast, wealth obtained through factors like luck, birthright, social ties, or corruption is perceived

as unjust and thus requires redistribution.

People generally show beliefs in fairness and equal opportunity to success (Roemer and Trannoy, 2015; Alesina and Giuliano, 2011). Additionally, research has demonstrated that the preference for redistribution is driven not only by self-interested motives but also by considerations of distributive justice (Fong, 2001). While the preference for equality might be expressed through voting for redistribution too. People's voting for redistribution is based on their experience of social mobility under various tax systems (Piketty, 1995). Hence, although perspectives on an ideal wealth distribution may differ worldwide, it is crucial to acknowledge the equal rights of all humans and uphold principles of justice. Fairness should be regarded as a fundamental economic distributive principle within any society, as it fosters moral integrity and consequently promotes long-term economic development and societal well-being.

Furthermore, when examining our contemporary emphasis on "productivity merits," philosophers and economists have offered diverse perspectives on the interplay between production, economy, and humanity. Adam Smith (1759) cautioned against the potential erosion of moral values in societies overly fixated on economic success. Durkheim (1893), on the other hand, suggested that the enhancement of productivity through the division of labor fosters social cohesion by establishing moral contracts and enabling individuals to contribute according to their unique abilities and functions. In the modern era, the emphasis on "productivity merits" may skew societal value systems. Marx (1867) criticized such tendencies, arguing that an excessive focus on material pursuits diminishes individuals' intrinsic worth and sense of morality. This orientation can also have broader economic ramifications: as societies prioritize

material gain, the spirit of voluntary cooperation and communal support may diminish, leading to divisions among individuals. These shifts could exacerbate existing inequalities, perpetuating the cycle of societal wealth disparities. This could be seen in Becker et al. (2005)'s analysis. He showed that if accumulating wealth results in heightened social status and, subsequently, increased utility for the wealthy, then a system favoring inequality would arise to maximize overall utility.

Therefore, it is essential to assess the individual factors that are crucial for assisting social mobility and contributing to inequality within the economy. This could underscore the disparity between modern concepts of production "merits" and perceptions of a "fair" distribution from a justice standpoint. Furthermore, from a moral perspective, it illuminates the connection between inequality and potential structural implications for human conditions in terms of moral values.

In the context of China, the unique nature of its political regime plays a pivotal role in shaping economic activities, in terms of regional development disparities. The primary reason explaining income inequality and its evolution lies in its political institutional framework, which diverges from liberal capitalist economic systems (Knight, 2013; Xie and Zhou, 2014). Additionally, interpersonal inequality is significantly influenced by the ownership of financial and physical capital (Zhou and Song, 2015). Over time, factors such as urbanization and demographic shifts due to aging have also contributed to changes in this inequality (Jain-Chandra et al., 2018). Indeed, regional and interpersonal inequality in China partly stem from underlying structure of the socio-political system. See a thorough review on the evolution of social inequality and mobility from Mao's era to contemporary China from the paper of Bian (2000).

Beyond just examining China's context, it's valuable to explore countries with more liberal economic systems to understand how various factors contributing to inequality in a "free" society. The foundational principle of a liberal economy emphasizes productivity and the capacity to generate wealth. If this principle is honored, it could be expected there is a relationship between "productive merits" and wealth and social mobility. This examination could offer more comprehensive evidence on the causes of inequality, and whether it is justifiable or not, by shedding light on the underlying structural factors within society behind it. In this thesis, i primarily focus on factors encompassing the ownership of capital, individual capabilities, educational opportunities, social and cultural capital, and psychological elements.

If individual ownership of physical capital is perceived as a form of "merit," it has been extensively contended that such ownership significantly contributes to inequality (Rousseau, 1755; Piketty, 2017; Ranaldi and Milanović, 2022). Research on the time span from 1870 to 2015 suggests that the return on capital has historically exceeded the growth rate (Jordà et al., 2019). While physical capitals such as land and natural resources remain a crucial role for production in contemporary society. The issue with unequal capital may eventually hinder economic growth, as suggested by the analysis of Alesina and Rodrik (1994), wherein distributive conflicts arise, leading to slower economic growth with a more unequal distribution of capital.

Aside from physical capital, research exploring the correlation between factors such as education level, intelligence, ability, and income, social mobility offers insights into to what degree these attributes are perceived as indicators of productivity or "merit." Studies conducted in the British context, such as those by Brown et al. (2014),

suggest that education is considered the primary "merit." Similarly, research focusing on American society indicates that the primary factor explaining social mobility and income disparities is investment in human capital, particularly education (Griliches and Mason, 1972). This trend has also contributed to the widening wage gap observed in recent years (Card, 1999).

In terms of the decision to invest in human capital, It has been pointed out that investing in human capital is primarily an individual's rational choice based on their calculations of future income and the time required, the influence of environmental factors, such as family backgrounds, is considered less significant in this perspective (Mincer, 1958; Friedman, 1953). However, in practice, households with limited financial resources face liquidity constraints that prevent them from investing in education and other forms of human capital acquisition (Lochner and Monge-Naranjo, 2012). Moreover, it remains uncertain as to what degree the decision to invest in education is influenced by the socio-economic backgrounds of individuals and their families. Drawing from sociologist Pierre Bourdieu's concept of cultural capital, it's highly likely that social economic and family environment significantly shapes individuals' prosperity by influencing their chances and choices of receiving education.

In contrast, ability alone is contended not to lead directly to higher wages (Cawley et al., 1998). While intelligence and genes related to education show a positive impact in terms of leading to individuals' success in education and career. This is regularly evidenced by research from both economics and biology, indicating individuals with such genes experience upward social mobility (Belsky et al., 2018; Davis et al., 2011; Strenze, 2007). However, some also suggest this could be attributed to marriage

patterns that selectively pair individuals with certain genetic traits associated with higher achievements (Abdellaoui et al., 2022). In other words, having higher intelligence and better educational related genes may not directly indicate an individual is better in terms of their ability to generate wealth. Rather, the identified relationship between genes and income might be due to the result of social interactions between similar people.

While these attributes or "merits" may facilitate social mobility, they don't definitively establish the relationship for individuals that "better" genes and more education lead to enhanced economic outcomes through heightened productivity and increased contributions. While it is generally true that individuals with higher levels of education and greater intelligence tend to excel in problem-solving and exhibit superior skills, thus contributing to greater efficiency, it's important to acknowledge the potential drawbacks of relying solely on these traits as criteria for selection and social hierarchy. If a system is primarily based on selecting individuals based on traits such as intelligence and education, it runs the risk of becoming predetermined. In other words, if these traits become the sole indicators or metrics upon which selections are based and social hierarchy is constructed, the result is a system that inherently favors certain individuals over others. Moreover, such a system may perpetuate itself by prioritizing the criteria of education.

Related issues that arise in this context are job mismatch and overeducation. Even if for the whole society, investing in human capital can boost productivity and generate more outcome, promoting free education for all as a means to enhance overall economic growth and equality poses several challenges. Advocating for free education

and improving welfare infrastructure to foster upward social mobility may not fundamentally alter the underlying structures of social hierarchy and economic disparities, potentially leaving individual social standings relatively unchanged. Even with equal educational opportunities, the existing production framework suggests that certain individuals may still occupy "lower-level" occupations, as these roles are essential within society. This phenomenon is evident in China, where individuals with college educations sometimes find themselves in jobs that do not necessarily require such advanced qualifications.

Furthermore, existing social status and wealth offer multiple avenues for perpetuating success. For individuals already positioned at the apex of the social hierarchy, various mechanisms facilitate the transmission of their status, thereby perpetuating inequality. Bourdieu's (1977) examination of various forms of capital provides insights into the ways in which wealth and social status are transferred and maintained across generations. Heckman and Mosso (2014) highlighted that the accumulation and distribution of such capital significantly contribute to societal disparities and discrimination. Additionally, tastes and lifestyles cultivated within specific social contexts naturally serve as mechanisms to distinguish and maintain distinct social classes, as elucidated by Allen et al. (1994).

Bourdieu posits that predispositions within individuals translate over time into tangible forms known as social capital and cultural capital. These forms encapsulate people's learned behaviors, networks, and cultural competencies, which subsequently shape their socio-economic trajectories. Hence, these forms of capital exhibit themselves as social and economic privileges, and they can manifest in diverse ways. For

instance, if people are more likely to socialize with people who are closer to them in terms of their social statuses, then it will create the class stability (Akerlof, 1997). Research by DiMaggio and Mohr (1985) and Chetty et al. (2022) underscores the significance of social capital — emphasizing that an individual’s networks and connections can profoundly impact their economic prosperity, mobility, educational achievements and even marriage selection. Moreover, one’s economic status can shape consumption patterns, including cultural preferences such as music and literature (van Eijck, 1999; Chan and Goldthorpe, 2007). Such patterns further influence the educational performance of subsequent generations (Graaf et al., 2000). Additionally, distinct consumption behaviors of material goods between social classes serve as markers of individual tastes, contributing to the perpetuation of social class distinctions (Holt, 1998). These social and cultural inclinations form a theoretical construct (Allen and Anderson, 1994), although they may not necessarily exist as an identified social class with a distinct social identity. Consequently, the inequality in cultural capital can be viewed as an amplified reflection of economic disparities. This concept will be further explored in the first chapter of this thesis.

The roles of cultural and social capital in perpetuating inequality are closely intertwined with fundamental psychological and emotional dynamics (Friedman, 2016). Psychological factors play a significant role in perpetuating social immobility. As society increasingly equates wealth with social status, generating extra utility to individuals by being socially “distinctive”, individuals are more inclined to hoard their assets (Osman et al., 2018). The desire to maintain one’s social status, combined with the need to preserve a sense of distinction and prestige, intensifies the urgency to amass wealth (West, 2014). This behavior may be exacerbated by status quo ef-

fects, where the fear of descending the social ladder outweighs the satisfaction derived from ascending it. Consequently, individuals at the bottom face a pronounced socioeconomic trap, leading to limited or stifled social mobility. Moreover, individuals in such positions often bear psychological costs due to their socioeconomic status, leading to a further decline in their overall well-being (Brown et al., 2005; Dearing, 2008).

Thus, it becomes evident that even within the economic system aimed at maximizing productivity, achieving a "fair" outcome in terms of wealth distribution and opportunities for social mobility based on individual "merits" and contributions to production is not always guaranteed. The factors influencing the fairness of distribution range from intertwined effects of psychological, sociological, and political factors. Therefore, redistribution policies are suggested as a remedy to address this issue. Additionally, apart from funding public education and fostering opportunities for innovation and entrepreneurship, it is crucial to recognize the importance of harnessing potential and promoting overall productivity to effectively tackle these challenges.

From the aforementioned points regarding the dynamics and patterns of how inequality arises and persists, it is evident that wealth inequality, as a primary driver behind conspicuous consumption, is a multifaceted phenomenon. Likewise, despite conventional perspectives emphasizing the prominent role of economic factors in driving conspicuous consumption, other interconnected factors also contribute significantly to this phenomenon. Additionally, just like inequality itself, these factors might also be embedded in sociopolitical power dynamics. Thus, there exist universal factors across human societies contributing to wealth inequality, such as psychological effects

and the presence of social and cultural capital, which are not confined to specific economic systems and societies. From this point of view, addressing inequality and fostering social mobility may, therefore, necessitate new perspectives and alternative approaches.

These perspectives on the source of inequality further implied the importance of examining conspicuous consumption not merely as an individual behavior but as a broader social, cultural, and structural phenomenon, particularly within the context of evolving economic and cultural landscapes. Therefore, the next section will review theories concerning the evolution of society in the context of industrialization. These theories offer insights into understanding the relationship between people's living condition, society, and production. While this will further motivates the studies conducted in Chapter 5, 6 and 7, which delve into the how the social political environments are affecting the choice of conspicuous consumption. To be specific, for Chapter 5 and 6, i address the issue of imbalanced existing culture in conspicuous consumption. While for Chapter 7, i reflect on the effects of political ideological in consumption choices, of which the relevant theories are reviewed in the next section.

2.3 Conspicuous Consumption in the Context of Industrialization

Conspicuous consumption is a form of leisure choice that is greatly influenced by the corresponding social and economic macro environment as well as individual conditions. Therefore, it is valuable to draw insights from sociologists and anthropologists regarding its role in reflecting the production relationships and social structure of so-

ciety. In the words of structuralist philosophers, what people consume is determined not by people's free will but is also determined by the structure of the society.

The following section aims to elucidate the socio-economic conditions that have facilitated the prominence of conspicuous consumption within modern industrialized society. From a structural perspective on the politics of society, people's lives are constructed by forces that are reflective of power. Consequently, consumption patterns are often intertwined with power, whether it be political, economic, or other forms of influence shaping the conditions in which people live across various environments. This perspective positions conspicuous consumption as a behavior within the economic realm, while also draws attention from disciplines such as sociology and anthropology alike. For sociologists, human civilization represents a continuous process of modifying human conditions, exerting direct impacts on society and individual mentality and life. As Elias (2000) noted in his theory of the progress of civilization, the evolution of human society encompasses changes in interpersonal relationships, structural and institutional configurations of political power. Furthermore, as societies advance, emotions and human motivations coevolve, reflecting the interplay between the individual psyche and societal conditions.

Responding to the needs analysis in the first chapter, while certain universal human needs rooted in our biology and psychology might transcend cultural and geographical boundaries, their expression and fulfillment are profoundly influenced by external factors such as specific temporal, social, cultural, and political contexts. Evidence highlights distinct variations in how individuals across different societies pursue and derive satisfaction from their needs, contingent upon unique societal characteristics

(Diener and Lucas, 2000). In other words, to a certain degree, needs are endogenously determined within the progression of society, a point well reflected in sociology. Hence, the emphasis and prevalence of conspicuous consumption might vary, reflecting the socio-economic nuances of specific societies. It is therefore crucial to consider the concept of social evolution and how society has evolved over time, impacting human conditions.

This calls for a thorough exploration of the analysis of the industrialization revolution on people's needs and consumption behaviors. From an economic standpoint, this discussion will critically assess how shifts in production modes have contributed to social stratification, changes in interpersonal relations, and social identity, thereby influencing the changes observed in conspicuous consumption behaviors.

Before proceeding further, it is worth noting the ostentatious exhibition of resources and conspicuous consumption are not solely phenomena confined to human civilizations; they manifest within the broader context of the animal kingdom as well. Conspicuous behaviors in various species serve as evolutionary signals, signaling an individual's capacity to procure resources essential for reproduction and offspring rearing. For instance, the pronounced antlers of male deer or the vibrant plumage of male peacocks serve as overt indicators of their genetic fitness to potential mates. Within human history, the utilization of conspicuous goods as markers of social differentiation and status has been well-documented (Mason, 1981; Page, 1992; Sundie et al., 2012; Patsiaouras and Fitchett, 2012). Ancient civilizations leveraged a myriad of artifacts—ranging from intricately crafted beads, pendants, and amulets fashioned from bone, shell, and various minerals—to demarcate societal hierarchies and delin-

create the roles of pivotal figures within tribal or communal structures. These artifacts were emblematic representations of power, authority, and social prominence. Thus, Baudrillard (1970) viewed conspicuous consumption as a contemporary alternative to physical aggression and dominance, exemplifying aggression and the desire to showcase one's capabilities in today's modern and civilized society. Meanwhile, Veblen referred to this form of consumption as conferring "invidious distinction" (Veblen, 1899, p. 24).

As one of the pioneer scholars in the study of conspicuous consumption, Veblen's insights emphasize that the social value accorded to goods, and the consequent "urgency" to possess them, is not static but evolves accordingly with shifting institutional and structural landscapes. Consequently, attributing such phenomena purely to inherent human inclinations, without considering broader socio-economic variables, will result in an incomplete perspective. The following section will explore ideas and analysis from sociology regarding societal changes of industrialization, which will eventually be reflected in how people regard consumption.

Industrialization stands as a pivotal period in human history, primarily because of its profound impact on enhancing productivity to fulfill basic human needs and instigating significant structural shifts within society. Weber's (1904) work emphasized the deeply ingrained cultural factors that contributed to the rise of industrialization. He highlighted industrialization as an era where profit-driven motives rationalize economic activities, guiding societies toward the "ideal type" termed by Weber. However, this progression also comes with consequences. Weber theorized a potential outcome known as the "Iron Cage," wherein societal structures and human endeavors become

increasingly constrained by the rationalities of bureaucracy and the economic order.

Drawing from Marx's analysis of historical materialism, changes in forms of production inevitably impact social relations and shape prevailing societal conditions by influencing interpersonal dynamics and overarching socio-economic structures. Marx argues that capitalism has transformed societal values, directing them towards a materialistic orientation centered on the production and acquisition of goods and material possessions (Leopold, 2015). He labels this phenomenon as commodity fetishism.

According to Marxism, for capitalism to function, the processes of material production and the demand for commodities must be continually maintained. This encompasses broader implications for human life, as sustaining capitalism necessitates the ongoing reproduction of productive resources and the reproduction of social and production relations (Okishio, 2022). Marx posits that, diverging from the natural progression of human ownership history where material resources are communally owned, private ownership results in the estrangement of individuals in various facets of life and society. This includes realms such as religion, family, state, science, and art (Marx, 1844). Consequently, shifts in the mode of production directly influence governance structures, religions, art, and formal institutions, as they become integral components of the superstructure, primarily serving the imperatives of production and societal reproduction (Althusser, 2014).

In terms of the attitude and need for material goods and commodities, it also had to be reconstructed and eventually perpetuated people's belief system. This process suggested consumption must be socially determined along with this process. As Marx indicated, "The various shaping of material life is, of course, in every case

dependent on the needs which are already developed, and the production, as well as the satisfaction, of these needs is an historical process, which is not found in the case of a sheep or a dog (Stirner's refractory principal argument *adversus hominem*), although sheep and dogs in their present form certainly, but *malgré eux*, are products of an historical process." In addition, "Under the system of private property their significance is reversed. Each person speculates on creating a new need in the other, with the aim of forcing him to make a new sacrifice, placing him in a new dependence and seducing him into a new kind of enjoyment and hence into economic ruin. Each attempts to establish over the other an alien power, in the hope of thereby achieving satisfaction of his own selfish needs." (Marx, 1844, Part 3, Chapter 3).

On the other hand, commodity fetishism also decides the value of labor is its use in the production. "So it is in the world of commodities with the products of men's hands. This I call the Fetishism which attaches itself to the products of labour, so soon as they are produced as commodities, and which is therefore inseparable from the production of commodities" (Marx, 1867, Chapter One). The process of commodification of individuals to their functions in the economic production process, which eventually led to the situation where work type and productivity activities define individuals (Rafique, 2022).

Indeed, not only is people's "value" expressed through production, but alienation between individuals can also result, where social relationships are mediated and expressed by commodities. This shift brings changes to the dynamics of interpersonal relationships, where people's social worth is expressed through the exchange of goods. From the perspective of structural Marxism, studies on consumption are closely linked

to social class, with a focus on how goods could be distributed among people for use according to the prevailing production mode (Marsh and Burrows, 1992).

This point could further be from the analysis of the direct shift in individual societal roles, which further underlies changes in people's perceptions of well-being, as highlighted by sociologists. In post-industrialized settings, one's occupational identity shaped their social standing, which also conferred individuals with a distinct sense of purpose and belonging. Bauman's (1998) perspective encapsulates this sentiment succinctly by suggesting that societal structures condition individuals, cultivating them to align with their social identities.

Thus, accompanying the process of industrialization is the observation that it significantly reshaped the dynamics surrounding the consumption of conspicuous goods. Such consumption became emblematic of stratified societies and exacerbated class distinctions. Veblen's analysis, based on his observations of 19th-century America, recognized the presence of conspicuous consumption in both barbarian and savage societies, (Mason, 1981; Page, 1992). Nonetheless, its prominence was notably more subdued in comparison to industrialized societies. The growing prevalence of conspicuous consumption, coupled with the rise of the leisure class and emulation as primary consumption drivers, was intrinsically linked to the establishment and utilization of individual ownership of productive resources (Veblen, 1899). According to Veblen (1899, p.12), "In the sequence of cultural evolution the emergence of a leisure class coincides with the beginning of ownership. This is necessarily the case, for these two institutions result from the same set of economic forces. In the inchoate phase of their development they are but different aspects of the same general facts of social

structure.”

In barbarian societies, property ownership was characterized by "exploit, coercion, and seizure," reflecting a "predatory habit of life," as described by Veblen (1898). In these contexts, individuals sought honor through violent activities that showcased their power, and the transfer of resource ownership often occurred through forceful means such as plunder and seizure (p.14). Conversely, in industrialized societies, the reinforcement of individual ownership of productive resources were achieved through the accumulation of capital through production. According to Veblen (1899), the accumulation of wealth served as an indicator of one's efficiency in production, representing a significant form of merit in an industrialized society. Consequently, the conspicuous display of goods and participation in leisurely activities became more prevalent, serving as primary indicators of one's ability to accumulate capital and, consequently, signifying belonging to the "leisure class." Similarly, Rojek (1985) contended that leisure activities, frequently linked with conspicuous consumption, were not intrinsic human tendencies but rather constructs molded by shifting social stratifications. Thus, in essence, industrialization not only expedited the adoption of conspicuous goods but also amplified its societal implications.

For ordinary individuals, the imperative to meet society's "conventional standard of decency" intensified, with the desire for the goods which are “just beyond our grasp” (Veblen, 1899, p24). From this perspective, conspicuous consumption served as a method for individuals to integrate and conform to societal norms and expectations. Veblen's analysis illuminates both the distinct and conformity motives inherent in the psychology of conspicuous consumption. Furthermore, echoing Marx's focus on

superstructures, Veblen emphasized that the mindset of conspicuous consumption is deeply embedded within educational and learning systems. These systems serve as instruments that perpetuate the values and beliefs associated with this particular lifestyle.

Bourdieu's exploration of tastes often intersects with Veblen's work. Bourdieu had more emphasizes on that conspicuous consumption arises not merely from conscious choices but rather from the unconscious formation of tastes. Individuals from diverse socioeconomic backgrounds naturally develop distinct lifestyles. Those from affluent backgrounds exhibit spending patterns and upper-class tastes not as active choices but as outcomes shaped by their social environment (Bourdieu, 1990). Such behaviors are cultivated through dispositions and habits (Trigg, 2001). From this perspective, conspicuous consumption inherently serves as a marker of social class distinctions perpetuated through unconscious learning. Similarly, Veblen distinguishes between wealth inherited and wealth acquired through personal efforts, acknowledging that inherited wealth is sometimes viewed as more honorable.

Thus, social progress is accompanied by evolution of the perception of well-being (Baudrillard, 2017). In societies that prioritize democracy and classlessness, individuals often associate happiness more closely with equality. Consequently, the consumption patterns of such societies reflect this egalitarian mindset of wellbeing, as material possessions serve not only as sources of personal enjoyment but also as symbols of well-being. Expanding on this, Baudrillard posited that a genuinely equitable society would exhibit elevated levels of happiness, with material prosperity distributed more uniformly. He compared modernized society with prehistoric societies where commu-

nal sharing of resources was the main way of distribution of goods and praised the latter as the epitome of a true welfare state.

The phenomenon of conspicuous consumption is often tied to the discussions about Consumerism and Consumer Society, which also have great implications for both the economy and society and thus received great attention from both sociologists and economists. Building upon the structural argument regarding the role of consumption within society, there are observations underscoring the profound impact of the consumer society. This, coupled with evolving perceptions of societal well-being, has substantial implications for human welfare. Schor (1993) elucidated this dynamic by emphasizing how employers' strategies to reduce labor costs, combined with societal pressures to emulate ideal lifestyles, led to overwork and over-consumption among Americans. The production of consumers is through sustaining human sensation, so to generate demand (Scitovsky, 1976; Goodwin et al., 2013). As people need to constantly consume to maintain economic growth, producers need consistently produce new products by inventing new technologies to explore diverse human desires (Witt, 2001). Thus, the leisure stemming from material affluence is often linked with corruption of the mind, given that indulgence in material goods tends to appeal to people with easily accessible leisure.

At the same time, the signaling value of consumption is magnified. Consumption, not merely confined to conspicuous consumption, was becoming a way for people to express their political and social perspectives. Consumption serves as a means through which people identify themselves, especially within cultural segmentation. On top of this, Baudrillard (2017) further highlights a more concerning phenomenon:

the commodification of art, media, fashion, and even sexuality, all becoming products of the force of the economy, a point which was previously made by Marx.

In addition, the point that there is a direct relationship between consumption and power was further illustrated. Miller (1995) argues that the significance of consumption is often underestimated and receives insufficient attention, despite its pivotal role in shaping history. According to him, consumption is intertwined with modern politics, which has become increasingly dependent on modern economics as “modern politics has become more dependent on modern economics (p.2)”. From this point of view, consumption and consumption choice are the power display of political force. Saunders (1986, p.320) crystallized the consumption patterns across the population as "a distinct phenomenon of the distribution of power in the modern period."

This review briefly examines the main ideas and theories concerning the relationship between industrialization and changing human conditions. It reflects on the connection between capitalist ideology, production, and the need for reproduction. This foundation sets the stage for a discussion of conspicuous consumption in relation to political influence. Chapter seven will focus on the connection between political ideology and individual life choices regarding conspicuous consumption. This is crucial for the theoretical background of Chapter seven, which emphasizes social class and the relevant socio-political contexts. Bourdieu's ideas are essential for understanding the relationship between social class and conspicuous consumption.

2.4 China, Culture and Institution of Conspicuous Consumption

2.4.1 Culture and institutions

From the preceding review, it is evident that social and economic progress—particularly through industrialization and modernization—not only enhances the productivity of commodities but also induces shifts in individuals’ preferences for goods. In the context of contemporary China, the phenomenon of conspicuous consumption requires examination from various dimensions, including cultural, institutional, and structural factors, while also considering the socio-political transformations supported by empirical evidence presented in Chapters 5, 6, and 7.

In contemporary China, as discussed previously, both interpersonal and regional inequalities often arise from policies stemming from the development strategy dictated by central planning. From this perspective, political forces lay the social groundwork for the economic relationships that incentivize the use of conspicuous goods. Additionally, when tracing back the cultural elements, it becomes clear that Chinese culture has contributed to the perpetuation of inequality by emphasizing interpersonal relationships.

Weber (1968)’s analysis suggested the lack of “rationality” for economic-orientated activities and highlighted that traditional Chinese rationality (Confucianism and Taoism) had great emphasis on ethical values and personal relations while lacks the “spirit of capitalism”. According to him, “For the economic mentality, the personalist principle was undoubtedly as great a barrier to impersonal rationalization as it was generally

to impersonal matter of factness” (Weber, 1968 p.236). From his viewpoint, the rationalization from a society emphasizing social ties and interpersonal relationships poses as a challenge for economic process and hence hinders economic growth.

This perspective can be further understood through the lens of contemporary institutional economics. There are at least two aspects of economic analysis pertinent to the context of China, which are also reflected in Weber’s analysis of the country. The first aspect pertains to the utilization of technology and the capacity for innovation within society. Economic growth is intricately tied to innovation, and the level of investment in innovation within a society fundamentally reflects societal preferences (Romer, 2002). In a society where innovation is perceived as a disruptive force to social harmony or balance, it is more likely to be constrained. Meanwhile, social and family ties have been demonstrated to be crucial determinants of economic outcomes (Alesina and Giuliano, 2010).

Likewise, the structure of institutions is the second aspect. Institutions, as devised by humans, serve to facilitate exchange by establishing order and reducing uncertainty (North, 1991). It involves the distribution and use of political power within society. Economic growth relies on the efficient allocation of resources, which can be hindered by the presence of unbalanced political power among different groups (Acemoglu, 2002). In every society, the distribution of power may vary, but it is likely to be present. According to Acemoglu et al. (2004), the ownership of resources and power is a crucial factor in sustaining the establishment of institutions. The configuration of institutions is determined by the unbalanced political power between groups, which ultimately benefits one group’s interest retention. Simultaneously, the formation of

these groups is also influenced by the possession of resources, as they can leverage their resources to acquire more power.

Thus, institutions are endogenous and tend to sustain themselves. For ordinary people in the institutional setting, their preference formation and the sustenance of these economically inefficient institutions could be rooted in various factors such as beliefs and ideology regarding what is beneficial for society. Although people's beliefs may not always accurately reflect the overall welfare of society, models have demonstrated that if people continue to repeat their errors in assessing outcomes, these beliefs will perpetuate the economic state of societies (Romer, 2002; Piketty, 1995).

Concerning the use of technology, North's (2005) pointed out the adoption and use of technology, as one source of economic growth, will be determined by those institutional frameworks and cultural beliefs. While formal institutions make the process easier as they aim to minimize transaction costs, informal institutions such as interpersonal relationships which dictate social code of acts, instead generate costs (North, 1991). He emphasizes that as technological advancements and material conditions evolve, institutions, both formal (e.g., legal systems) and informal (e.g., cultural norms), must also experience adaptation.

In the context of China, the aforementioned factors to some extent shape the dynamics of Chinese society. The constraints imposed by interpersonal relationships play a significant role in shaping all the aspects, contributing to the persistence of economically inefficient institutions. Consequently, China's long-standing culture and the presence of centralized political power could serve as pivotal forces influencing technological progress and, eventually, the country's economic advancement. One

aspect of inefficiency highlighted by Weber is the emphasis on relationships and interpersonal connections, which serve as a form of social capital in economic activities. In this context, conspicuous goods are often utilized as a means to enhance social capital. These effects are specifically discussed in the context of interprovincial labor force migration in 5, innovation activities in Chapter 6, and issues of corruption in Chapter 7.

2.4.2 Culture and conspicuous consumption of China

Although China has a longstanding tradition of using goods to signify social distinction and maintain the structure of social relations, the dynamics and implications of conspicuous goods have evolved over time. During China's feudal period, social hierarchical structure dominated people's life, wherein people's behaviors and the goods they could possess were determined by their social hierarchy. Within such societies, the utilization of conspicuous goods as status symbols was restricted to specific individuals based on their societal position (Clunus, 1991). In addition, ancient Chinese consumption practices also aimed to foster social relations between people who are at the same social levels and even stimulate economic growth (Min, 2018).

Durkheim (1893)'s theory of mechanical solidarity offers a pertinent lens to understand this phenomenon. According to Durkheim, collective actions like consumption, driven by conformity motives, foster a sense of societal cohesion by emphasizing shared similarities. This phenomenon was particularly prominent in traditional societies where the division of labor roles was less developed and clear. Social behaviours like this underscoring the importance of collective behaviors in maintaining societal harmony. From this point of view, it is thus evident consumption in ancient China

displayed both purposes: it signifies distinction while simultaneously nurturing social relationships and fostering harmony between people. Within this context, it is evident consumption itself carries social value, even if it wasn't always necessarily manifested through consuming goods that have conspicuous features.

Despite regime changes leading to the establishment of the People's Republic of China under the Communist Party, economic reforms have been implemented. However, in contemporary China, the culture of interpersonal relationships continues to underpin all social interactions and activities. Contemporary scholarship on its conspicuous consumption often investigates the underdevelopment of formal institutions in China, emphasizing the robust influence of cultural norms, such as Confucianism and the collectivism. Confucian teachings, deeply ingrained in Chinese culture, have historically endorsed the prominence of conspicuous consumption, rooted in values such as family honor, societal status, and communal recognition (Zhou, 2018). Additionally, other generally identified cultural characteristics, such as collectivism and long power distance, also showed to have an impact on the preference for the use of goods (Awanis et al., 2017; Park et al., 2013; Jiang et al., 2020).

Nowadays, China is the world's largest luxury market underscoring its rapid economic development and changing consumer preferences. Drawing parallels with the post-World War II era in the United States, where increased disposable income and leisure time led to heightened consumption (Higgs, 2016), China's economic reforms and market liberalization have similarly paved the way for a surge in commodity affluence (Song et al., 2014). Emerging from a prolonged period of material deprivation, the Chinese populace exhibits a burgeoning desire for higher-quality goods, representing

evolving aspirations for an enhanced quality of life (Zhao, 1997). The *Chinese General Social Survey* (CGSS) highlights a shift in societal perceptions: wealth is increasingly viewed not merely as an economic asset but also as a symbol of luck, intelligence, and other favorable attributes. This contrasts sharply with the socialist-era ideologies prevalent in China.

Consequently, the connotation of conspicuous and branded goods has evolved. Nowadays, they are no longer solely indicative of social status among the elite, these goods have permeated broader societal hierarchies, becoming the symbol of a desirable lifestyle accessible to a wider population. Recent studies indicate the absence of conspicuous consumption patterns that delineate class distinctions (Zhang, 2020). This suggests that in terms of ideology, the class dynamics in China have evolved, leading to a freer view on wealth and conspicuous consumption among its people in contemporary times. However, the changing dynamics of ideology and societal environment still require further exploration and examination. In chapter seven, i will employ a special social political event in China, the Chinese cultural revolution, to examine the relationship between conspicuous consumption on one hand, egalitarian ideology and inequality on the other.

2.5 Consumption Analysis in Economics

This thesis falls within the discipline of economics. Despite the emphasis on borrowing insights from sociology and psychology to explain conspicuous consumption, the conceptualization and analysis of conspicuous consumption must be placed within the framework of economics. Particularly in Chapters 5 and 6, the choice of conspicuous consumption is modeled according to mainstream economic methods, which essen-

tially treat it as a component of individuals' utility functions. Specifically, Chapter 5 augments the classic Todaro model in terms of regional migration, focusing on how individuals perceive the potential for successful migration and assimilation into the local culture. Both of these chapters emphasize the role of conspicuous goods as a means of enhancing social capital. From this point of view, this section will explore various strands of classic economic theories and works pertaining to consumer behavior. It attempts to emphasize constraints inherent in the concepts and assumptions employed in traditional analyses pertaining to conspicuous consumption. By doing so, it aims to enhance our understanding of the fundamental principles guiding consumer decisions and individual welfare, particularly in relation to the impact of social comparison and the limitations in comprehending people's choices within the realm of economics.

Economics is fundamentally concerned with managing the production and exchange of goods and services. Adam Smith (1776) emphasized consumption as the ultimate goal of economic activity, while Keynes (1936) famously stated that "all production is for the purpose of ultimately satisfying a consumer." The demand for production and consumption plays a pivotal role in the economy, directly influencing the sustainability of economic activities and overall economic growth. At the same time, one of the fundamental objectives of studying economy is to improve the welfare of individuals by comprehending the relationship between the organization of production and the material aspects of their lives.

In terms of the societal aspects of concerns, opinions arise regarding how demand and consumption should shape the direction of economic development, particularly

concerning the nature of demand. On one hand, there might be an inverse relationship between satisfying consumer needs and economic growth. Therefore, demand should be stimulated by creating more incentives. On the other hand, following Marx's thoughts, there's concern that excessive consumption may shift economic growth towards producing goods primarily for leisure and pleasure, potentially leading to wasteful production, instead of fostering real innovation and social progress (Mason, 2000; Cooper et al., 2001). Hirsch (1976) coined the term "positional economy" to describe this phenomenon, highlighting it as the "social limits to growth." Hence, comprehending the motives driving demand and consumption is crucial for economics.

Household behaviors concerning demand and consumption are fundamental for comprehending how the economy operates, forming the basis of microeconomics principles. Moreover, as emphasized by Deaton (1992), delving into the underlying motivations driving consumption choices holds significant importance for economists and businesses, particularly in understanding and predicting aggregate economic fluctuations. Thus, it is reasonable to suggest consumption emerges as a pivotal factor in understanding the structure of economics, highlighting its role in both microeconomics and macroeconomic (Attanasio, 1999).

Additionally, conspicuous consumption pertains to economic analysis from two additional aspects. As both a social and economic phenomenon, it reflects a crucial effect in economic analysis: peer and model effects, which are of interest to economists. Moreover, Manski (2000) highlighted the interdependency of preferences as a vital topic in economic analysis. The outcome of jealousy-related attitudes of conspicuous consumption often reflects a non-cooperative stance in game theory. Hence, real-life

phenomena such as conspicuous consumption also provide insights into understanding the motives and dynamics of decision-making within the framework of game theory.

2.5.1 Utility and indifferent analysis of choice

In economic analysis concerning the satisfaction people derive from consumption, utility serves as a construct to quantify the satisfaction individuals obtain from their decisions and choices. According to Bentham (1789), “By ‘utility’ is meant the property of something whereby it tends; to produce benefit, advantage, pleasure, good, or happiness (all equivalent in the present case) or (this being the same thing); to prevent the happening of mischief, pain, evil, or unhappiness to the party whose interest is considered.”

Utility serves as a foundational method in economic analysis to understand and potentially mathematically measure people’s choices. This is typically done under the assumption that individuals seek to maximize their utility. The utilization of utility in analysis is often associated with rational decision-making, allowing for the measurement of people’s decisions, akin to "assessing the temperature" (Deaton and Muellbauer, 1980, p.28). In this manner, the calculation and recording of the utility of choices is understood as being mathematically modeled in a cardinal manner.

However, the use of utility as a consistent and objective metric for assessing people’s satisfaction, especially across diverse activities and choices and among different individuals, has long been questioned¹. It has been noted that the sense of utility often operates within relative circumstances, where people’s perception of the usefulness of

¹see Arrow, 2012, chapter 2

goods is influenced by their respective situations. The interpersonal comparability of utility poses a significant challenge to its use, as people's psychological satisfaction cannot be accurately measured by reporting and quantifying alone. Hence, utility is generally accepted as being only ordinally measurable.

In terms of how people derive utility from consuming bundles of commodities, the principle of declining marginal utility was generally accepted. This concept involves understanding the diminishing satisfaction gained from consuming additional units of a commodity. It's characterized by the use of marginal utility and marginal substitution rate. According to this principle, typically, people prefer a combination of diverse goods for consumption.

In contemporary economic analysis, utility is treated as immeasurable, as Samuelson (1938) concluded, "The discrediting of utility as a psychological concept robbed it of its only possible virtue as an explanation of human behavior in other than a circular sense, revealing its emptiness as even a construction." Instead, economists such as Pareto advocated for the use of preferences to capture choices and approximate individuals' utility. Satisfaction derived from choices is approached through preference and "indifferent" analyses, as discussed by Arrow (2012). Therefore, when economists analyze consumer choices regarding combinations of goods, it is usually relied on the assumption that preference formation reflects maximized utility. The Revealed Preference Hypothesis (Samuelson, 1938) is provided for illustrating that changes in consumption choices are in align with an indifference curve of utility. Empirical support for the indifference measurement of utility can be found in psychometric experiments (Thurstone, 1931; Thurstone and Jones, 1957).

The use of the indifferent perspective relies on individuals exhibiting a rational pattern of choices. Rationality is manifested in the indifference curve across different bundles of goods, indicating that individuals employ an underlying mathematical method to psychologically assess the utility from different sets of choices. The rationality assumption underlying individual choices should adhere to several axioms, as discussed by Deaton and Muellbauer (1980, Chapter 2). These axioms include *Reflexivity*, *Completeness*, *Transitivity (consistency)*, *Continuity*, *Nonsatiation*, and *Convexity*.

However, certain properties necessary to maximize utility in choice-making, such as consistency, are subject to debate and may not always be applicable in real-life cases, as discussed by Basu (2000, chapter 2). These debates potentially underscore disparities between the rational choice framework assumed by economics and the actual choice-making of individuals. Further exploration of how assumptions of rationality are challenged by behavioral economists, will be discussed in the following section.

Limitation regarding the use of revealed preference in economic analysis was discussed by Sen (1977). He suggested revealed preference is inadequate to encapsulate the intricacies of human psychology and thus is not able to provide a sound theoretical framework for measuring utility and reflecting how people make choices. One implicit assumption of revealed preference analysis is that the alternatives within a choice set remain constant, which may not always stand as the alternatives to a choice set might change, thereby potentially undermining its value. Furthermore, like the use of utility, indifferent analysis of preferences cannot provide an objective evaluation of how individuals assess different options, especially across different individuals. These

limitations might still necessitate innovative approaches and further exploration of methodologies. Further discussions on the use and limitations of utility in economic theories will be explored in the section dedicated to decision-making and research on conspicuous consumption.

2.5.2 Consumption in macroeconomics

In macroeconomics, individuals are assumed to consume according to their evaluations as to how their income should be allocated throughout their lives to maximize overall utility. Hypotheses regarding how individuals distribute their income over their lifetime suggest decisions vary mainly about the considerations of how much to save versus spend across an individual's entire life. This is to say that while individuals allocate a segment of their earnings for temporal consumption for immediate gratification, they also set aside funds for unforeseen contingencies and future use. While how people decide this allocation would also depend on their tastes or personal preferences. Individuals also consider several crucial factors, including estimation of both their permanent and temporary incomes, as well as other key socioeconomic attributes and prevailing economic environmental factors. Motives related to considerations of how to allocate money across time are discussed in detail by Keynes (1936, Chapter 9). Thus, decision regarding temporary consumption goes beyond merely being a function of current income.

Relying on time-series data, Friedman's Permanent Income Hypothesis (1957) proposes that consumers base their decisions on assessments of both permanent and temporary incomes, while adjusting their short-term spending accordingly. Based on Friedman's framework (1957, p.30), individuals determine their spending based

on evaluations of several "fixed" factors such as inherent characteristics, education level, ability, and personality. Conversely, temporary factors affecting income, such as illness or temporary environmental conditions (such as weather for farmers), are considered more accidental.

According to Friedman, over the long term, temporary factors are expected to average out, along with corresponding spending. Evidence also suggests that consumption is smoother over time. While consumers' temporary income at any given time may be influenced by environmental changes, the impact of such changes on their spending behaviors may be indirect or minimal due to people's inertia in spending habits. From this point of view, individuals' spending patterns exhibit the characteristic of intertemporal inseparability.

While the Life-cycle hypothesis (Ando and Modigliani, 1963) posits that individuals distribute their expenditures consistently across their lifespan, aiming to optimize their overall utility across their lives. In another word, individuals have estimations of their overall income of their life and manage to spend their income evenly by managing saving and spending. They save at youth to provide spending when old. According to Deaton (2005), this hypothesis offers valuable insights into understanding macroeconomic growth by providing estimations of the level of saving, which is ensured with its foundation in individual microeconomic decisions.

Hall (1978)'s analysis suggests that if people's discount rate of future income equals their discount rate of future consumption, there will be a stochastic process of obtaining utility from consumption within this framework, emphasizing that it remains largely unaffected by changes in temporary income. Instead, according to him, it is

primarily determined by income expectations and tax.

Aside from focusing on consumption habits over time, it's important to recognize that individuals across different socioeconomic backgrounds tend to exhibit homogeneous tastes influenced by shared social life. Duesenberry (1949) proposed the relative income hypothesis to illustrate how interpersonal dependence influences consumption choices. He emphasized the acquisition of material goods as a "commonly accepted social objective" and that individuals' consumption patterns are shaped both to meet physical comfort and to satisfy societal expectations dictated by their cultural context. Thus, the inclination to consume is propelled by individuals' perceptions of well-being. Likewise, as living standards elevate, people often calibrate their consumption choices in alignment with societal expectations and following the process of socialization. Further evidence has indicated that the saving rate increases with income levels. According to Franks (1985), this suggests that lower-income households tend to allocate a larger proportion of their income towards goods that contribute to people's social well-being. As identified by Gaillard et al. (2023), consumption tends to be "closer" between the rich and the poor, especially when compared with labor income, wealth, and capital income.

Subsequent research has recognized the heterogeneous nature of consumption decisions across households and has explored various factors related to psychological and social aspects. For instance, uncertainty often triggers precautionary savings (Leland, 1968). Variations in consumption decisions are evident within the population, indicating that certain families tend to spend their current income, contrasting the permanent income hypothesis (Campbell and Mankiw, 1990). Further evidence has

emerged regarding how individuals perceive and react to permanent versus transitory income, suggesting that people's consideration of their spending behavior might be more nuanced than what the rational expectation model suggests. For example, concerning temporary income shocks, the evidence is mixed. Some studies suggest that individuals indeed respond positively to temporary changes in income by exhibiting substantial spending of their temporary income in the short run (Parker et al., 2013), while others argue that tax reductions do not significantly affect people's temporary spending; instead, individuals opt to smooth out their spending (Hsieh, 2003). Factors varying among individuals and households are also examined, such as consumption motives influenced by social and environmental constraints like liquidity constraints (Hubbard et al., 1994). Nevertheless, altogether, such findings assert that consumption displays habitual characteristics while also, to some extent, being partly susceptible to temporary external influences. This also once again raises questions about whether people's utility is intertemporally comparable, as discussed by Bewley (1977).

Thus, it also indicates there is challenge in aggregating individual consumption. The concept of a "representative consumer" used in consumption models has limitations, as economists like Muellbauer (1976) and Deaton (1980) have pointed out. They highlight the difficulty of accurately capturing the diverse characteristics of consumers within a consumption function. The heterogeneity in spending and saving patterns appear across different household types, which underscores that consumption behaviors are intricately related to the socio-cultural and economic contexts within individual families.

2.5.3 Consumption in microeconomics

In macroeconomics, theories and hypotheses explaining consumption at the aggregate level have only paid limited attention to the phenomenon of conspicuous consumption, potentially because this field is not the most conducive to studying this phenomenon. Even for Duesenberry, who noted the crucial role of the social environment in shaping spending patterns, data availability constraints prevented him from directly examining his hypothesis with models. Instead, he relied on analyses of spending patterns between communities and cities, as well as changes in saving rates over time, to support his hypothesis. However, his observations underscored the significance of delving deep into consumers' mindsets and attributes. In comparison, in microeconomics, the issue of social and psychological factors influencing consumers tends to be better acknowledged.

Demand and consumption, as microeconomic topics, is primarily discussed by mainstream economists under the theory of consumer demand. Engel curves illustrate that as income increases, consumptions vary across different categories of goods, based on the characteristics of goods, such as whether they are normal or luxury goods. This suggests that the way individuals maximize their utility by consuming a combination of goods also evolves with changes in income levels. Here, economic rationality, in terms of how individuals adjust their consumption patterns in response to changes in household income, is expected to exhibit a pattern of change that could be captured mathematically. In another world, even without identifying the exact functional utility form of consumers, models can still uncover discernible consumption patterns associated with the income level, which could be interpreted as rational behavior (Afriat, 1967).

Specifically, the Engel curve demonstrates that for normal goods, as income increases, the quantity consumed also rises, indicating a direct positive relationship. Conversely, for luxury goods, the Engel curve typically shows that consumption increases at a faster rate than income, reflecting a higher sensitivity to income changes. This distinction highlights how the utility function for normal goods is characterized by steady increases in consumption, while luxury goods exhibit a more pronounced increase in consumption with rising income. Therefore, the Engel curve serves as a valuable tool for understanding consumer behavior and preferences, emphasizing the differing impacts of income changes on the consumption of various types of goods. This emphasizes the necessity of encompassing utility derived from a diverse range of goods. Works like the "Almost Ideal Demand System" (Deaton and Muellbauer, 1980), provide frameworks for modelling how individuals maximize the overall utility with different categories of goods by assigning different utility functions to normal goods (substance) and luxury goods (bliss). Following this line of thought, if we are to account for utility differences between goods across households, then other household characteristics such as education level and household size are also crucial. As these factors might influence spending on various categories of goods in ways as changes in income do.

Based on the results of models, overall, people do not deviate too far from their "rational" way of consuming. Even for behaviors such as conspicuous consumption behavior, which does not always seem rational in terms of maximizing overall utility, Stigler and Becker (1977) argued for the rationality of individuals. They indicated that individuals can consistently maximize their utility by suggesting that for economic entities like families and individuals, preferences tend to remain stable over

time rather than fluctuating unpredictably and do not vary significantly across different units. Their theory was able to explain the existence of the conformity effect in consumption patterns by considering the interpersonal dependence of utility. In addition, Arrow and Dasgupta (2009) pointed out that empirical household data does not observe the "rat race" phenomenon of consumption of conspicuous goods. Instead, they suggested an intertemporal substitution effect in spending patterns, indicating that individuals are able to rationally consider that an increase in current spending may lead to a subsequent decrease in future expenditures. Given that individuals maximize their utility across their lifetimes, the conformist motives of conspicuous consumption do not influence overall market demand according to their analysis.

However, despite the capacity of these theories to elucidate consumer choice and uphold the assumption of rational utility maximization, real-world consumption patterns can demonstrate behaviors that are "harmful" to the overall financial well-being of individuals or families. The phenomenon of excessive and frivolous spending on certain goods is undeniable, even if it has been largely ignored by mainstream economists (Frank, 1985). In addition, existing theories may not fully consider the psychological and social aspects of the influences. As Deaton and Muellbauer (1980b, p. 323) aptly pointed out, "Influences other than current prices and current total expenditure must be systematically modeled if even the broad pattern of demand is to be explained in a theoretically coherent and empirically robust way."

Many realistic considerations for a family may not be accounted for in models. For example, a poor family living in a rich neighborhood might exhibit a different consumption pattern than poor families in poor neighborhoods. Additionally, certain

aspects of the social environment cannot be directly measured and quantified. Due to issues such as these, simplified assumptions based on limited information about households may pose challenges. It becomes challenging for differences in tastes and preferences need to be accounted for to explain consumption.

Moreover, people derive utility not only from making choices but also from the experiences associated with decision-making, known as transaction utility and acquisition utility (Thaler, 1985). These additional sources of satisfaction add complexity to the accounting of utility and its use as an objective metric.

As Becker (1962) also recognized, the analysis of economic rationality, aimed at maximizing utility, faces challenges due to practical real-life considerations often excluded from standard analyses. Individuals can exhibit impulsive, erratic behavior, while also being inert and habitual. Social comparison, various social conditions, and the influence of others' utility levels are factors that impact individual utility (Becker, 1974). In addition, with the developed understanding of behavioral and social psychological economics, people's behaviors do not always adhere to the strict patterns indicated by rational assumptions. Thus, behaviors such as conspicuous consumption indicate that the way people make choices is subject to considerations beyond the narrow scope of assumptions made by classical economics.

These external influences could directly contribute to cognitive biases and information and psychological aspects of decision-making. McFadden (2013) provided a comprehensive review of the works by neoclassical economists and pointed out aspects of previous works concerning the difficulty of using utility as an objective measurement in modeling consumption choice. As summarized by him, these include "preference

heterogeneity, acquired tastes, shifting hedonic attributes of commodities, nonlinear budget sets, time, space, or uncertainty, and the frequent cases of zero and lumpy purchase (McFadden, 2013)." In the case of conspicuous consumption, considering the motives for consuming such goods, the feeling of embarrassment and shamefulness can be strong motivators for people's decision-making, as they may strive to avoid these feelings.

Attempts on methodologies have also been made regarding how to deal with these issues. For example, relating to the previously discussed issue of how utility is accounted for in choices, approaches such as the use of random utility models (Manski, 1977) were proposed. These improvements in methodologies help address issues of the heterogeneity of tastes with latent class structures of choice making (Hess, 2014).

2.5.4 Studies of choice making

Thus, research in microeconomics on consumption pointed at the need of considering consumer characteristics. Additionally, as previously discussed, goods satisfy multiple aspects of people's needs. Therefore, the understanding of consumption necessitates insights into why people make certain decisions and how consumer behaviors are formed.

Research in this area emphasizes that people make decisions to fulfill various dimensions of purposes and employ diverse strategies. Decisions are not solely made with long-term objectives in mind; individuals also seek short-term pleasure and hedonistic fulfillment. There are clear cases where people do not follow utility optimization strategies. Akerlof (1991) provided several instances where human behavior deviates

from the supposed use of utility, including addiction, procrastination, and consumer concerns for the saliency of products.

As decision-making processes involve significant cognitive elements (Busemeyer and Rieskamp, 2014), it results in innate biases. The human capacity for decision-making is instrumental in addressing challenges and maximizing specific goals. Individuals strive to both survive and prosper by employing their cognitive faculties to navigate and make choices that fulfill various needs, desires, and other aspects of human pursuits. Research in biology and psychology suggests that psychological and emotional forces significantly influence reasoning, rationalization, and ultimately, decision-making processes.

In the realm of marketing and business research on consumption, there has been a greater emphasis on studying emotions (Richins, 1992), personality (Baumgartner, 2002) and psychological effects in consumer decision-making. Compulsive consumption, for example, indicates involvement of psychological benefits or experiences of emotions at large (O'Guinn and Faber, 1989; Hirschman, 1992).

There are several innate human factors that prevent us from achieving full rationality to maximize utility according to economics studies. Humans have limited cognitive resources for decision-making, particularly when facing uncertainties. In such situations, people often have limited information about outcomes and time to make decisions, requiring them to rely on prior information and norms. The theory of "bounded rationality" (Simon, 1990) suggests that individuals do not always strive to optimize their choices but instead settle for satisfactory outcomes due to cognitive limitations.

Uncertainty is also a significant factor affecting choices which also has further implications on economics. On one hand, according to Simon's line of thought, uncertainty poses a potential barrier for cognitive rationality (Dequech, 2001). On the other hand, uncertainty might directly lead to fear, which is a psychological avoidance mechanism for humans.

Kahneman (2003, 2011) and Tversky (1979) discussed the role of intuition, which relies on less cognitive effort and quickly comes to mind, contrasting with rational reasoning, which is controlled and demands more cognitive effort, in influencing people's preferences and decision-making. Intuitive decisions are characterized by high accessibility of thoughts and a closer connection to emotional states and current needs. Further extending this perspective, people's way of evaluation of losses and gains deviates from conventional utility theory as they are often judged relative to a reference point. In other words, utility should be perceived based on changes rather than absolute states, while this point forms the basis of prospect theory (Kahneman and Tversky, 1979; Thaler, 1985).

While for longer-term choices such as political choices and opinions, insights from social psychology and economic psychology are invaluable. These fields focus on factors that influence attitudes and the use of prior information, such as beliefs and normative norms, when making decisions. As a result, decisions and choices have been suggested to lack rationality and individual reflection on the issues. Matters such as political preferences and choices, as analyzed by Chong (2000), are often formed due to predispositions, norms, and personal values. On the other hand, social learning and communal learning, which provides prior information and constructs cultural

and social norms (Bandura, 1977; Woolley et al., 2010), also received attention from multiple disciplines, as they are shown to significantly influence crowd behavior and affect the construction of institutions (Almaatouq et al., 2020; Leng et al., 2020).

In terms of consumption decisions, there are also several psychological factors and biases that deviate from traditional economic assumptions of utility maximization, as highlighted by behavioral economists. Famous ones include mental accounting, which discusses how people mentally “calculating” benefits, and the "endowment effect" (Thaler, 1985; DellaVigna, 2009). In this regard, people often rely on what is termed as a "value function" to assess gains and losses and are drawn to the psychological pleasure from making choices, rather than adhering strictly to the conventional utility maximization method. Additionally, Loewenstein and Thaler (1989) suggested when it comes to addictive goods and intertemporal budget allocation problems, people may not always discount their future benefits and loss as economists suppose they do.

Discussions regarding the welfare implications of cognitive and behavioral abilities have also surfaced, prompting economists to consider the behavioral aspects of choice-making in welfare analysis (Atkinson, 2011). A notable example of welfare loss is evident in the case where the salience of taxation (inclusive or exclusive tax) affects individuals' purchasing decision based on their different psychological perceptions of the price (Chetty et al., 2009). Recognizing that choices and decision-making do not always adhere to the economic principle of utility maximization, and thus cannot be directly linked to welfare or well-being concerns as prescribed by traditional economic rationality, Bernheim and Rangel (2008) proposed a framework for behavioral

biases and developed models to illustrate how choices are influenced by subjective perceptions of welfare under environmental constraints.

2.5.5 Conspicuous consumption in economics

In terms of the decision to use conspicuous goods, as discussed in the previous sections, people often consume conspicuous goods to fulfill social needs and to demonstrate their individual distinctiveness. Therefore, the act of consuming conspicuous goods is closely associated with emotions such as shame, self-consciousness, and superiority, as well as feelings of social exclusion, isolation, and inadequacy. This relationship has been extensively explored in psychological research (Braun and Wicklund, 1989; Mandel, 2017). From the psychological literature, emotions have a significant impact on human inclination towards certain choices and can even affect individuals' rationality. In this regard, people consume to fulfill hedonistic purposes or to experience short-term satisfaction. For example, from the marketing research, the social interaction with salesmen or staff can promote sales by giving people the sense of prestigious consumer experience (Lim et al., 2012; Wall et al., 2011).

On the other hand, particularly pertinent to the concerns of economics regarding inequality and social issues, economists have emphasized that conspicuous consumption goes beyond being merely a psychological response to social influences. It is also perceived and modeled directly as a form of social capital to enhance one's social position, as indicated by Veblen and Bourdieu. As synthesized by Frank (1985), "many of the most important decisions ever made about us turn on others' estimates of what talents, abilities, and other characteristics we possess when an individual's ability level cannot be observed directly, such observable components of his consump-

tion bundle constitute a signal to others about his total income level, and on average, therefore, about his level of ability.” From this point of view, individuals often view conspicuous consumption as an investment in their future, aiming to enhance their social capital based on their assessment of societal perceptions regarding individual human capital (Mason, 2000). In other words, their decision to acquire conspicuous goods hinges on whether displaying these items is perceived as a valued attribute that could potentially boost their future earnings. Indeed, social capital is augmented by anticipated upward social mobility (Glaeser et al., 2002). Altogether, consuming conspicuous goods provides utility, serving multiple purposes: it can alleviate psychological distress, act as an investment into social capital, potentially indicating an individual’s concealed human capital.

From this perspective, it aligns with Sen’s (1983, 1995, 1999) discourse on relative poverty and the Capability Approach. In capability approach, Sen emphasized the significance of the condition where individuals can achieve their functioning. He stressed a multidimensional approach to assess comprehensive well-being (Martinetti, 2000). In Sen’s view, possessing certain capabilities means an individual must maintain relevant functioning. “The relativist approach sees deprivation in terms of a person or a household being able to achieve less than what others in that society do (Sen, 1983).” Therefore, he advocated for a society that offers individuals the essential choices to enable them to realize their capabilities for various functions so people can achieve their utility. In terms of conspicuous consumption, as conspicuous consumption is a socially motivated choice which functions as a form of "productive factor" for individuals. So that individuals utilize conspicuous goods not only to alleviate psychological distress and cope with their deficits in social capital and hence to enhance their sense

of social well-being and career opportunity. Here, in a society where the judgement of individual ability is through their way of displaying their wealth, the acquiring of conspicuous goods is crucial part of people's capability in terms of deciding their social functioning.

As a result, this consumption pattern can inadvertently create a "poverty trap" for some individuals by diverting resources away from essential areas such as education and nutrition (Moav and Neeman, 2012; Jaikumar and Sharma, 2021), an outcome also noted by Duesenberry (1949). Moreover, prior research has highlighted parallels with the phenomenon of consumption trap, where individuals are driven to consume non-essential goods due to social pressures. There exist direct market and societal forces that impose a "poverty penalty" on the economically disadvantaged. This concept is articulated in works such as "The Poor Pay More" (Caplovitz, 1967) and "The Disadvantaged Consumers" (Andreasen, 1975). These works elucidate how structural societal conditions and marketing strategies disadvantage the economically vulnerable. For example, producers' tactics in selling goods to this demographic can limit their ability to make optimal consumption decisions, given the constraints of their socioeconomic circumstances.

2.5.5.1 Conspicuous consumption and interdependence of utility

Following the theories presented in the last sections, the efficacy of utility as a metric for economic decisions and choices is evidently constrained when considering social and psychological factors. As previously noted, conspicuous goods yield utility not solely through their immediate functionality but also through the symbolic value they bestow upon individuals. Furthermore, from a behavioral perspective on consump-

tion, the act of consuming conspicuous goods often involves transaction utility and purchasing utility.

Consequently, the utility derived from the symbolic value of conspicuous goods is sometimes overlooked or inadequately accounted for in traditional consumption utility functions. This oversight has led some to perceive conspicuous consumption behaviors as irrational (Chaudhuri and Majumdar, 2006). Thus, the assumptions to be made about changes of individual perception of satisfaction from their choices might also need to incorporate insights from psychology and sociology.

The mechanisms driving conspicuous consumption revolve around a competitive interpersonal dynamic, wherein individuals endeavor not only to keep up with others but also to surpass them. Thus, conspicuous consumption is treated as socially determined and characterized by the interdependence of individuals' utility. Consequently, accounting for utility maximization in statistical models becomes challenging when an individual's utility from a specific good depends on another individual's utility from the same good. This difficulty is akin to the challenges encountered in providing public goods. Thus economists sometimes treat this interdependence as an externality (Hopkins, 2023).

From this point of view, this is related to one of the foundational assumptions in economic analyses which is that individuals primarily act out of self-interest, aiming to maximize their own profits or interests from their choices or actions. Under this assumption, utility is typically conceptualized as the fulfillment of an individual's personal and solely self-benefiting desires and needs, with little consideration for others' welfare and without being influenced by other people's conditions. How-

ever, studies have revealed that individuals frequently exhibit altruistic tendencies and demonstrate genuine concern for the well-being of others (Hoffman et al., 1998; Charness and Rabin, 2002; Fehr and Gächter, 2000). This complexity potentially adds a layer of intricacy to the challenge of modeling utility. From this perspective, as underscored by Brown and Deaton (1972), the analysis of consumption parallels that of public welfare, with the overarching goal being to optimize the collective utility derived from consuming these goods and services.

Intuitively, conspicuous consumption might present itself as a "rat race" in consumption, a phenomenon of pecuniary emulation as initially proposed by Veblen. Such dynamics can have implications for the market in terms of demand and supply. Due to the competitive nature inherent in the consumption of conspicuous goods, scholars have sought to model how this interdependence of consumption decisions affects market equilibrium and consumer welfare.

Leibenstein (1950) highlighted the "non-additivity" effect in demand, suggesting that the aggregate demand of individuals may not necessarily align with market demand due to the interpersonal dependence of consumption. To take into account of this effect, he introduced the idea of diminishing marginal external utility where the utility derived from consuming an additional unit of goods has a diminishing impact on another individual's utility decline. Utilizing this principle, Leibenstein demonstrated how shifts in the market equilibrium occur concerning the consumption of conspicuous goods. Subsequent studies may not have explicitly outlined this principle, their analyses share a foundational premise that aligns closely with its effects.

In addition, while various models categorize the motivations behind consuming con-

spicuous goods differently, there are commonalities among them based on the motives for owning conspicuous goods. For instance, Leibenstein identified motives such as the bandwagon effect (where market demand positively influences individual demand), the snob effect (where market demand negatively impacts individual demand), and the Veblen effect (where an individual's demand is influenced by both price and others' demand). On the other hand, Friedman and Ostrov (2008) categorized motivations as "pride" and "envy". Despite these differences in classification, there are shared findings cross their models of the effect of conspicuous consumption on demand and welfare.

Examining welfare analysis, the equilibrium consumption level across societal strata surpasses the natural level absent interpersonal dependence of utility, signifying a welfare loss for consumers overall (Becker et al., 2005; Hopkins, 2023). As a result, producers of conspicuous goods generally have positive profits due to the increased demand (Bagwell and Bernheim, 1996). Becker (1974) used the idea of "social income", which seeks to evaluate an individual's income relative to the impact it generates on the social environment. He noted the welfare changes associated with the 'social income,' in comparison to welfare derived from real income. Likewise, interpersonal reliance of utility renders the Pareto optimality of consumption welfare ineffective (Dupor and Liu, 2003; Hindriks and Myles, 2006). These results from models are consistent with empirical findings of people's happiness and social comparison (Winkelmann, 2012).

Furthermore, Corneo and Jeanne (1997)'s model posited that an increase in demand with rising prices may appear when conformity is the main motivational factor. The

equilibrium of a dynamic model, where preferences for conspicuous goods evolve over time, generally aligns with the static setting where individuals' preferences remain stable. Friedman and Ostrov (2008)'s the model suggests the primary motive of conformity ("envy") in conspicuous consumption leads to the emergence of a growing "middle class" where everyone tends to consume more than they needed with the same consumption patterns (this is by assuming identical preferences and income). Conversely, when the primary motive is distinction or "pride," the consumption pattern often displays a skewed distribution based on individuals' assessment of their position within the social hierarchy. As a result, there is no definitive conclusion on whether a tax on conspicuous goods would enhance welfare, primarily because there is no consensus on the formulation of people's demand for conspicuous goods (Bagwell and Bernheim, 1996).

The above review highlights works and theories from Economics that are relevant to the analysis of consumption and conspicuous consumption across various disciplines, with a primary focus on economics and sociology. However, as previously noted, several methodological issues are present in the study of conspicuous consumption and the related factors. I summarize these issues here and potentially introduce two research gaps.

Firstly, existing modeling approaches and assumptions including the use of utility about consumer behaviors are not realistic in terms of modelling conspicuous consumption choice using the utility maximizing principle, as evidenced by findings from behavioral economics and psychology research. Secondly, research into how institutions and culture impact various aspects of people's social lives, and consequently

affect their well-being, remains limited. While some of these limitations cannot be easily addressed, these gaps suggest the needs for further exploration and refinement in understanding the complexities of consumption behavior and its societal implications.

The next chapter will introduce the analytical framework used for this thesis. As reviewed above, there is clear limitation in current scholarship in terms of accounting for the source and effect of conspicuous consumption in the economy. As the Cultural Based Development (CBD) framework emphasized the importance of culture as the root for various social economic phenomenas, i expect it to explain the role of conspicuous consumption.

Chapter 3

Theoretical Framework: The Cultural Based Development (CBD)

An outstanding share of literature that has modelled the impact of culture, while its impact on human capital and consequent impact on economic development is preceded by the Cultural Based Development (CBD) paradigm. In this thesis, I will use this framework to enrich the understanding of the ways culture affects human capital use and economic outcomes.

CBD offers a comprehensive framework for understanding the intricate relationship between culture and the economy, which is the primary framework used in this thesis. CBD recognizes that "values" play a crucial role in shaping modes of thought, which subsequently influence people's economic choices and, on a larger scale, how economies function. Drawing from the insight of Max Weber, his analysis underscores the substantial impact of a country's culture on economic development, emphasizing how cultural frameworks shape perceptions of value, which in turn guide choices and preferences of people. Consequently, variations in economic achievements and levels of industrialization between countries can be attributed to these cultural differences (see Weber's works on India and China (1968, 1916, 1921)).

CBD acknowledges that while human values may share universal attributes in that humans universally treasure some characteristics, such as peace and economic affluence. Their expressions vary across different regions, challenging the notion of a singular, universal moral standard. This is to say values would be related to different

sets of moral attitudes and beliefs. As indicated by Tubadji (2020), “the local natural moral can be seen as always deviating from the natural ideal mean due to local cultural biases and path-dependencies in culture”. Thus, defined according to the CBD, culture encompasses "the set of attitudes and beliefs that delineate the value system of a population inhabiting a specific geographical area" (Tubadji, 2020).

These variations in attitudes and beliefs exert a direct influence on people’s economic beliefs and choices. Therefore, CBD paradigm aims to understand and capture the intricate influence of culture on human inclinations and inherent biases (Tubadji, 2020; Tubadji et al., 2019). Furthermore, CBD aims to elucidate the mechanisms that provide a structured framework through which culture influences economic development, while abstaining from making value judgments on the process and outcomes (Tubadji, 2014). Culture is endogenous in economics, acknowledging the co-evolutionary relationship between institutions and culture (Acemoglu and Robinson, 2021), wherein both entities exert mutual influence on each other (Tabellini, 2005; Licht et al., 2004). CBD thus understands the impact of culture by examining various channels through which culture operates, from shaping institutions to influencing individual choices and preferences. In addition, given the significance of morality in humanity, CBD contributes to a deeper understanding by examining the multifaceted cultural influences on both economic development and society.

The investigation into the relationship between culture and the economy remains ongoing. As emphasized by Guiso et al. (2000), research on culture has not fully pinpointed how culture is related to the economy. They also highlighted that the definition of culture within economic research is often vague and lacks clarity, and

the exact mechanisms that connect culture to economic outcomes are not thoroughly examined. This created the need for a comprehensive framework to analyze the role of culture in economic development.

Previous perspectives on the role of culture may isolate specific cultural elements such as religion, racial factors, or the effects of language to understand their economic implications. Florida (2002) explored how regional diversity and openness, indicated as specifically the concentration of bohemians, can affect local human capital concentration. While other works exam the economic implications of religious beliefs, such as Confucianism and Christianity (Barro and McCleary, 2003). Additionally, research by Brügger et al. (2009) illuminated how language can act as both a conduit and barrier in employment contexts.

While these studies have significantly enriched our understanding of specific dimensions or facets of culture and their economic implications, CBD underscores the importance of a more comprehensive approach, promoting a holistic perspective to account for the role of culture. Within the CBD framework, culture is perceived not as a singular entity but as a composite construct, which works as an aggregate force on economic activities. By delving deeper into the formation process of people's perceptions and mentality and exploring new methodologies such as the use of font=bf, footnotesize, CBD provides a systematic perspective that enables a more nuanced and comprehensive evaluation of the interplay between culture and economy.

3.1 Culture at Work

There are several mechanisms through which culture impacts the economy. Strands of research highlight the potential ways in which culture could influence the economy at both macro and micro levels. CBD recognizes these mechanisms and capture them within its framework.

Culture is associated with individuals' value system, essentially determining what they consider important and thereby influencing their preferences and decisions. It is widely observed that cultural perspectives on the value of economic growth can vary globally. This is because culture tends to emphasize different aspects of human life, influencing how economic progress is perceived and valued. For instance, collective cultures are often seen as less conducive to innovation than individualistic ones, potentially due to less use of financial benefits and social distinction as incentives (Gorodnichenko and Roland, 2011) and a greater focus on interpersonal relationships and social harmony (Greif, 1999). Reduced individual rewards may diminish the motivation to create and innovate, ultimately leading to lower economic growth. For example, Confucian values as a kind of collective culture have long been posited as a primary influence on China's economic stagnation during Qing dynasty, as it emphasizes human relations and social harmony over the efficient allocation of resources (Weber, 1915, Franke et al., 1991). In CBD, this mechanism is particularly relevant and addressed accordingly. When examining the local configuration of human capital, the accumulation of human capital and the local attitudes toward outsiders are influenced by a set of local values and beliefs (Tubadji and Nijkamp, 2014).

In addition to shaping values and influencing how individuals rationalize their deci-

sions based on their value system, it is important to recognize that decision-making often occurs unconsciously. Individuals rely on heuristics and information gleaned from past experiences to navigate their choices in various contexts. Bourdieu (1977) insightfully indicated that an individual's life trajectory is fundamentally influenced by the socio-cultural environment in which they grew up. This process can occur consciously, such as when making career and education choices, as well as unconsciously through learned habits and inclinations. While Bourdieu's observation highlights that individuals in upper social classes may be more inclined to pursue education and select certain occupations as a means of signaling their social status, research in social psychology suggests that they also unconsciously develop specific views and attitudes within their socioeconomic environments, such as greater confidence in their own abilities and a more optimistic outlook regarding the sources of success (Manstead, 2018; Benabou and Tirole, 2006).

Studies on decision-making processes indicate that choices are indeed influenced in this manner. By generating prior information, individuals' beliefs, preferences, and natural inclinations are correspondingly formed (McFadden, 2001). This largely unconscious process of generating heuristics is crucial in decision-making in many contexts as indicated by behavioral scientists. Culture, being a vehicle that provides information and widely accepted social norms, plays an essential role in terms of providing the learning environment. It operates by subconsciously shaping people's lifestyles and cognitive processes (DiMaggio, 1997; Guiso et al., 2000) and even people's "default choices". For instance, evidence suggests that simply belonging to a particular group can result in different beliefs. In the context of political preference formation, people tend to place more emphasis on information provided by their

in-group, resulting in different belief formation outcomes. (Bauer et al., 2024).

Likewise, researchers have also noted the influence of culture can manifest through its impact on people's emotions. The emotional and psychological impact of culture has garnered significant attention in disciplines such as psychology and biology, as evidenced by studies from Markus and Kitayama (1991), Lim (2016) and Lehman et al. (2004). While emotions are also acknowledged as pivotal factors in decision-making processes. It is suggested by psychologists that emotions could influence motivated cognition and beliefs and shape understanding of the environment (Bénabou, 2015). This mechanism is uncovered and examined within CBD through the culturally based emotion-perception-feeling pathway, which was first examined in relation to the use of Artificial Intelligence (Tubadji and Huang, 2023). Regarding one potential aspect of this relationship to this thesis, as shown in the first section of this chapter, there are clear emotional incentives for conspicuous consumption. For example. feelings of shame and envy might serve as a strong predictor for such behavior (Davidson et al., 2019), particularly in societies and cultures that emphasize social image (Taylor and Strutton, 2016).

In addition, by shaping societal norms and setting codes of conduct, culture plays a pivotal role in influencing social behaviors that, in turn, determine economic trajectories. Interpersonal interactions governed by specific social norms within a cultural context often exert social influences by reinforcing existing patterns of thoughts and activities. Importantly, this process typically occurs without deliberate rational thinking. For example, the propensity to trust is, to some extent, an ingrained cultural characteristic that has been proven to have significantly impacts economic

development. Additionally, from the aspect of uncertainty and economic development, cultures differ greatly in their acceptance while attitudes toward uncertainty may originate from deeply rooted propensity, often evolving unconsciously through individuals' daily experiences and interactions. Research indicates that attitude toward uncertainty plays a crucial role in affecting economic choices, such as the adoption of new technologies (North, 2005).

In CBD, the significance of uncertainty avoidance is emphasized concerning multiple facets of economic performance at both the aggregate and individual levels. The survival rate of firms is significantly influenced by cultural preferences towards uncertainty (Tubadji et al., 2020). Additionally, cultural uncertainty plays a pivotal role in shaping people's propensity to utilize Artificial Intelligence (AI) technologies (Tubadji et al., 2021). Furthermore, the apprehension of failure impacts youth entrepreneurship, as highlighted by Tubadji (2021).

Concerning the examination of long-standing local culture, it can directly exert a substantial influence on the economy by shaping individuals' perceptions of identity. In this regard, local cultural heritage can potentially act as a deterrent for migrants by establishing cultural barriers for newcomers (Tubadji et al., 2014). Conversely, the emergence and evolution of living culture may induce contrasting outcomes. This concept is further explored through the analytical framework of cultural capital, which will be elaborated upon in the following section.

3.2 The Concepts of Cultural Capital in CBD

The concept of cultural capital is now commonly employed in sociology and economics to examine the influence of culture on various socioeconomic phenomena. According to Bourdieu (1986), cultural capital is an expanded form of economic capital, manifesting in institutionalized forms like educational qualifications. When viewed at an aggregate level from the point of view of CBD, cultural capital is characterized as the empowerment that both society and individuals derive from possessing culture (Tubadji, 2020). In specific, the cultural capital consists of cultural heritage and living culture, which are categorized according to their temporal dimensions. While cultural capitals can be further classified according to their physical properties (into material cultural and immaterial culture).

Living culture is quantified by the presence of cinemas, theaters, and libraries, which are considered part of the material living culture, as well as community activities that contribute to the immaterial culture (Tubadji, 2012). Essentially, living culture encompasses locations and resources that foster interpersonal interactions. This quantification indicates that living culture can serve as a measure of a locality's active efforts and potential to enrich its cultural diversity. From this perspective, living culture acts as a catalyst, fostering social interactions and facilitating the blending of human capital and diverse ideas. Previous research suggests that cities characterized by cultural diversity and an influx of migrants typically exhibit greater economic innovation (Florida, 2005; Ottaviano and Peri, 2005).

In contrast, cultural heritage is measured through landmarks such as historical architecture, cultural monuments, museums, and parks, which represent a region's long-

standing cultural legacy. Immaterial cultural heritage can include historical stories, social norms, customs, and traditional practices and beliefs. The presence of such historical elements in a locality might restrict communities to their traditional ways of life. In more traditional societies, people are often less likely to welcome change and novelty due to ingrained habits and perspectives (Hagen, 1963). Additionally, it has been shown that material historical cultural heritage can reinforce a community's sense of identity (Miao, 2021). From this perspective, local cultural heritage tends to exert restrictive and confining effects. Therefore, these two types of cultural capital typically have contrasting effects on society and economic development.

One of the innovations of CBD is that it introduces new methodologies to address the limitations encountered in previous studies. In prior research, cultural attitudes and values have often been gauged through survey questions, which typically try to identify cultural traits through assessing people's perceptions on various social and cultural matters with statistical methods. The aim is to offer a portrayal of individuals' values across cultures and regions. However, they face some issues.

Firstly, there is the endogeneity issue, as cultural beliefs and attitudes can lead to different economic outcomes while also being influenced by socioeconomic factors. Thus, the causal relationship between culture and economic development cannot solely rely on survey questions and economic indicators. Additionally, related to endogeneity is the reflection problem (Manski, 1992) in studies of social phenomena, where making causal inferences between individuals and the groups they belong to is challenging and complicates estimating how individuals and groups affect each other. In the context of culture and economics, this includes cases such as cultural beliefs, attitudes, and

economic performance, where it is difficult to determine how aggregate behaviors and individual behaviors influence one another without appropriate identification methods. Specifically, this requires “prior information” about the group, as suggested by Manski.

Secondly, there is the ecological fallacy (Robinson, 1950), which highlights the statistical issue related to using aggregate data to infer relationships at the individual level. This can lead to biased statistical inferences about individual characteristics and behaviors.

In the context of CBD, using cultural heritage and living culture as aggregate representations of a locality partly addresses these issues. These two forms of cultural capital more effectively encapsulate regional cultural influences, as they reflect the shared historical and contemporary experiences of all individuals within a given locality, providing a comprehensive picture of culture’s influence on the region. More importantly, cultural heritage can be regarded as an exogenous factor influencing subsequent economic performance in certain contexts. In CBD, cultural heritage serves as the prior information. For instance, concerning the historical communist experiences of certain countries, it has evolved into a largely endogenous factor in current economic development and issues due to the changing political context. This characteristic is potentially advantageous for advancing knowledge and facilitates methodological convenience in dealing with the endogeneity issue.

3.3 CBD on Regional Inequality Analysis

In terms of dealing with regional inequality, it is crucial to identify the role of culture in generating and perpetuating regional inequality. One of the fundamental aspects CBD investigates is the cultural frictions created from the interactions between cultural heritage and living culture. The proposed mechanism of CBD in analyzing the generation and perpetuation of inequality is through the following process as illustrated in Figure 3.1.

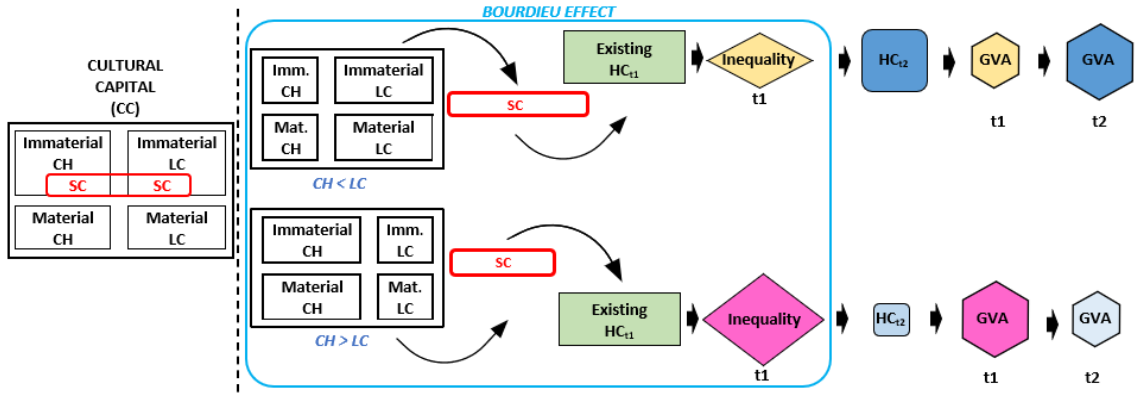
In a given locality, the two cultural capitals—cultural heritage and living culture—constantly interact with each other, generating lively cultural dynamics as well as potential conflicts. These processes are represented as two overlapping squares in Figure 3.1. Living culture embodies a push toward openness, embracing novelty and fostering dynamism and interactive communication between people. In contrast, cultural heritage tends to promote a sense of closeness and identity, which can lead to resistance against new ideas (Tubadji, 2012).

Furthermore, while the formation of living culture is shaped by various factors, including social, political, and economic power, the relationship between these two types of cultural capital is also reciprocal; historical capital influences the development of living culture as well. Historical cultural capital can interact with living culture, acting as a source of innovation and creativity. This, in turn, can stimulate the inflow of human capital, becoming a driving force for a more dynamic living culture, which enhances living capital. This duality potentially results in constant tensions.

Researchers have sought to quantify cultural barriers and exclusionary mindsets using

surveys such as the World Values Survey. These surveys usually investigate people’s sentiments and opinions related to racial, cultural, religious, and gender attitudes, offering insights into prevailing values and potential cultural barriers from various aspects. In CBD, to measure the potential conflicts arising from these cultural capitals, the concept of Cultural Entropy is introduced (Tubadji, 2022). This metric aims to capture the degree of conflict between cultural heritage and living culture. This topic will be discussed in depth in Chapter 5, where an empirical study will be conducted to explain regional innovation ability as a result of the complexity of local culture. In this process, conspicuous consumption is used as a means of boosting social capital.

Figure 3.1: The Culture-Based Development (CBD) Definition of Cultural Capital (CC) and the ‘Bourdieu Effect’ of Culture-Based Spatial Frictions.



Source: Tubadji et al., 2022

When analyzing regional economic development through the lens of cultural forces, a central concern is the distribution and utilization of human capital. Human capital serves as an indispensable part for economic activities. However, the regional formation and distribution of human capital are decided by the intensity of cultural conflicts and tensions, which are delineated by CBD as two primary mechanisms. Firstly, in the receiving locality, preferences are molded by cultural attitudes toward newcomers, determining whether the community welcomes migrating workers or not.

This phenomenon is referred to as the “cultural attraction effect” (Tubadji and Nijkamp, 2015; Tubadji and Nijkamp, 2016b), which will be explored in detail in the first main study within the interprovincial context of China. This effect is illustrated in Figure 3.1 as the formation of social capital (SC) resulting from the interaction of the two types of social capital. The level of SC further affects the accumulation of human capital. As people migrate to pursue better careers prospects and higher life quality, the decision of migrant workers to relocate is shaped by their perceptions of benefits and opportunities in the host region. Thus, local culture influences the utilization of human capital by affecting their decisions to migrate or not as migrating workers decide their migration choices based on their experiences with local cultural interaction and assessments of potential advantages.

On the other hand, cultural interactions will decide whether a locality could attract workers of high bargaining power. This is termed the cultural "milieu" effect (Tubadji and Nijkamp, 2014; Tubadji et al., 2017), which will be studied in the second study. North (2005) suggests that the challenge in adopting new ideas lies in ensuring that they are perceived as beneficial within a community. Given that cultures have different perspectives on the utility and acceptability of innovations, these will directly impact the productivity of human capital. This as a result, will be seen in the regional capability of innovation. Additionally, if local inequality becomes too high and the distribution of economic resources becomes excessively unequal, it may result in either a loss of human capital or a decrease in the ability to fully utilize human capital for productivity. This will lead to diminished effects of using human capital, as illustrated in the second stage of Figure 3.1. As a result, the redistribution of human capital will be associated with the redistribution of gross value added (GVA),

as shown in the last part of Figure 3.1.

These dual mechanisms determine human capital allocation and utilization, subsequently shaping the economic growth of a region.

In empirical research on conspicuous consumption, studies often identify the impacts from income inequality (Christen and Morgan, 2015; Jaikumar and Sarin, 2015), racial inequality (Charles et al., 2007; Kaus, 2012), and social exclusion (Mead, 2010; Lee and Shrum, 2012) using a range of methodologies such as surveys, questionnaires, and experiments. This thesis aligns with the CBD paradigm to use the concepts of cultural capital and living culture to explore the inequality and social exclusion generated from cultural forces and potential conflicts, which according to the hypothesis would induce the use of conspicuous goods.

From Bourdieu's perspective, cultural capital serves as the embodiment of inherited tastes and lifestyles, naturally distinguishing individuals and determining their social class by shaping their habits. While Veblen suggests people purposely take up conspicuous leisure activities in order to blend into upper class. In the regional migration context of China, the perceived disparities in cultural capital might motivate behaviors designed to emulate the lifestyle of a desired social group. Against the backdrop of China's evolving economy and significant migrant workforce, two studies in this thesis examine how such factors shape individuals' inclinations towards conspicuous consumption.

Thus, overall, CBD is built on solid theoretical foundations as reviewed in Chapter Two and further developed along the line of Weber's ideas in terms of focusing on the

role of value in economic process. In this specific thesis, it closely follows Veblen and Bourdieu's theorization on the role of conspicuous goods in social and cultural contexts, as well as economic studies on conspicuous goods as a social capital booster, as reviewed in Section 2.5.5. Additionally, as shown in Sections 2.5.1 to 2.5.4, there are existing challenges in measuring the utility associated with conspicuous consumption, and CBD thus advances the understanding of such choices. Lastly, as discussed in Section 3.2, there are also methodological advancements in applying CBD to understand the relationship between culture and economic development in China.

Chapter 4

A Behavioral Cultural-Based Development Analysis of Entrepreneurship in China

4.1 Abstract

This chapter deals with local cultural capital as a motivator for entrepreneurial behavior in China. Following the Culture-Based Development paradigm (CBD), the current study approaches local cultural capital as an entity that can be temporarily segmented into living culture and cultural heritage and can be further differentiated type-wise into material cultural capital and immaterial cultural capital. The main hypothesis of this paper is that living culture and cultural heritage have different roles in the direction of effect on entrepreneurial behavior in China. To test this hypothesis, a quantitative research method is utilized and data is collected from *China Statistical Yearbooks*, the website of *Chinese Intangible Cultural Heritage* as well as the third and fourth *China Economic Census Yearbooks*, covering the period from 2010 to 2019 and regarding all 31 provinces of mainland China. This dataset provides indicators for both material and immaterial living culture, respectively represented by the total book circulations in public libraries and performances at art venues, while historical cultural heritage is approximated by intangible cultural heritage (such as the number of folk literature, traditional music, traditional dance and so on) and historical sites. For data analysis, an OLS regression is used to assess the roles of each kind of cultural capital on regional entrepreneurship development. Findings suggest CBD is applicable for analyzing entrepreneurship behavior and the result of the application

of model shows a notable impact of culture on entrepreneurship activities in China.

4.2 Introduction

The aim of this chapter is to understand regional entrepreneurial behavior in China from a behavioral perspective by applying the Cultural-Based Development (CBD) paradigm. For the role of this chapter in the whole thesis, this chapter attempts to apply CBD on China, serving as a pilot study in using CBD in the context of China for connecting culture to the economic outcome, here, the entrepreneurial activities. Through this study, it can show whether the CBD model of economic growth model could be applicable in explaining the economic phenomena in China.

There are two new books which have shed additional light on the study of regional economic development with special focus on personality, culture and other institutions, namely, the work by Obschonka et al. (2021), "Footprints: Geography of Entrepreneurial Psychology" as well as the book by Huggins and Thompson (2020), "A Behavioral Theory of Economic Development: The Uneven Evolution of Cities and Regions", and I will engage with their insight from CBD perspective. China has a vast land and rich cultures; concerning its entrepreneurship development, researchers have been active in examining entrepreneurship-related institutions, characteristics as well as entrepreneurship cultures in China. Studies that do not incorporate a comprehensive cultural paradigm are inherently limited, as they fail to fully capture the nuanced effects of culture on entrepreneurial activities. CBD provides a cultural economic analysis paradigm, which is suitable for analyzing entrepreneurship behavior from a culture-based perspective and would further our understanding of the role of Chinese culture in socioeconomic development.

Culture plays a significant role in entrepreneurship by influencing individuals' inherent tendencies, shaping mindsets that foster entrepreneurial activities, and creating a vibrant environment conducive to innovation. Culture acts as a soft factor that determines whether innovation is perceived as beneficial or utility-enhancing. Both psychology and regional studies have examined the relationship between culture and entrepreneurship. These two fields converge on a key insight: the propensity to innovate often stems from having the right social and institutional environment, which is closely tied to the surrounding cultural context. This highlights the importance of social support and institutional frameworks in nurturing entrepreneurial endeavors. Moreover, there is evidence for the path dependency in entrepreneurship. Certain regions have historically demonstrated a higher propensity for entrepreneurial activity, largely due to the presence of a “right” cultural environment that promotes and supports entrepreneurship. This cultural backdrop not only encourages individuals to engage in entrepreneurial pursuits but also reinforces a cycle where successful entrepreneurial activities further strengthen the cultural factors that support innovation.

In the context of CBD, the influence of various forms of cultural capital plays a crucial role in determining how easily individuals can engage in entrepreneurial activities. Following the CBD definition of local cultural capital, which segments it into four categories—material living culture, immaterial living culture, material cultural heritage, and immaterial cultural heritage—this paper examines the impact of each type of cultural capital on local entrepreneurial behavior across all 31 Chinese provinces using Ordinary Least Squares (OLS) estimation methods. The expectation is that, based on the distinct roles of these different types of cultural capital, they will

have varying associations with provincial entrepreneurship. Specifically, I anticipate that living culture will exhibit a positive relationship with entrepreneurial activity. This study thus aims to shed light on how cultural capital influences entrepreneurship at the provincial level in China.

Data obtained from *China Statistical Yearbooks*, *Chinese Economic Census Yearbooks* and the website of *Chinese Intangible Cultural Heritage* are utilized to quantify both entrepreneurial behavior and cultural capital. The main associations are examined and discussed. The findings outline a promising agenda for applying the CBD paradigm for understanding the intricacies of entrepreneurial behaviors in China.

The structure of this chapter is as follows: Section 2 offers a brief review of studies on regional entrepreneurship and Chinese entrepreneurship development as well as empirical studies of CBD on socioeconomic development. Section 3 introduces model and estimation strategy with the results of empirical application on regional Chinese entrepreneurship. Finally, Sections 4 and 5 illustrate limitations of this chapter and concludes.

4.3 Literature Review

4.3.1 Drivers of the difference in Regional entrepreneurship

Various factors have been identified to be related to entrepreneurship. It has been examined that regional unemployment rates and population density contribute to the growth of enterprises (Bosma and Schutjens, 2010). Formal institutions such as government intervention (Bjørnskov and Foss, 2007), employment protection (Bosma and Schutjens, 2010), and labor market regulation (Van Stel et al., 2007) have negative

impacts on entrepreneurship. However, monetary policy (Bjørnskov and Foss 2007), along with fiscal, monetary, and labor freedom—which refers to the restrictions imposed by the government that allow individuals to pursue entrepreneurial activities more freely (McMullen et al. 2008)—are positively associated with entrepreneurship development. Moreover, explanations for regional disparities in entrepreneurship are beyond these “hard factors”. Entrepreneurship is about a certain kind of behavior highlighting individuals’ characters and mindsets, which makes it closely linked to the study of personal profile and culture. As Obschonka et al. (2021) indicate, the forming process of human psychology is under the influence of both biology and environment, which makes it impossible to study regional entrepreneurial activities without referring to its relevant geographical contexts.

There are two paradigms which propose, with insights from psychology, two different takes on how entrepreneurship is formed, namely, the action-oriented paradigm and the person-oriented paradigm. The former recognizes the focal role of actions in entrepreneurship as entrepreneurs would only achieve by taking actions with hierarchical regulations of behaviors (Frese, 2009), while the person-oriented paradigm treats the personality of the individual as the study object and the main determinants of all psychological outcomes, including behavior, motivation, cognition, and emotions. In this perspective, entrepreneurs are “identified” with their personality. Obschonka and Stuetzer (2017) have adapted the original Five_Factor Theory (FFT) Personality System initially developed by McCrae and Costa (2008) to model entrepreneurial personality and have concluded three major components, namely, basic tendencies, characteristic adaptations, and self-concept. These three components are interconnected where that basic tendencies refer to the relatively stable person-

ality characteristics while characteristic adaptations and self-concept represent more changeable and variable parts of personality.

The so-called entrepreneurial personality profile could be built by studying the geographical entrepreneurship human personality, which is considered to be an important regional factor to explain the variations in regional entrepreneurship. McClelland (1961, 1965) attempted to find the connection between economic development to individual-level psychological concepts by focusing on the role of achievement motivation in the economic development (McClelland, 1961) as well as in the entrepreneurship development (McClelland, 1965). Additionally, researchers have been focusing on identifying aggregated entrepreneurial traits between regions. Big Five traits, including openness, conscientiousness, extroversion, agreeableness, and neuroticism are viewed as the relatively stable part of Five Factor Theory (FFT) Personality System and is applied to the analysis of the association between regional entrepreneurship and aggregated human traits profile (Rentfrow et al., 2008; Obschonka et al., 2013). Apart from focusing on identifying entrepreneurial traits, Huggins et al. (2018) argue it is the combination of community culture and personality psychology that decides the variations in human behavior, and they term it as the psychocultural character of one region. Courage is identified to be one important psychological feature for the success rate of entrepreneurs (Ebert et al., 2019). It should be noted that the mechanism of how psychological factors would impact on the economic activities is still unclear, and it is often argued that it is the result of individuals with such personality traits interacting with local knowledge sources (Obschonka et al., 2016).

Other drivers such as the agglomeration of creative class in a locality is also claimed to

contribute to regional entrepreneurship development (Florida, 2006), as creativity is one major fertilizer for the growth of entrepreneurship by generating new knowledge. For the creative class, it is claimed they tend to migrate to places with a lively and diversified cultural atmosphere and the society is more open and tolerant. However, the causality between social prosperity and the concentration of the creative class is hard to examine, and empirical evidence also varies (Möller and Tubadji, 2009; Falck et al., 2011).

The phenomenon of regional entrepreneurship persistence has been observed in several studies (Fritsch and Mueller, 2007; Fritsch and Wyrwich, 2014; Fritsch et al., 2019; Andersson and Koster, 2010; Fotopoulos, 2013). For these regions, it has been observed their level of entrepreneurship would remain relatively high for a long period. This phenomenon could be explained by the local stable entrepreneurial-determining factors (Fotopoulos, 2013; Fritsch and Kublina, 2019). Another explanation indicates in these regions that existing enterprises as well as entrepreneurial environments provide more opportunities for new enterprises, which lead to a path-dependent manner of regional enterprises (Martin and Sunley, 2006). Demonstration and peer effects are viewed as the explanation in that people are more likely to engage in entrepreneurship activities when they witness successful demonstrations from peers (Sorenson and Audia, 2000; Arenius and Minniti, 2005; Falck et al., 2010). Moreover, for regions such as Germany, entrepreneurship would thrive again even after drastic social and economic fluctuations (Fritsch and Wyrwich, 2014). This could be the potential evidence of entrepreneurship culture, as entrepreneurial culture could be maintained within a society through the mechanism of parents transferring an entrepreneurial spirit to their offspring as well as selective migration (Obschonka et al., 2018a). Fritsch et al. (2019)

further indicate that collective memory might also be the explanation, which reminds later generations of the preexisting entrepreneurial activities, thus could motivate the present generation to engage in entrepreneurial activities.

Apart from entrepreneurship persistence, the preexistence of different industries and labor divisions would also induce the differences of present-day entrepreneurship. Large-scale industries (Obschonka et al., 2018b), farmers, homeworkers and science-based industries (Fritsch et al., 2019) have been proven to lead to different psychological impacts on the latter entrepreneurial development and could act as either negative or positive role models for latter generations.

During crises and economic adverse conditions, entrepreneurship is thought to be crucial in restoring economy (Haltiwanger, 2021) while regional entrepreneurship disparities are furthermore highlighted. Resilience is one quality greatly valued during times like this (Kuckertz et al., 2020). The study in Afghanistan shows that even during wars, entrepreneurs who are more resilient and self-efficient would be more active and successful in surviving hardships and even show greater entrepreneurial spirit (Bullough et al., 2014). Likewise, Obschonka et al. (2015) find there is a regional entrepreneurial personality profile which serves as a prospective factor when faced with crises.

However, it is also believed that crisis could be the source of innovation (Li-Ying and Nell, 2020). When it comes to the ongoing worldwide COVID-19 pandemic, Davidsson et al. (2021) point out that as the demands for certain goods and services designed for coping in this pandemic situation increase, the entrepreneurial and business opportunities have also flourished, which could bring changes and reformation

of entrepreneurship structure. Haltiwanger (2021) showed that there is an increase in new businesses in the U.S., mainly in the sectors of Ten 3-digit industries, non-store retail, personal services, professional, scientific and technical services and so on, while there are also geographical disparities in the formation of new businesses. Using start-up data of new businesses in eight U.S. states, E. Fazio et al. (2021) observe changes in the geography of entrepreneurship with the fact that neighborhood with higher proportions of black residents and with higher median incomes saw higher startup rates. These challenges have pushed international entrepreneurship to the frontier of confronting the impact of COVID-19 (Zahra, 2021), and is believed to bring potential changes to regional entrepreneurship distribution.

While these findings are indeed very promising to understand the psychological aspects of regional entrepreneurship differences, the precise mechanisms that drive the local psychological milieu to develop into entrepreneurship psychology is still under-researched.

4.3.2 CBD as a driver for the development of entrepreneurship

As noted in the previous section, while psychological types seem to predict entrepreneurial behaviors at a regional level, the precise reasons and mechanisms of their regional impact remain to be explored. Human behavior is known to be strongly dependent on the cultural context, which is a core argument in evolutionary economics often dealing with entrepreneurship and is the cornerstone concept in culture-based development as well (Tubadji, 2012; Tubadji et al., 2015).

Economic activities and choices are often based on the judgment of value. However,

such judgement would usually be biased within their respective cultural contexts (Tubadji, 2020). Thus, it would be empirically detrimental to leave out culture from the objective analysis of all socioeconomic outcomes. The culture-based development (CBD) paradigm, developed by Tubadji (2013, 2020), recognizes that every model would be underspecified if cultural factors are omitted. Following Weber's idea of the relationship between value and economic development, CBD also asserts that the value-free analysis of economic activities—defined as the objective assessment of economic behaviors and outcomes without the influence of specific values or biases—can be conducted correctly only if cultural factors are properly measured and integrated into models. In other words, CBD believes that economic phenomena, behaviors, and outcomes can be understood accurately if no value, especially the value of wealth, is added to the analysis for judgment, especially such values are usually closely associated with culture. According to CBD, culture is “a proto-institution which determines the formation of all other institutions in the locality and drives the likelihood of aggregate human preferences and choices in all main socioeconomic activities in the localities” (Tubadji et al., 2014). Thus, it could be expected that culture is a strong factor in entrepreneurship development (Huggins and Thompson, 2020).

According to CBD, culture can be quantitatively approximated through four different types of local cultural capitals. Considering the physical nature of cultural capital, immaterial culture and material culture could be accordingly recognized as sub-components. These two sub-components are interrelated and only their combined effects could impact on socioeconomic development (Tubadji, 2013). Further, to recognize the temporal nature of cultural capital, cultural capital is then divided into cultural heritage and living culture. Cultural heritage represents the total beliefs and

norms passed from earlier social stages and would still have a major influential role today. Meanwhile, living culture is the part of cultural capital which is being produced at the present stage (Tubadji, 2013). Cultural heritage and living culture are connected in a path-dependent manner (Tubadji et al., 2014). Using this delineation allows us to study the respective roles of each type of cultural capital in economic development. An important aspect of CBD is that it uses cultural capital as a notion at the regional level. CBD defines the notion of cultural capital as referring to the potential ability of culture to impact on socioeconomic development (Tubadji, 2012; Tubadji et al., 2013). It is to be noted that following the original definitions of cultural capital and its mechanisms on an individual level, CBD adapts the notion of cultural capital and explores its mechanisms adapted for use on aggregate level rather than individual level, which makes it applicable for macro- and regional-level economic analysis².

CBD has shown that culture is indeed a strong factor in explaining socioeconomic development. According to CBD, cultural capital exerts its power on socioeconomic outcomes through two gears. The first gear refers to how culture would determine the composition, quality, quantity, and structure of local human capital, while the second gear illustrates how local human capital would utilize local productive capital to impact on local efficiency (Tubadji et al., 2014). Empirical applications of CBD in Greece (Tubadji and Nijkamp, 2016b), Germany (Tubadji and Pelzel, 2015; Tubadji, 2012), and Europe (Tubadji, 2013) have shown culture would impact on local productivity. However, CBD further differentiated the roles of living culture and cultural heritage on economic development. Historical culture was identified to create

²see Tubadji et al., 2015

a closed cultural milieu which would curb the process of innovation and creation and eventually hinder economic development (Tubadji, 2012; Tubadji and Pelzel, 2015). The impact of culture has been found to extend further with a richer dataset. Culture could impact on social well-being by improving cultural vitality (Tubadji et al., 2014), preventing local crimes (Tubadji et al., 2014) as well as the overall labor force structure, leading to the improvement of overall quality of life (Tubadji and Nijkamp, 2015). Specially, the study in the USA recognized the endogeneity of cultural industry in economic development, with results showing its impact on human capital (Tubadji et al., 2014), which could aid the regional policy design.

It has to be noted that CBD has provided an insightful view into looking at the relationship between culture and entrepreneurship in detail. According to CBD, entrepreneurship can be seen as a channel by which culture could exert its impact on socioeconomic development. Theoretically, culture is a primary influential factor of individual entrepreneurial spirit development, as well as a proto-institutional factor on macro-level entrepreneurship development. Moreover, CBD argues apart from the economic determinants in a locality, the success in regional entrepreneurship will be affected both by cultural risk and by cultural institutional risk which entrepreneurs might encounter. Cultural risk refers to the local attitudes toward entrepreneurship, specifically how they perceive failure in entrepreneurial ventures—whether they view such failures as setbacks or as losses that will greatly tarnish an individual’s reputation. On the other hand, cultural institutional risk pertains to the efficiency with which human resources are utilized within the local context, including how well institutions support or hinder entrepreneurial activities and the overall economic environment. Together, these factors—cultural risk and cultural institutional risk—will

determine the potential for entrepreneurship to develop in a given locality (Tubadji, 2013).

4.3.3 Entrepreneurship in China

The ownership transformation of Chinese domestic enterprises has greatly contributed to the economic success in China and proven that private-sector enterprises are more productive and competitive than state-owned enterprises, underlying the economic advantages of private entrepreneurship (Zhang et al., 2003; Zheng et al., 1998). According to the *2018/2019 Global Entrepreneurship Monitor China Report* published by the Entrepreneurship Research Center on G20 Economies 2019, concerning the entrepreneurship environment, China is ranked in fifth place among all G20 countries. Especially, culture and social norms is ranked at the third place, while physical infrastructure, services, and internal market dynamics are also reported to be strongly supporting entrepreneurship development in China. This result shows that China now has a favorable entrepreneurial environment in general. However, in China, the gap of private entrepreneurship between regions is still pronounced. Certain regions and provinces have more advantages for private enterprises to grow, while others relatively lag behind (Pan and Yang, 2018). During the earlier stages of transformation, rural areas and eastern provinces were more active in developing agriculture-based individual businesses. However, with a coherent law-based transition strategy put in place, it became clear that coastal provinces in the east are more endowed with developing private entrepreneurship with the evidence showing that coastal provinces see the largest number of private enterprises and the highest share of employment in private enterprises, followed by central provinces then western provinces (Gregory et al., 2000). The disparities could also be observed in that some provinces have

more efficient innovation-related enterprises than others (Du et al., 2019; Zhang et al., 2003). Explanations might reside in different level of the regional deregulation, intervention of local government (Zhou, 2011), such as tax incentives (Liu et al., 2018) as well as financial supports and venture capital availability (Pan and Yang, 2018). However, Yang and Xu (2006) claim that the economical level of provinces, urbanization rate, marketization, wage level, as well as unemployment rate hold no account for the disparity.

Concerning “soft factors” in entrepreneurship development, Kirby and Fan (1995) compared traditional Chinese values to general entrepreneurial attributes and found that traditional Chinese value system lacks creativity, innovation, and flexibility, but indeed shares certain entrepreneurial values consisting of being positive toward changes and initiative and profit-orientated. Similarly, Wang (2012) suggested that Chinese culture is not fully supportive for nurturing entrepreneurship but does have several aspects which are in favor of the growth of entrepreneurship. For cross-country research, ethnic diversity (Howell, 2018) and religion (Liu et al., 2019) are identified to be notable reasons for the disparities in entrepreneurship in China. Specially, "GuanXi" is a crucial part of Chinese business culture. It refers to a kind of interpersonal relationship with emphasis on continued exchange of favors (Luo, 2000). As a Chinese indigenous construct (Chen and Chen, 2004), "GuanXi" plays a rather unique and notable role in entrepreneurship as on the one hand it facilitates the development of Chinese enterprises (Anderson and Lee, 2008), while on the other hand it could also have adverse effects, as it leads to a situation where business decisions are made based on the individual preferences (Li and Matlay, 2006).

To conclude, cultural factors are found to be very important in Chinese entrepreneurship development. Yet, the detailed cultural mechanisms behind these impacts are still unclear. This motivates the need to adopt the filigree CBD definition for culture in order to advance the understandings of the reasons behind entrepreneurial behaviors in China.

4.4 Data and Method

4.4.1 Data and definition of variables

The panel dataset in this paper covers the period from the year 2010 to the year 2019 and consists of all 31 provinces in mainland China. Thus, the dataset uses provincial and yearly observations.

The standard economic indicators as well as indicators for living culture are obtained from *China Statistical Yearbooks*. Provincial-level immaterial cultural heritages and cultural sites are drawn from the website of *Chinese Intangible Cultural Heritage*. The economic indicators of 2013 and 2018 are obtained from the third and fourth *China Economic Census Yearbook* respectively, as nation-wide economic censuses were conducted during these two years and relevant data were no longer published in regular yearbooks. The number of provincial-level private enterprises is used to indicate local entrepreneurship. In this chapter, private enterprise refers to for-profit economic organizations that are invested by or controlled by a natural person and is based on hired labor. In China, these organizations include the private proprietorship, private partnership, private limited liability company and sole proprietorship registered in accordance with the Company Law, Partnership Law, Interim Regulations

on Private Enterprises and Sole Proprietorship Law enterprises. Intangible cultural heritage includes ten categories, namely, folk literature, traditional music, traditional dance, traditional opera/theater/drama, narrative/storytelling traditions, traditional sports/recreational activities/acrobatics, traditional arts, traditional handicraft skills, traditional medicine, and folk customs. The list of intangible cultural heritage is published by the *Chinese Ministry of Culture* while the list of historical cultural sites is published by the *State Administration of Cultural Heritage* and includes all historical sites which are deemed to be of significant historical, artistic, or scientific value. These sites consist of ancient temples and cemeteries, imperial palaces, historical towns and cities, traditional rural dwellings, and so on.

The main explanatory variables of interests are the four types of cultural capitals, which are denoted as IH_CC (standing for intangible cultural heritage), MH_CC (standing for material cultural heritage), IL_CC (standing for intangible living cultural capital) and ML_CC (standing for material living cultural capital). As CBD indicates, the historic parts of cultural capital are largely exogenous to current economic development, while living culture might be endogenous. Thus, the indicators used in this chapter should be chosen with caution. The number of intangible cultural heritages is used to measure IH_CC, while the number of historical cultural sites is used to approximate MH_CC as intangible cultural heritages and historical sites were both produced more than 50 years prior to the current-stage economic development and should not suffer endogeneity problems in this chapter. For the measurement of living culture, the number of performances at art venues is used to approximate IL_CC and the total circulations of books in public libraries measures ML_CC. Book circulations should be considered to be independent of local economic

statue as book loaning is mostly free in Chinese public libraries. In most cases, the indicator of performances at art venues could not be considered an entirely exogenous economic factor. However, in China, the amount of money individuals spend on art performances is relatively low compared with the income level within each province as it is a policy goal of China to bring art to people by keeping the costs on art performances affordable. Thus, this indicator could be considered to suffer from no endogeneity problem in the context of China.

For the dependent variable, while entrepreneurial activities extend beyond the mere formation of new businesses, due to the limitations of available data, i resort to the use of new business formation as a proxy for the entrepreneurial “spirit” within a province. This approach allows us to capture the essence of entrepreneurial activity in a region, despite the broader range of entrepreneurial behaviors that may exist. By focusing on the formation of new enterprises, we aim to gain insights into the general entrepreneurial climate. Thus, the dependent variable in this paper is PEnt, which is measured by the number of regional enterprises. HC is measured by the percentage of citizens who have attained education with degrees from a university, college, or specialized higher education school. L is measured by the percentage of urban employees. Lastly, K represents the provincial physical capital investment.

Controlling variables include UL, which is the percentage of urban citizens in the total population. Dummy variables are included to control the geographic variances of Chinese provinces. It is to be noted that geographical segmentation is not strictly based on the spatial features of each province. According to the National Bureau of Statistics of China, it is divided according to the economic development of each province,

as provinces in the same group would be expected to encounter the same economic issues resulting from their geographical features. This chapter is a cross-country study, which could be considered to exclude the possible institutional differences generated under different culture backgrounds, thus avoiding what CBD calls cultural relativity across space, expressed as Platonian cultural bias in empirical terms (see Tubadji, 2012; 2020). Table 4.1 provides descriptive statistics for this chapter. Apart from K, L, and HC, we can see that the deviation in the number of newly formed enterprises and cultural variables is quite large, considering across the chosen years, the provincial number of enterprises shows relatively stable changes.

Table 4.1: Descriptive Statistics

Variable	Obs	Mean	Std.dev.	Min	Max
PEnt	310	312816.8	383909.1	1400	2567749
K (10000 Chinese Yuan)	310	15992.79	12014.01	462.7	55202.72
L (percentage)	310	0.1269243	0.0581523	0.0626718	0.3801426
HC	310	0.1229993	0.0685422	0.0213592	0.4768705
intangible cultural heritage (IH_CC)	310	99.3871	49.06153	18	233
material cultural heritage (MH_CC)	310	171.8065	116.5656	34	538
intangible living cultural capital (IL_CC)	309	3.488964	6.158726	0	42.44
material living cultural capital (ML_CC)	310	1882.441	2143.069	2.7	13935
Urban_Level	310	0.5608627	0.1338953	0.2266667	0.8960662

4.4.2 Model and estimation strategy

In order to examine the impact of both cultural heritage and living culture on the entrepreneurship development, using both standard economic data and cultural data obtained from *China Statistical Yearbooks* and the website of *Chinese Intangible Cul-*

tural Heritage, the following CBD model is examined with OLS regression (1):

$$PEnt = \beta_0 + \beta_1 HC + \beta_2 K + \beta_3 L + \beta_4 IH\_CC + \beta_5 MH\_CC + \beta_6 IL\_CC + \beta_7 ML\_CC + \beta_i CONT + e \quad (4.1)$$

Where,

- *PEnt* – The number of private enterprises
- *HC* – Human capital
- *K* – Physical capital
- *L* – Labor
- *IH_CC* – Immaterial historical cultural capital
- *MH_CC* – Material historical cultural capital
- *IL_CC* – Immaterial living cultural capital
- *ML_CC* – Material living cultural capital
- *CONT* – Control variables for controlling urban level and geographic factors

This model is motivated by CBD (Tubadji, 2012; 2013) in the sense that it uses the CBD notion of cultural capital in its four dimensions as factors to explain an economic outcome of interest. It, however, is innovatively adapted for the case of entrepreneurship study, and thus allows us to examine the main hypothesis in this chapter, which can be stated as:

Hypothesis 4.1:

Regional culture would have a significant impact on the regional entrepreneurship development.

Five specifications were tested accordingly, starting from the basic model where cultural variables are initially excluded, which explores the relationship between economic factors and entrepreneurial behavior in Chinese provinces. Next, each cultural capital proxy of interest was individually added in, which allows for the comparisons of their respective impacts on entrepreneurial behavior. Ultimately, with both the living culture and cultural heritage proxies together, a clear picture of their strength could be obtained, as CBD suggests. Finally, relevant regional control variables were included to account for heterogeneity in the model.

4.4.3 Descriptive evidence

Table 4.2 presents the correlations of all independent variables and the number of private enterprises. All cultural variables hold positive and comparably strong correlations with PEnt. Among them all, the strongest correlations could be seen between the ML_CC and PEnt, with a notable correlation as high as 0.8., which is even stronger than the correlations of standard economic variables. Moreover, the correlation between PEnt and IH_CC as well as IL_CC also reach 0.522 and 0.517, respectively. This result suggests a positive and crucial role of cultural capital in the regional private entrepreneurship development, especially regarding living culture. For standard economic factors, K is the one showing the most prominent contribution to entrepreneurship development. While based solely on the correlation results,

HC and L hold relatively weaker relationships. It is to be noted that the correlations between historical cultural variables and HC are both negative, while for living cultural variables, the correlation results are both shown to be positive. This same pattern could be observed from the correlation results of UL. Judging from the correlation results only, we could expect their different roles for the entrepreneurship development, as expected by CBD.

Table 4.2: Correlations between Variables

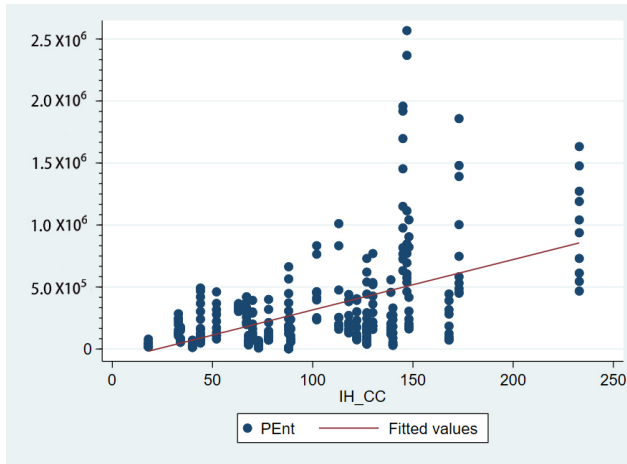
	PEnt	K	L	HC	IH_CC	MH_CC	IL_CC	ML_CC	Urban Level	Middle	West	Northeast
PEnt	1											
K	0.758 ***	1										
L	0.299 ***	-0.00839	1									
HC	0.198 ***	-0.0627	0.871 ***	1								
IH_CC	0.522 ***	0.524 ***	0.0713	-0.103	1							
MH_CC	0.269 ***	0.472 ***	-0.106	-0.162 **	0.662 ***	1						
IL_CC	0.517 ***	0.415 ***	0.266 ***	0.194 ***	0.351 ***	0.301 ***	1					
ML_CC	0.871 ***	0.648 ***	0.293 ***	0.125 *	0.533 ***	0.241 ***	0.446 ***	1				
Urban Level	0.392 ***	0.145 *	0.799 ***	0.807 ***	-0.0602	-0.148 **	0.267 ***	0.389 ***	1			
middle	-0.200 ***	0.019	-0.342 ***	-0.254 ***	-0.026	0.284 ***	-0.166 **	-0.217 ***	-0.292 ***	1		
west	-0.271 ***	-0.235 ***	-0.306 ***	-0.259 ***	-0.0414	-0.203 ***	-0.205 ***	-0.267 ***	-0.484 ***	-0.0775	1	
northeast	-0.134 *	-0.107	-0.0504	0.0374	-0.341 ***	-0.177 **	-0.107	-0.0949	0.0945	-0.260 ***	-0.209 ***	1

Note: *** p<0.01, ** p<0.05, * p<0.1.

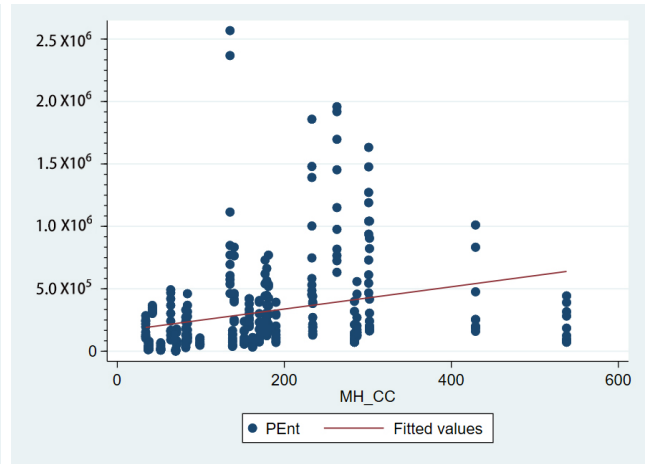
Scatter plots are provided in Figures 1–4 to show the relationships between each cultural variable and provincial entrepreneurship with their corresponding regression lines. The correlation of ML_CC and PEnt shows a strong and positive relationship. For IL_CC, a large number of observations mainly cluster to the lower-left side of the scatter plot, but still shows a generally positive relationship, while the relationship of IH_CC is comparably clear with an upward trend between the two variables. Regarding the correlation between Material Heritage Cultural Capital (MH_CC) and entrepreneurship, provinces with 300 cultural sites or fewer exhibit a clearer correlation, showing a strong upward trend in entrepreneurial activity as the number of cultural sites increases. However, the two provinces with the highest number of

cultural sites, Henan and Shanxi, which have 429 and 538 cultural sites respectively, actually demonstrate a relatively negative relationship between material cultural sites and entrepreneurship. This finding suggests that the role of historical cultural capital in promoting economic development in China is not uniform; instead, it varies significantly across different provinces.

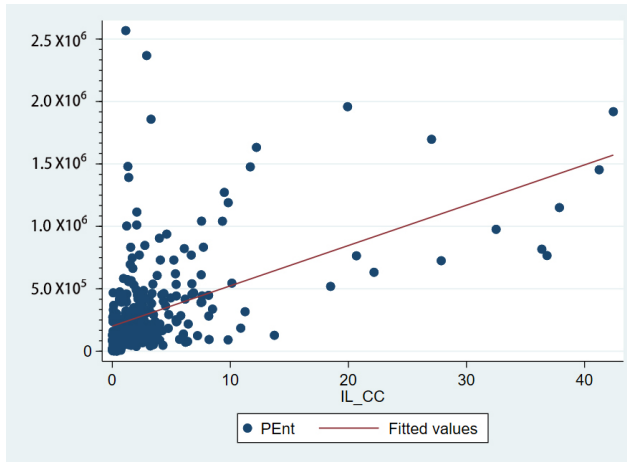
Figure 4.1: Relationship between Four Types of Cultural Capital and Regional Entrepreneurship



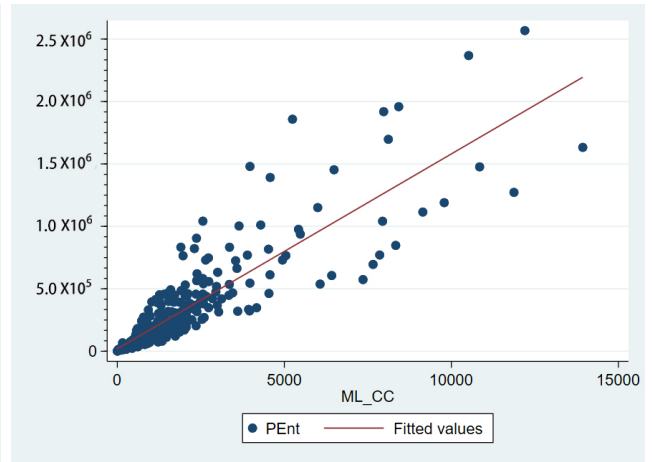
(a) Relationship between intangible cultural heritages and entrepreneurship.



(b) Relationship between cultural sites and entrepreneurship.



(c) Relationship between performances in art venues and entrepreneurship.



(d) Relationship between circulation of books and entrepreneurship.

4.5 Results

Table 4.3 shows the result of the model with five specifications. The first specification shows the impact of standard economic determinants on entrepreneurship development. The result of this specification shows that 67% of the overall growth of private enterprises is driven by K and L. The second specification examines how much of the growth could be explained by historical cultural capital, while the third one examines the impacts of both historical and living cultural capital on regional entrepreneurship. The total explanatory power of the third specification rises to 85.4%, showing that cultural capital is indeed a very important factor for entrepreneurship development. This finding potentially suggests that when living culture is controlled for, the size of the labor force in a province may not significantly relate to the conditions that promote entrepreneurship. This could be attributed to the idea that the entrepreneurial spirit is largely shaped by cultural and social conditions, as discussed in the introduction. In other words, while a larger labor force might seem advantageous for fostering entrepreneurship, it appears that the underlying cultural and social factors play a more critical role in influencing individuals' willingness and ability to engage in entrepreneurial activities.

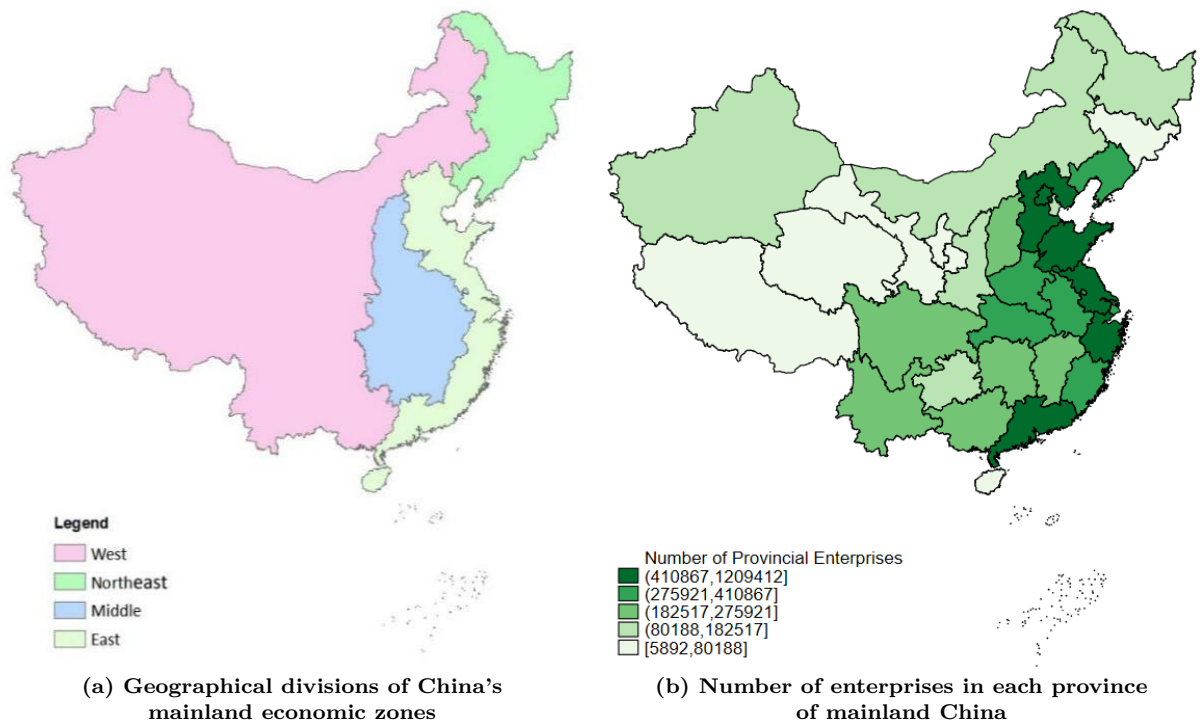
It should be noted that in specification 3, after living culture capital variables are introduced, L is no longer a significant factor, while HC shows a significant and positive influence over entrepreneurship. This indicates when the influence of living cultural is taken into consideration, HC is actually a very important factor in the local entrepreneurship development. However, the significance of labor dropped, which suggests L is not actually a driving force of local entrepreneurship. Moreover,

after introducing the living cultural variables, the coefficient of MH_CC reduced by half, suggesting the existence of living culture mitigates the negative impact from MH_CC. Regarding IH_CC, the result from specification 5 indicates there is actually no impact from IH_CC on regional entrepreneurship development. Instead, the explanation lies in their respective region-fixed effect, which is controlled by three geographic control variables, namely, west, middle, and northeast. However, the estimators of geographic variables are significantly negative, suggesting the growth of enterprises in the western, middle, and north-eastern parts of China is hindered by their locations. Among them all, the northeast is where geographical features would make them least advantageous in entrepreneurship development, which is consistent with what we know about north-eastern part of China, as social and crime issues are thought to impair their economy. On the contrary, similar to other coastal regions in the world, the eastern part of China is mainly located by the sea, which is a strong geographic advantage for economic and entrepreneurship developments. The geographical features of Chinese provincial entrepreneurship are illustrated in Figure 4.2³.

Overall, provincial entrepreneurship could be driven by living cultural capital, while the historical cultural capital actually hinders the local development of entrepreneurship. This is consistent with CBD expectations, as historical cultural capital may create a closed local cultural milieu which would be detrimental for economic growth. Moreover, this model also captures the effect of the mechanism of cultural capital impacting on the formation of HC. When taking living culture into consideration,

³In figure (b), the numbers of provincial enterprises are calculated as the average numbers of enterprises in each province from period 2010 to 2019.

Figure 4.2: Geographical Divisions of Mainland China's Economic Zones and Number of Enterprises by Province



results show HC is a strong factor in explaining the growth of entrepreneurship, as it might act as the source of innovation and creativity. However, more studies are to be carried out in order to examine this mechanism in China.

Table 4.3: Effects of Cultural Capital on Entrepreneurship

specification	1		2		3		4		5	
dep.var	number of private enterprises in each province									
K	24.15	***	23.13	***	11.72	***	11.92	***	11.87	***
L	2506113	***	1549951	***	-365500.1		-252718.4		-457081.3	
HC	-477030.07		178819.75		962665.21	***	1099878.27	***	1240621.87	***
intangible cultural heritage			2168.02	***	657.44	**	550.77	*	384.99	
material cultural heritage			-739.72	***	-337.12	***	-335.59	***	-306.81	***
intangible living cultural capital					5973.03	**	5963.00	**	5462.35	**
material living cultural capital					101.33	***	104.10	***	104.54	***
Urban_Level							-150462.40		-213544.46	
middle									-34801.62	*
west									-35066.24	*
northeast									-69486.39	***
Constant	-332850.44	***	-364230.70	***	-165435.32	***	-110251.05	**	-22794.36	
Observations	310		310		309		309		309	
R-squared	0.67		0.709		0.854		0.855		0.857	

• Note[1]: *** p<0.01, ** p<0.05, * p<0.1.

• Note[2]: Regressions were estimated using ordinary least squares (OLS).

The above results confirm that culture is indeed a factor greatly impacting on the entrepreneurial behaviors on provincial level, which supports the theoretical expectations of CBD. Moreover, at the provincial level of China, as it has also been explored by CBD, depending on the type of cultural capital, the directions of cultural impact vary across space. Another concern is that these cultural factors may be correlated with other economic factors that are more conventionally and typically considered conducive to entrepreneurship, such as population density, infrastructure, and overall economic activity. To address this, I conducted additional estimations that included two additional variables: the number of foreign tourists and the number of public

facilities in each province. The number of foreign tourists in a province can, on one hand, represent geographical openness and, on the other hand, reflect cultural vibrancy. Meanwhile, the number of public facilities can serve as a proxy for the convenience of conducting business activities in that province. The results indicate that the impact of the cultural variables remains significant even after accounting for these other factors. Please refer to Appendix 1 for the alternative results.

4.6 Limitation

This paper serves as an attempt of CBD analysis on Chinese entrepreneurship study. Following the CBD approach, cultural capital are divided into four groups according to their nature, which gives us advantage of identifying their respective role in entrepreneurship development.

However, this paper is limited in addressing the problem of endogeneity of the development of “natural” living culture in the context of China. As China has recognized the vital role of culture and is currently investing in living culture building by creating the “creative industry” or “cultural industry”, living cultural capital could be on the one hand relatively highly dependent on economic factor while on the other hand rely on immaterial living culture, which leads to it’s rather mixed role in the Chinese development. Thus, in the context of China, living culture is a result of both the “natural” cultural development indicated by CBD, while is also strongly affected by the economic resource investment which the indicator by industry is not. Future researches should be aimed to address the methodological challenges of identifying the potential endogeneity of living culture in terms of regional openness in the context of China with properly chosen instrumental variables.

Furthermore, this chapter fails to identify the profound impact of culture on the choice of enterprise types due to a lack of data differentiating between these types. Studies addressing this issue could potentially enhance our understanding of the relationship between Chinese culture and its economic and business structure. Moreover, in this chapter, entrepreneurial activity is limited solely to the formation of new businesses, while entrepreneurship and entrepreneurial spirit are connected to a broad range of activities that highlight individual attitudes and mindsets characterized by being active, creative, and willing to take risks. In this regard, we can anticipate that culture also plays a vital role in various entrepreneurship-like economic activities, and further research should address issues related to this aspect accordingly.

4.7 Conclusion

From the results of this chapter, CBD appears to be empirically applicable in capturing the impact of culture on entrepreneurial development in China from a local psychological milieu perspective. Culture is clearly a crucial factor driving Chinese entrepreneurial activities, resulting in significant provincial differences and potentially driving the regional inequality. While living culture serves as a booster for entrepreneurship development, cultural heritage tends to impede it. This finding is consistent with CBD expectations, which suggest that the closeness of historical cultural milieu can suppress economic vitality.

As a preliminary exploration of the role of culture in Chinese regional entrepreneurship behavior, this chapter highlights the applicability of CBD in analyzing Chinese entrepreneurship development and further underscores its potential for discussing the effects of culture in various aspects of regional economic behavior studies in China.

Chapter 5

Culture of Conspicuous Consumption and Regional Inequality in China

5.1 Abstract

China has witnessed intensive rural-urban migration motivated by employment. This study suggests a cultural augmentation of the standard Todaro (1969) model for local labour supply in order to explain urban migration inflows. Namely, I propose that urban migration depends on wages and costs for cultural adaptation driven by non-linear inequality-aversion preferences. Employers seek employees who have successfully adapted to the urban culture. To display cultural adaptation, migrants can engage in Veblenian consumption (conspicuous consumption) mimicking the urban tastes. If the local inequality is relatively low, migrants are willing to pay this cost to secure the desired job. Yet, if local inequality grows too high, migrants become proportionally unwilling to engage in Veblenian consumption. To operationalize the model, I use a unique regional panel dataset for China over the period 2013-2019, informed with over 60 cultural indicators. I find that the empirical results confirm that places with too high inequality will gradually lose their attractiveness for migrants which is ex-ante signalled by drop in local levels of conspicuous consumption. This can be interpreted as evidence for conspicuous consumption serving as an early warning for cultural frictions in migration with implications for regional redistribution of growth.

5.2 Introduction

People in China migrate to the big cities, hopeful for success, but find it hard⁴ there. Big backlashes of immigration from the urban areas became known as the “flight from Beijing, Shanghai and Guangzhou” and gave rise to the hypothesis for counter-urbanization in China (Li et al., 2015; Qin and Zhu, 2018). Some Chinese authors have disagreed with the counter-urbanization hypothesis, suggesting that the outflow observed concerns only certain big cities and cannot be qualified as a counter-urbanization process per se (Cao, 2016).

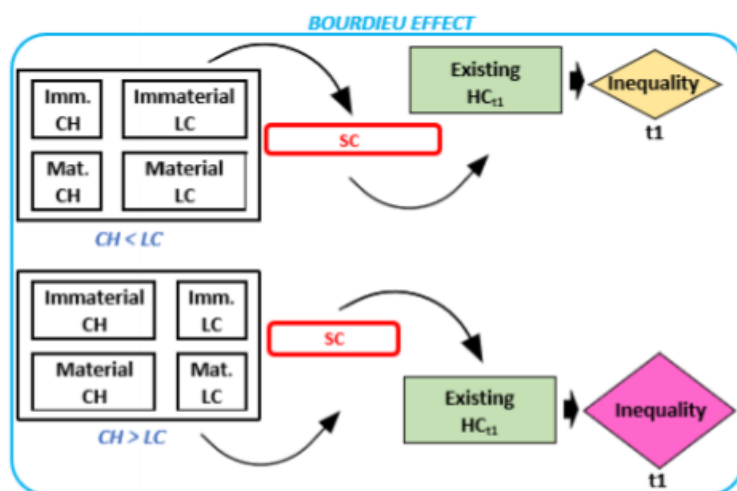
This study is inspired by the classical Todaro (1969) model for rural-urban migration which expresses the decision-making process of an immigrant as a function of costs, benefits and probability for access to lucrative modern jobs in the urban context. I propose a Culture-Based Development augmentation of this model introducing a dynamic mechanism of cultural bias on the expected probability for access to lucrative jobs.

In this chapter, following Veblen’s theories reviewed in Section 2.1 of Chapter 2, I stress that there is an important cultural economic concept used to explain the socio-economic mobility of migrants in a rural-urban migration setting: the notion of Veblenian consumption (1899). Veblenian consumption entails the consumption of goods serving as cultural markers for the desired socio-economic group. Newcomers want to gain access to the urban group by signalling through the culture of their

⁴A condition known as “lying flat” is now widely debated in relation to the development of China. The meaning of this notion captures the desperation which paralyzes the individual hope for socio-economic mobility (see for example Financial Times (2021)).

consumption behaviour (Trigg 2001; Campbell 2021.). Veblenian consumption is the vantage point of our CBD cultural augmentation to the Todaro (1969) model.

Figure 5.1: CBD Regional Development Mechanism: Cultural Attraction in the Context of Regional Migration



Further to this, the original proposition is that the centripetal and centrifugal effects of social closure (i.e. the reluctance to accept newcomers) across cities in China varies in a Kuznets curve relationship with economic growth. We know that the bigger cities become gradually more unequal (Glaeser 2005). In line with the Culture Based Development paradigm and its cultural frictions take (Tubadji et al. 2021), I suggest here that growing inequality can be seen also as a cultural economic product of growing social closure which prevents socio-economic mobility of the culturally more distant newcomers in the region. Thus, I suggest that the growing social closure in the bigger Chinese provinces is what pushes away the new immigrants who cannot find ways to integrate in the local desired socio-economic circles (related to the most lucrative modern jobs). This process corresponds to the left part of the flow in Figure 5.1, where the balance of Cultural Heritage (CH) and Living Culture (LC) induces

different levels of Social Capital (SC). In other words, the amount of social capital in a region that facilitates newcomers' integration into local society is determined by the balance between LC and CH. This process of determining regional social capital is described by Tubadji and Nijkamp (2015) and Tubadji and Nijkamp (2016b), and is known as the cultural attraction mechanism.

I importantly hypothesise that a nonlinear relationship exists between inequality and cultural attitudes to cooperation on a regional level, a special case of which is the act of allowing social integration of newcomers in one's local winners' group. The intuition is that when inequality increases, initially people aspire to be part of the top economic classes. However, when inequality increases beyond the level of reasonable chance for catching up between the forerunners and those left behind, the relative deprivation of those left behind is likely to cause a tipping point in the morale and cultural attitude of those deprived and result in backwards migration. This has been called the "Sour Grape Effect" (Tubadji et al., 2022), this means that essentially people who suffer too much from the pain that they cannot catch up, ultimately switch to believing they do not wish to catch up. Put differently, too big an increase in the relative deprivation between the winning and losing sub-groups in a region is likely to diminish the motivation for cooperation and instead instigates antagonism against the well-off segment of society. Thus, the socio-economic condition of regional inequality might be a trigger of a psychological mechanism of self-defence against a psychological pain (due to inability to catch up in socio-economic status). I hypothesise that this psychological pain mechanism will be revealed as a backlash of labour supply to a region when local inequality passes a tipping point which results in centrifugal forces switching to centripetal ones. In other words, I hypothesis in this study a hill-shaped relationship

between inequality and labour supply in a locality. In the Figure, this corresponds to the relationship in which Social Capital (SC) is linked to Existing Human Capital (HC), resulting in the production of inequality through the distribution of human capital across space. During this process, our proposed Veblenian mechanism links inequality and social mobility through a non-linear function of social closure, where Veblenian consumption acts as a booster of social capital. Overall, this chapter examines the attraction effect posited by CBD in regional development, corresponding to the process depicted in Figure 3.1 in Chapter 3 and illustrated in Figure 5.1.

I model Veblenian consumption as a signaling behavior for the level of social closure. Specifically, Veblenian goods are used as a means to boost social capital, increasing the likelihood of individuals belonging to the local society and, consequently, finding lucrative jobs. I expect that Veblenian consumption will initially grow with inequality, as migrants have aspirations for social mobility. However, if inequality widens too much in a region, the likelihood of social mobility decreases and Veblenian consumption will also decrease. This, in turn, will increase the likelihood of backward migration. Thus, the fall in Veblenian consumption can signal the lower future migration stock in a region. In doing so, this chapter emphasizes the role of cultural capital, as conceptualized by CBD, in influencing the use of conspicuous goods within the context of interprovincial migration.

To test the CBD-augmented Todaro model I compile a unique regional database for Chinese provinces between 2013 and 2019. My dataset boasts a uniquely rich pool of 63 cultural indicators. This data allows me to implement the hallmark CBD method for multidimensional quantification of cultural capital with the biggest ever cultural

pool of data. I also obtain unique data for Veblenian consumption, based on the modern CBD narrative quantification approach, using internet search data to depict the zeitgeist and socioeconomic behaviour of the population (Tubadji et al., 2020). Namely, I use search for keywords associated with the consumption of Veblenian goods, such as e-cigarettes, fashion, jewellery and collectible “urban vinyl” toys. These are all specific type of Veblenian goods characteristics for the cultural context in China (Phoenix, 2006; Zhao et al., 2020). I test the CBD hypothesis for Veblenian signalling and its hill-shaped relationship with inequality by approaching our dataset through a variety of estimators suitable for panel data – from pooled effect to fixed and random effects estimators. I also explore the structure of the Veblenian signalling mechanism and its relation to social closure in a detailed fashion using a simultaneous recursive system system of equations. Across a variety of specifications and within-method triangulations, I find that the hypothesis for a hill-shaped inequality-driven Veblenian signalling and its effect on labour supply across Chinese regions is robust.

The chapter is structured as follows. Section 2 summarizes the literature about the two main components of the proposed CBD mechanism – conspicuous consumption and inequality – with focus on China. Section 3 presents the Culture-Based Development (CBD) augmentation of the Todaro (1969) model with the suggested Veblenian signaling mechanism. Section 4 presents the unique dataset and estimation strategy. Section 5 presents the results, while Section 6 concludes. Appendix 3 to 5 present the robustness checks; Appendix 9 and 10 presents the descriptive statistics and Appendix 11 described the alternative quantification of cultural capital.

5.3 Literature Review

5.3.1 Conspicuous consumption as a socio-economic behaviour

Consumption behaviour is clearly half of the famous demand and supply relationship, underpinning every economic process. Thus, consumption theory has been developed rigorously in parallel with the development of supplied-side economics.

A major question in demand-side economics has been how differences in income explain behaviour, as income is a major constraint for consumption. Macro theorists such as Keynes (1936) had attempted to factor in the role of basic income and psychological propensity to consume, assuming that people use only part of their income for consumption and therefore subsequent increases of income affect only marginally the overall process and the cultural preference to save is what underlies the main trend.

Consumption however not only depends on savings, but also has its own dynamics. Modigliani and Brumberg (1954) suggested the lifecycle theory of consumption, which was further refined by Friedman's (1956, 1957) permanent income hypothesis where it dictates individuals make consumption decisions over time based on their expected long-term average income rather than their current income. Namely, Friedman (1957) raised the idea of permanent household income which is distinct from income levels and explains why empirically a mismatch between inequality and consumption in theory and practice may occur. The crudeness of measurement was addressed theoretically and empirically in order to ameliorate the understanding of the process by accounting also for the role of age and its relationship with income, giving rise to what is known

as the life cycle theory of income and consumption⁵.

Further developments in this line come from Blanchard and Oswald (2004) and Layard (2005) who integrated relative income as part of the utility function of the consumer, showing that both wealth and income but also the relative positioning of income matters.

The happiness economics literature has noted that relative income plays an important role in the happiness of individuals and regions, supported by evidence from research at both individual and cross-regional levels. Consequently, well-being affects various aspects of people's lives (Blanchflower and Oswald, 2008; Frey, 2000). Places with lower unemployment and inflation rates are observed to show higher levels of happiness (Frey and Stutzer, 2010). Additionally, people's relative income compared to their parents significantly influences their birth decisions (Macunovich, 2010).

Moreover, the dynamics of consumption are related to mechanisms of socio-economic mobility. Duesenberry's (1949) take has deep institutional and cultural economics roots. Veblen (1899) as well as Cultural Theory prominent figures such as Pierre Bourdieu (1984) have independently developed consistent explanations for the cultural-psychological behaviour of consumers, known as conspicuous consumption (Trigg, 2001). Conspicuous consumption is essentially a consumption of goods and services which are cultural markers of belonging to a certain group. The essence of conspicuous consumption is the consumption not just in bulk per se, but in specific the consumption of a particular type of goods – luxury, status-related goods which are typical for the consumer of higher income and are aspired by those individuals who

⁵see Palley (2008).

are of lower income⁶. The use of the cultural markers to intentionally create positive bias has been formalized in a more general sense in economic terms by Spence (1973) in his model of signalling. I suggest that the behaviour of Veblenian consumption can be interpreted as a special case of signalling, where individuals seek access to a desired group by signalling their eligibility for belonging to the group on the grounds of cultural proximity in terms of revealed shared cultural tastes for consumption.

Notably, Veblen explicitly uses the concept of Veblenian consumption for analysing the behaviour of rural-to-urban migrants. In his seminal book “The Theory of the Leisure Class” (Veblen, 1899), he depicts how newcomers who immigrate in the urban context consume Veblenian luxury goods in order to overcome the local social closure. Thus, this is the point in the conspicuous consumption literature that is most suitable for establishing a link between conspicuous consumption and regional labour supply, which is of interest in this study.

The gap that I propose to address is the potential presence of nonlinearity in the psychological relationship between inequality (relative income and deprivation) on the one side and the utility derived from conspicuous consumption. The presence of this nonlinearity is the main theoretical value added of this study.

The relevance of my contribution with this to the regional literature is evident from the work by Glaeser et al. (2001) who explicitly outline the importance of consumption behaviour for the development of the city – proposing the notion of “consumer city”. My contribution adds a novel aspect to this regional notion by revealing how conspicuous consumption early signals its nonlinear dependence on inequality.

⁶see Connelly et al.(2011).

5.3.2 Conspicuous consumption in the context of Chinese migration

The recent economic development of China has been linked to (conspicuous) consumption of luxury goods and extravagant behaviour (Jin et al., 2015; Huang and Wang, 2018). Comparative studies found a relatively higher propensity of conspicuous consumption in China than in the US and Canada, even when comparing identical age brackets⁷ (Podoshen et al., 2010).

There has been some caution raised by more careful interpretations which have looked into the cultural dynamics of these tendencies. Studies of Chinese immigrants in Canada for example have shown that in fact Chinese propensity to conspicuous consumption seems to be modifiable by the local context (Chen et al., 2008) and can even prove to be individually non-existent (Chung and Fischer, 2001). The culture of conspicuous consumption seems not to be so much an individual marker but rather a context dependent behaviour.

The literature has also paid attention to tobacco consumption and tobacco tax, since consumption of electric cigarettes (e-cigarettes), in particular, is a prominent cultural marker of conspicuous consumption in China (Zhao et al., 2020). But conspicuous consumption is not limited to one type of goods or services and largely relates to the consumption of luxury goods per se, including modern cultural markers such as Japanese collectable urban vinyl toys ("Shouban") which are in vogue with young Chinese professionals (Phoenix, 2006), as well as jewellery (Jenkins, 2016) and similar traditional luxury goods. It is also likely that luxury goods consumption varies according to the level of their conspicuousness i.e. salience (Currid-Halkett et al.,

⁷The latter being consistent with the expectations based on the life cycle hypothesis.

2019).

Currid-Halkett et al. (2019) showed the endogeneity of the culture of conspicuous consumption to local economic development in terms of urban context and city development as factors for individual propensity to conspicuous consumption. Tubadji et al. (2021) shows that cultural endogeneity specifically relates to regional inequality. This study is the first to question the role of the relative economic position (i.e. local inequality, relative income and relative deprivation) for the endogeneity of conspicuous consumption in China on regional level.

Moreover, while Veblenian consumption reflects the aspiration for membership within the more affluent circles, but recent theory and practice has acknowledged the presence of a related phenomenon termed: the resentment of the rich. Recently conceptualized by Piston (2018), this phenomenon is generalizable as the occurrence of growingly negative attitudes towards the wealthy proportional to the growth of inequality. The resentment of the rich has been widely documented throughout the world and especially for the case of China⁸. This literature gives rise to my hypothesis that there is to be expected a hill shape (a presence of an inflection point) in the relationship between inequality and conspicuous consumption, assuming that when negative feelings start to be triggered by the growingly insurmountable inequality, this creates growing pain and growing dis-utility from membership in the group of the rich.

⁸see Jie (2010) and Wu and Lin (2018).

5.3.3 Regional inequality in China

Inequality has been rising in China at a hectic rate ever since the reforms in the country started in 1978 (Ying, 1999; Yang, 1999, 2002; Heckman and Yi, 2012). The inequality pervades all sectors of human activity, but most importantly, the educational sector is strongly affected by unequal opportunities (Wu, 2008; Liu, 2016; Xie, 2016). Education is perceived as a tool for socio-economic mobility in China, due to Confucianism which links merit and education. Thus, the growing educational inequality is very likely to trigger feelings of relative deprivation. Moreover, as it is known, deepening educational inequality is a prerequisite for growing inequality in productivity (Muldavin, 2000; Heckman and Yi, 2012; Myrdal, 1962).

Inequality in China has varied path over time and space. Initial conditions of the spatial distribution of human capital at the start of the reform contributed to the growing inequality through time (Yang, 2002; Hausman and Yi, 2021). Over time, the inequalities had their own evolution and dynamics. There were two main dimensions of this evolution— they were driven by rural-urban income gap and by the inland-coastal disparity (Yang, 2002). Furthermore, spatially, inequality had initially a South-North pattern, which changed to a West-East divide in the first period of the Reform, mostly based on the locational advantage of the port cities to the East. Later however, differences between the north and south parts of the East regions became most prominent (Ying, 1999). Public policy supporting special areas of the country and its economy as well as the behaviour of private companies (such as Coca-Cola as an investor in China) have also contributed towards the increasing inequalities (Yang, 2007; Xie, 2016; Yeung and Mok, 2006). In addition, social and cultural factors of networking and cognitive biases have created pockets of inefficiency in the investment

flows (Qiu, 2005; Karreman et., 2017). Thus, despite helping to reduce poverty levels in the country, the privatization of Chinese economy witnessed unwanted inequality growth (Lyons, 1998; Han and Pannell, 1999). This inequality showed in multiple aspects of people's lives. There is evidence for differences in entrepreneurial activity due to economic barriers for the less wealthy (in terms of home ownership (Liu and Zhang, 2021) or in terms of differences in access to capital investment opportunities (Zhou and Song, 2016)). Inequality is documented also by the emergence of informal economic activities such as the urban fairs which are entire grey economy retail systems (Sit, 2016).

Other forms of inequality are also observed. There is a separate stream of literature especially dedicated to house prices in the country⁹. Apparently, there are two main phenomena at stake. First, there is a hectic increase in house prices throughout the country accounting for 1/4 of regional inequality (Li and Gibson, 2014). Second, not only do spatial differences exist in house prices, but within every region, a dual market emerges where an informal market coexists. This informal market encompasses illegal housing arrangements, such as converted commercial spaces, which cater to lower-income populations. As a result, this situation could potentially bias the validity of the observed house price data and thus inequality data (Harten et al., 2021). In addition, the Social Credit System, a social surveillance plan executed in China since 2020 is another factor that might potentially contribute towards the inequality situation in an ambivalent manner (Dai, 2018; Liang et al., 2018).

In what follows I shall examine: (i) whether local income inequality affects the con-

⁹see for example Wang et al., (2021).

spicuous consumption of luxury goods on regional level and (ii) whether local conspicuous consumption predicts the labour supply in a region. The next section suggests how this mechanism of Veblenian consumption can be used to culturally augment the classical Todaro model for rural-urban migration underlying my examination of the above dependencies.

5.4 A CBD Model of Conspicuous Consumption and Regional Inequality

This chapter offers a Culture Based Development (CBD) model, which represents a cultural augmentation of the Todaro (1969) model of urban labour supply. My CBD augmentation suggests the incorporation of a Veblenian signalling mechanism in the classical Todaro model. The CBD paradigm has conceptualized the link between local inequality and social capital resulting into cultural frictions in migration that lead to the uneven redistribution of economic growth across space (Tubadji et al., 2021). Thus, the main contribution of this study to the CBD literature here is that I clarify the link between the Veblenian Signalling behaviour and regional income inequality. The latter relationship is the main operational hypothesis.

Todaro (1969) offers the fundament of his nowadays classical behavioural urban labour supply model. The main element of the Todaro model is the comparison of the discounted present values of the expected income in rural and urban areas. Specifically, for the urban migrant, Todaro (1969) states:

Model (1):

$$V_u(0) = \int_{t=0}^n p(t) \cdot Y_u(t) \cdot e^{-rt} dt - C(0) \quad (5.1)$$

where,

- V_u is the discounted present value of the expected urban real income stream;
- $p(t)$ is the probability of having a modern sector job in period t ;
- $Y_u(t)$ represents net urban real income in period t ;
- $C(0)$ is the initial fixed cost of migration and relocation in the urban area.

The CBD cultural augmentation of the above specified Todaro (1969) model regards the $p(t)$ component. Namely, closely following Veblen's idea that conspicuous consumption acts as a social capital booster, I suggest that Veblenian consumption is a signaling behavior used to increase the probability of finding a job in the modern sector by exploiting the social behavioral aspects of job searching. Put differently, I CBD-interpret here Veblenian consumption as a mechanism to increase one's social capital, which can be tapped on as a multiplier, increasing the probability of finding a more lucrative modern job, by adopting the modern consumption patterns of those working in the modern sectors. Consuming the same type of goods as employees in the modern sectors signals to potential employers that the job candidate belongs to the category of eligible employees based on cultural markers of consumption as individual behaviour. This process, as in the model, is equivalent to increasing the value of $p(t)$

As is known, the Harris-Todaro (1970) model takes the Todaro (1969) reasoning to the regional migration level. CBD is also a regional economic concept, which engages with the impact of local cultural capital on the redistribution of economic growth across space through the cultural frictions in the labour migration process, as the first stage in Figure 5.1. The CBD literature has so far clarified the cultural gravity

mechanism that depicts the cultural frictions in migration from the perspective of quantifying the dynamics in the local cultural milieu (Monte and Rossi-Hansberg, 2018; Tubadji and Nijkamp, 2015; Tubadji et al., 2021). In this chapter, I will build further on Tubadji et al. (2021) regarding cultural frictions and regional inequality, by showing that cultural frictions in migration can be signalled by Veblenian signalling incorporated in a Todaro (1969) model and lifted on regional level. Put differently, I suggest that based on the CBD-augmented Todaro model, I expect to observe an association between Veblenian consumption and the concentration of migration and labour supply at the provincial level.

Further to this, the main working hypothesis regards the relationship of local Veblenian consumption with local levels of inequality, in particular. This hypothesis can be stated as follows:

Hypothesis 5.1:

Local income inequality is related to Local Veblenian consumption in a hill-shaped pattern.

The so-called here hill-shaped relationship implies that I expect to observe the rise of inequality to instigate first an increase and then a decrease in the propensity to Veblenian consumption. The original CBD rationale behind this hypothesis relates to the degree of inequality as a trigger of social closure. Inequality initially makes Veblenian consumption more lucrative since the better-off group becomes more and more wealthy. However, there is a trade-off between (i) the lucrative wealth status and (ii) the increasing level of inequality and the proportionally decreasing probability of access to membership in the club of the wealthy through the modern job market

of which their club acts as a gate-keeper. When inequality is very high, the necessary Veblenian consumption becomes too costly. This reasoning builds on Tubadji et al. (2021) which explains the relationship between cultural capital (CC) and social capital (SC) in terms of social closure. Namely, the balance between the stock of living culture (LC) and cultural heritage (CH) causes social closure when CH prevails, which results at a next step in a lower local social capital. I take this reasoning one step further with regard to Veblenian consumption, which is the value added in this chapter. I suggest that the level of Veblenian consumption in relation to local inequality signals the drop in social capital locally.

Meanwhile, the hill-shaped relationship has been found on individual level (Blanchflower and Oswald, 2008; Blanchflower, 2020; Tubadji, 2021) and on regional level¹⁰(Huang et al., 2012). Therefore, I suggest that the described hill-shaped relationship here can be thought of as a Kuznets curve-relationship between inequality and Veblenian consumption at the regional level. Moreover, my expectations for the transferability between individual and local effects is based on the usual CBD rationale that, in line with Shelling's model (Schelling 1969,1978), individual behavioural patterns show in an accelerated manner in the behaviour of the entire system (Tubadji, 2021; Tubadji et al., 2021).

¹⁰This is referred to as the Kuznets curve (1955).

5.5 Data and Method

5.5.1 Data

I have compiled a unique dataset for China with a rich quantification of cultural capital and Veblenian consumption. It is a panel dataset, covering the period from 2013 to 2019, with observations at provincial level¹¹. Using a panel dataset is crucial because there may be inherent differences across provinces in terms of economic activities, which are often associated with the amount of inflow of labor and living culture activities. Additionally, the variables of interest, including living culture and labor inflow, may show a positive relationship over the chosen seven years as they co-evolve across the time. For these reasons, employing a panel dataset with fixed-effect estimation allows us to control for year and province-specific factors.

The cultural indicators in the composite dataset amount to 63 variables, hand-collected from various historic sources. Refer to Appendix 10 for the full data resources. Following Tubadji et al., (2021), these are collected and theoretically grouped as the following components of local cultural capital: (i) Cultural Heritage (CH), (ii) Living Culture (LC) and (iii) Social Capital (SC), based on a Principal Component Factor Analysis (PCA) retaining 3 factors. See Appendix 7 for the results of the PCA loadings.

The variables are clearly classified into distinct factor groups. From Appendix 7, CH is primarily associated with historical elements, such as ancient buildings and literature. In contrast, LC relates to contemporary art and cultural activities, including

¹¹31 localities, nested within four economic regions: West, Middle, East and Northeast (as defined by the *National Bureau of Statistics of China*).

exhibitions and book borrowing. Following the use of CBD, CH can be interpreted as the cultural capital that a place has accumulated and inherited from the past, while LC represents the active engagement with current cultural capital through new activities and events. SC is mainly linked to community activities. It encompasses the number of institutions and venues dedicated to organizing community cultural events. This type of social capital is similar to the concept of “bridging” social capital described by Putnam (2001), which aims to enhance connections across different groups.

The main outcome variable is the concentration of labor supply in a province. I quantify this in two ways: through migration inflow into a province and overall labor supply. The reason for focusing on overall labor supply is that I aim to propose a generalized form of the CBD-augmented Veblenian Signaling Todaro model, which is why we use these labor supply outcome variables. Thus, the primary variables of interest in this chapter are the percentage of migration and urban labor supply, as detailed in our estimation strategy.

The key determinant in the augmented CBD model of Veblenian Signaling is the provincial interest in Veblenian consumption. To construct this determinant variable, I used approximations based on hand-picked frequencies of internet search terms related to goods that serve as cultural markers, specifically e-cigarettes, jewelry, fashion, and collectible urban vinyl toys (ShouBan), which are popular among young professionals in China. To accurately represent the popularity of each category, I selected between 9 and 35 relevant search terms per category (depending on whether the search engine generates an indicator for the term.) and aggregated their search

intensities to create an index for each. These selected brands are among the most popular, often noted in marketing and business reports. expect that these aggregations will reflect the general interests and popularity of these goods in each province. The list of the brand-related terms used to generate the indicators can be found in the Appendix 2.

As discussed in section 5.3.3, In order to identify the Veblenian consumption mechanism, I need to use measures for inequality that explain the level of Veblenian consumption. To do so, I have two alternative measures. The first one is the income in the province (which I use in level and the square of this level). The second one is the Theil index, based on the income difference between urban and suburban area, which is highly relevant in the context of Todaro's model. Like the Gini coefficient, the Theil index is also an index measuring inequality. In this context, it is used to assess the inequality of urban and suburban incomes. It is calculated using the formula:

$$T = \frac{1}{N} \sum_{i=1}^N \frac{y_i}{\bar{y}} \ln \left(\frac{y_i}{\bar{y}} \right)$$

Where T is the Theil index; N is the number of individuals or groups; y_i is the income (or other relevant measure) of individual i ; $\bar{y}$ is the mean income (or relevant measure) of the population.

At the level of Chinese provinces, data on income levels and associated population information are often unavailable. As a result, I turn to the income and population information of urban and suburban areas within a province to generate a Theil index. The reason for choosing the Theil index over the Gini coefficient is that the standard

calculation of the Gini coefficient often requires information regarding multiple income levels along with population data, which is not available for Chinese provinces. The Theil index tends to be more flexible in terms of the data requirements (see Pedro and Ferreira, 2000).

Additionally, while the Gini coefficient is bounded between 0 and 1, the Theil index is bounded between 0 and $\log(n)$, where n is the total number of observations within the entire population. Thus, a larger province with the same level of income inequality will have a higher Theil index than a smaller province. This characteristic allows the Theil index to potentially account for the severity of income inequality within a province by considering the dimension of population size.

In this model, the underlying assumption is that as a region's income level increases, the level of inequality will also rise. From this perspective, using the Theil index effectively captures local inequality as a result of the cultural development processes described by the CBD model. The results of using the Theil index are further presented in the Appendix 3.

Finally, a battery of additional economic control variables is available to us, including average residential house price, average urban wage, labour, physical capital investment, percentage of urban population, total mileage of roads and square meters of tobacco areas in the province. See Appendix 8 and 9 for the detailed definition of all variables and their main descriptive statistics.

5.5.2 Estimation strategy

The main operationalization of the CBD-augmented Todaro model can be stated as follows:

Model (2):

$$Labour\_supply = \alpha + \beta_1 Avg\_urb\_wage + \beta_2 Avg\_hprice + \beta_3 Veblenian\_C + e \quad (5.2)$$

where,

- *Labour_supply* stands for labour supply (alternatively quantified with percentage of migration, urban labour supply or total labour supply levels); it approximates the expected value derived by people and revealed through the number of people feeling willingness to work in the regions i.e. finding the discounted present value of the expected urban real income (V_u in model (1)) as lucrative;
- *Avg_urb_wage* stands for average urban wage and it approximates the net urban real income in period t ($Y_u(t)$ in model (1));
- *Avg_hprice* stands for urban average residential house price levels and approximates the initial fixed cost of migration and relocation in the urban area (i.e. $C(0)$ in model (1));
- *Veblenian_C* – stands for Veblenian consumption and it approximates the cultural capital effect on the probability of having a modern sector job in period t (denoted as $p(t)$ in model (1)). In the original Todaro model, $p(t)$ represents the probability of finding a job, similar to unemployment rate in a province. In this model, the use of conspicuous goods is intended to increase this likelihood, $p(t)$. For individual job seekers, this might serve as useful information regarding

the ease of securing employment.

Thus, the CBD cultural augmentation of the Todaro (1969) model can be directly operationalized. However, my main value-added in this chapter entails delving into the Veblenian consumption mechanism and identifying it clearly with accompanying empirical tests. To do so, I develop a system of equations that expresses the mechanism behind the Veblenian consumption in the CBD-augmented model (3) as follows:

Model (3):

$$Income_{t-1} = \alpha_1 + \beta_1 CH_{t-1} + \beta_2 LC_{t-1} + \beta_3 K_{t-1} + \beta_4 Road_{t-1} + e_1 \quad (5.3)$$

$$Veblenian_{Ct-1} = \alpha_2 + \beta_5 Income_{t-1} + \beta_6 Income\_square_{t-1} + \beta_7 X_{t-1} + e_2 \quad (5.4)$$

$$SC_{t-1} = \alpha_3 + \beta_8 Veblenian_{Ct-1} + \beta_9 X_{t-1} + e_3 \quad (5.5)$$

$$Labour\_Supply_t = \alpha_4 + \beta_{10} Avg\_urb\_wage_t + \beta_{11} Avg\_hprice_t + \beta_{12} SC_t + e_4 \quad (5.6)$$

where,

- *Income* – average income in a province;
- *Income_square* – square value of income;
- *CH* – cultural heritage factor variable, part of cultural capital; obtained from principal factor analysis.
- *LC* – living culture factor variable, part of cultural capital; obtained from principal factor analysis.
- *K* – physical capital investment in the province;

- *Road* – measured by the mileage of roads, this serves as a control for how connected and convenient the province is for economic activities, as well as for the province’s size.
- *X* – captures controls for urbanization and area specialization in cigarette production;
- *SC* – stands for social capital and is the entity through which the Veblenian consumption manages to decrease social closure and increase $p(t)$; obtained from principal factor analysis.
- e_1, e_2, e_3 , and e_4 - represent error terms.

Equation 5.3 and 5.4 model the formation of local Veblenian consumption in the past period (t-1). Equation 5.5 models the effect of Veblenian consumption on the probability of finding a job in a modern sector in period (t-1). Equation 5.6 replicates equation (2) above. However, the variables in equation 5.6 refer to time (t), so that a recursive effect is achieved in the estimation of the first three equations with regard to the last one, expressing the signalling process.

Specifically, Equation (5.3) outlines the production model indicated by the CBD model, where regional economic development is crucial in determining the local income level, alongside standard economic factors controlled by capital investment and the connectivity of a region. The use of conspicuous consumption (Veblenian consumption) depends heavily on a province’s economic development, as it attracts labor and human capital through signals of interest in Veblenian goods, as modeled in Equation (5.4).

However, when a region’s economic development reaches excessively high levels—often

associated with significant inequality—it becomes difficult for individuals to utilize conspicuous goods as social boosters to integrate into local culture, leading to a decrease in conspicuous consumption. This aligns with the role of conspicuous consumption as a form of social capital, as discussed in the introduction. It serves as a signal for individuals when deciding to migrate, particularly regarding the perceived "ease" of blending into the local social environment, as highlighted by Veblen.

Thus, conspicuous consumption contributes to the building of social capital, as shown in Equation (5.5). Ultimately, as demonstrated in Model (2) according to Todaro's migration decision model, conspicuous consumption—along with other provincial factors—will influence local labor supply, as depicted in Equation (5.6).

In summary, the empirical test of our CBD Veblenian signalling hypothesis entails two main points of interest: whether Veblenian Consumption affects local labour supply and whether Veblenian consumption itself is dependent on income in a non-linear manner. Failure to reject these two empirical hypotheses supports our assumption about the relevance of Veblenian consumption for the Harris-Todaro (1970) model in a CBD manner.

Our empirical strategy consists of five steps. These are arranged from most statistically sparing to most statistically demanding tests of reduced and full form of our main model (3). Step 1 and Step 2 test a reduced form of model (3), skipping equation (3.3) and thus saving degrees of freedom (so they are more sparing statistically). Step 3 estimates the full model (3) through the same procedure. Step 4 uses a panel estimator to test a combination of equation (3.1) and (3.2) explaining the formation of Veblenian consumption. Step 5 tests the reduced form of model (3) – our model

(2) - with a panel estimator.

I utilize the three-stage least squares (3SLS) method with region and year fixed effects, in addition to the pooled OLS estimator, in our analysis. In our main results, the regional variable is approximated using four economic regions to save degrees of freedom. The dataset encompasses seven years and 31 provinces, organized into these four economic regions.

As discussed in Chapter 4, there are potential relationships between historical culture, living culture, and economic development. Provinces inherently differ in their levels of economic development and historical capital, shaped by previous regional economic growth and heritage-building efforts. To account for these variations, it is essential to include regional fixed effects.

Moreover, regional economic development and cultural activities related to living culture may coevolve and exhibit correlations, which can lead to inaccuracies in the discerned relationships among our variables of interest. This adjustment helps to ensure the validity of our results by controlling for these intertwined influences.

5.5.3 Robustness check – culture as a composite indicator

The analysis continues with five robustness checks. These aim to triangulate the quantification of the main determinants as well as to confirm the rigor and consistency of the estimation procedures. Namely, Robustness Check 1 tries alternative quantifications of cultural capital, obtained through different approaches to principal component factor analysis. See Appendix 8 and 9 for the precise definition of each alternative quantification. Robustness Check 2 substituted the Income and In-

come_square determinants of Veblenian consumption with the Theil index. I expect the Theil index to behave in a related pattern with income, because we know that inequality (the Theil index) is determined by income and income square, a relationship associated with the Kuznets curve.

Robustness Check 3 replicates Step 1, 2 and 3 by using fixed effects for all the 31 administrative divisions (provinces) rather than only the four economic regions. This is taxing in terms of degrees of freedom, but cross-checks whether the pooled OLS indeed captures consistently the correct effects present in the panel dataset when considering its true panel structure.

Robustness Check 4 estimates the standard CBD growth model, where local growth is a function of labour, economic capital and cultural capital. Specifically, the standard CBD growth model posits that local economic growth depends on living culture (LC) and human capital (HC), along with various economic inputs. In Robustness Check 4, where GDP is modelled as a linear function of labor, physical capital, road infrastructure, and cultural variables. This would cross-check whether the data behaves as expected by the CBD model, which will confirm the right to call the current cultural augmentation a CBD-exploration that could be taken further into the Veblenian consumption domains.

Robustness Check 5 addresses the question whether our Veblenian consumption mechanism acts as a preselection mechanism for labour supply in a locality. The idea is that the level of local economic development, and consequently the use of conspicuous goods, could serve as a form of preselection for provinces that people are willing to migrate to. Individuals may preselect provinces with a strong interest in conspicu-

ous goods, as these areas are likely to be more conducive to blending into the local social culture. This concept is akin to the idea of Heckman selection. I model a preselection equation where above-average local labor supply is explained by Veblenian consumption, and subsequently, the local level of labor supply is explained by Veblenian consumption as outlined in Model (2).

5.6 Results

Table 5.1 shows the implementation of Step 1 from the estimation strategy, detailed in the previous section. Namely, it tests a reduced form of model (3), where Veblenian consumption is included directly in the equation that explains labour supply. Thus, the entire structure of the model consisting of four equations are estimated simultaneously using a three-stage least squares (3SLS) estimation for a three-equation model. In this model, Equations 1 and 2 represent Veblenian consumption, while Equation 3 models the labor supply in a region, approximated by migration inflow.

I find clear statistical confirmation for the presence of a hill-shaped effect of income on Veblenian consumption and I confirm the effect of Veblenian consumption on labour supply. This is an important contribution to the literature, which so far has been striving to find a linear relationship (positive or negative) (Chung and Fischer, 2001; Chen et al., 2008) but has not addressed the possibility of a non-linear inflection-points-driven behaviour, for which the data gives serious evidence. In addition, I see that this is clearly a CBD model, since the results confirm the standard CBD effect of negative impact from CH and positive impact from LC on local productivity in

Table 5.1: CBD Veblenian Signalling Model –Effects for Migration

dep.var.1			Income								
CH	-1160.19		-983.835		-917.011		-1055.71		-1406.37		
LC	4146.5	***	3781.34	***	3580.93	***	3768.41	***	4208.72	***	
K	0.312	***	0.306	***	0.31	***	0.303	***	0.324	***	
Road	-1286.71	***	-1322.67	***	-1345.28	***	-1321.69	***	-1307.72	***	
Constant1	40563.84	***	41290.66	***	41561.92	***	41346.67	***	40627.78	***	
dep.var.2		E-Cigarettes		Jewellery		Fashion		Toy		Expenditure	
Income	10.413	***	32.348	***	59.552	***	2.767	***	0.52	***	
Income_square	-0.0003	***	-0.0001	***	-0.001	***	-0.0001	***	0.0001		
Urban	-3104.24	***	-3714.17	***	-4931.99		649.411	**	89.721	***	
Tobacco_area	29.64										
Constant2	16993.81		-168723.63	***	-329015.33	***	-48195.648	***	-956.997		
dep.var.3		Migrant Percentage_01									
Avg_urban_wage_01	0.0001		0.0001		0.0001		0.0001		0.0001		
Avg_house_Price_01	0.0001	***	0.0001	***	0.0001	***	0.0001	***	0.0001		
E-Cigarettes	0.0001										
Jewellery			0.0001	***							
Fashion					0.0001	***					
Toys							0.0001	***			
Expenditure									0.0001	***	
Constant3	0.002		0.02		0.018		0.042		-0.093	***	
FE_Year	YES		YES		YES		YES		YES		
FE_Region	YES		YES		YES		YES		YES		
Observations	102		10.2		102		102		102		
R-squared1	0.604		0.603		0.601		0.603		0.604		
R-squared2	0.49		0.682		0.676		0.735		0.987		
R-squared3	0.807		0.817		0.814		0.805		0.91		

• Note[1]: *** p<0.01, ** p<0.05, * p<0.1.

• Note[2]: Regressions are estimated using three-stage least squares (3SLS).

terms of income¹². The statistical performance of the CBD-model in 5.1 is consistent across all later specifications¹³.

Additionally, across all five specifications, the variable “Road” exhibits a negative sign. This may be attributed to the fact that, at the provincial level in China, physical capital investment (k) is a significant driving force behind economic development and explains income levels. After controlling for physical capital investment, the explanatory power of “Road” diminishes, as it is more closely related to the size of the province. In China, due to policies aimed at expanding regional connectivity, basic infrastructure such as roads has been significantly improved, even though this enhancement is not directly related to the expansion of economic activities.

Table 5.2 below shows the results for a replication of the above estimations, with the only difference that labour supply is quantified with the total labour supply in a province. This is a direct implementation of Step 2 from the estimation strategy. While migration percentage merely records the inflow of labour, which also to a certain extent reflects the attractiveness of a province to labour force, the total labour supply would also records the net inflow of a province, which might better accurate in terms of reflecting the amount of human capital in a province.

The estimated effects are fully consistent with those reported in Table 5.1. It should be

¹²see for example Tubadji et al.(2021).

¹³All presented results here are based on 17 provinces. I have estimations replicating all the results using almost all 30 provinces. However, this is possible only when I perform the cultural capital quantification with principal component analysis only on the 53 cultural variables in the dataset which do not have substantial number of missing values. This gives me more observations, but the CH factor in the factor analysis is less statistically clearly identified. Meanwhile, the statistical and economic results for the model survive intact across the estimations using the 17 and 30 province sample. Therefore, I present the results with the clearer CH quantification.

Chapter 5

Table 5.2: CBD Veblenian Signalling Model – Effects for Labour

specification	1		2		3		4		5	
dep. var. 1	Income									
CH	-147.759		-453.269		-665.982		-754.902		-810.42	
LC	4728.87	***	3866.16	***	3564.12	***	3773.38	***	2657.453	***
K	0.244	**	0.278	***	0.305	***	0.297	***	0.336	***
Road	-1262.62	***	-1313.48	***	-1339.42	***	-1329.19	***	-1413.05	***
Constant1	41902.79	***	41823.07	***	41582.04	***	41625.59	***	41982.9	***
dep. var. 2	E-Cigarette		Jewellery		Fashion		Toy		Expenditure	
Income	9.861	***	35.189	***	65.186	***	3.318	***	0.496	***
Income square	-0.0001	***	-0.0001	***	-0.001	***	-0.001	***	0.001	
Urban	-3127.25	***	-5654.62	***	-8318.27	**	456.289	*	115.37	***
Tobacco area	46.49									
Constant2	25782.2	*	-117076.45	***	-248517.22	**	-47044.84	***	-1828.73	***
dep. var. 3	Labour 01									
Avg_house_Price 01	-0.252	***	-0.258	***	-0.259	***	-0.27		-0.112	*
E-Cigarettes	0.103	***								
Jewellery			0.014	***						
Fashion					0.007	***				
Toys							0.075	***		
Expenditure									-0.108	
Constant3	3998.77	***	3263.31	***	2912.999	***	2559.39	***	4458.99	***
FE_Year	YES		YES		YES		YES		YES	
FE_Region	YES		YES		YES		YES		YES	
Observations	102		102		102		102		102	
R-squared1	0.598		0.599		0.599		0.601		0.587	
R-squared2	0.503		0.679		0.674		0.731		0.987	
R-squared3	0.641		0.693		0.72		0.726		0.397	

• Note[1]: *** p<0.01, ** p<0.05, * p<0.1.

• Note[2]: Regressions are estimated using three-stage least squares (3SLS).

noted in Table 5.2, the average wage is dropped. The average wages were insignificant in Table 5.1 as average wage and house prices are colinear (correlation=0.83). This variable has been dropped from the current models. The main added value here is that we confirm with these estimations the generalization of our augmented CBD

model from migration to an overall labour supply model.

According to the results presented in Table 5.2, overall local labor supply is influenced by economic costs and benefits, as well as the cultural milieu and the degree of closure. It is interesting to analyse this from the point of view of the long-term signs for evolution of the Chinese state-assigned urban-employment into a free labour market (Knight and Song 1991). It is also consistent with regional redistribution of growth (as in Rossi-Hansberg and Wright 2007), since migration affects growth and growth is approximated with labour supply.

Table 5.3 shows the estimation of the full model (3), where a fourth equation, linking Veblenian consumption and social closure in a locality is modelled explicitly. I use again 3SLS with fixed effects.

The results From Table 5.3 regarding the hill-shaped effect of income on Veblenian consumption are fully confirmed and robust (which is not entirely surprising, given the existent previous mixed evidence for conspicuous consumption in China¹⁴). In addition, here a confirmation can be seen, of what was previously assumed based on the chain rule, regarding the effect of Veblenian consumption on labour supply. Namely, I now clearly see that Veblenian consumption is associated with higher social capital that explains how Veblenian consumption affects labour supply. This test eliminates any concerns about eventual ecological inference in the interpretation of the results. The main take here from CBD development perspective is that SC and Veblenian consumption seem to be positively correlated entities, i.e. Veblenian consumption serves as signalling that increases the probability of accessing the lucrative jobs through the

¹⁴see Jinkins (2016); Jin et al.(2015); Huang and Wang (2018) and Podoshen et al.(2010).

Table 5.3: CBD Veblenian Signalling Model – Curing the Ecological Inference – the Social Capital and Cultural Capital Mechanism

specification	1		2		3		4		5	
dep. var. 1	Income									
CH	-1684.04	**	-1321.99		-1323.18		-1127.33		-1900.06	**
LC	3972.12	***	4230.95	***	4124.71	***	4,58.356	***	3058.62	***
K	0.302	***	0.307	***	0.318	***	0.286	***	0.327	***
Road	-1451.42	***	-1441.01	***	-1451	***	-1422.3	***	-1495.9	***
Constant1	43643.22	***	43349.88	***	43238.74	***	43595.77	***	43692.47	***
dep. var. 2	E-Cigarettes		Jewellery		Fashion		Toy		Expenditure	
Income	10.076	***	33.773	***	62.283	***	3.206	***	0.486	***
Income square	-0.0001	***	-0.0001	***	-0.001	***	-0.0001	***	0.0001	
Urban	-3251.22	***	-6328.44	***	-9963.82	***	103.997		118.585	***
Tobacco area	20.32									
Constant2	29884.23	**	-62793.19		-125000.43		-27763.52	***	-1851.17	**
dep. var. 3	Social Capital_SC									
E-Cigarettes	0.0001	***								
Jewellery			0.0001	***						
Fashion					0.0001	***				
Toys							0.0001	***		
Expenditure									0.0001	**
Urban	-0.067	***	-0.033	***	-0.097	***	-0.13	***	-0.017	
Constant3	3.584	***	4.324	***	4.26	***	5.439	***	2.344	***
dep. var. 4	Labour_01									
Avg_house_Price 01	-0.038	**	-0.047	***	-0.051	***	-0.066	***	-0.019	
SC	1432.06	***	1410.48	***	1388.48	***	1235.09	***	1582.72	***
Constant4	2348.34	***	2499.42	***	2616.79	***	2549.93	***	2111.52	***
FE_Year	YES		YES		YES		YES		YES	
FE_Region	YES		YES		YES		YES		YES	
Observations	102		102		102		102		102	
R-squared1	0.589		0.533		0.593		0.592		0.58	
R-squared2	0.5		0.684		0.68		0.734		0.987	
R-squared3	0.398		0.506		0.558		0.555		0.286	
R-squared4	0.657		0.651		0.646		0.653		0.635	

Note[1]: *** p<0.01, ** p<0.05, * p<0.1.

Note[2]: Regressions are estimated using three-stage least squares (3SLS).

help of better social capital and, by extension, social networking. These findings also highlight the importance of modelling correctly the interaction between CH, LC and SC and their different directions of effect, as postulated by CBD¹⁵.

In Table 4, I substitute the three-stage least squares (3SLS) estimation with a panel data estimator, in contrast to the original model that employed random effects. As discussed in the data section, using a panel data estimator that controls for province and year fixed effects can further help eliminate the possibility of confounding factors related to specific provinces or years that could influence the identified relationship. (see Appendix 7 for a description of the within and between variation in our panel). By doing so, I aim to exercise a within method triangulation of our findings from Table 1 to 3.

The post estimation Breusch-Pagan test and Hausman test both indicate that a random effect panel data estimator should be used. The empirical model includes the determinants of equation 5.3 and 5.4 because the panel estimator cannot handle the chain structure. The statistical results confirm two main findings. First, inequality is clearly confirmed to exist in a hill-shaped relationship with the level of Veblenian consumption. This finding is especially important from the point of view of similar pattern of nonlinearity in life-satisfaction of people related to their income and their age (Blanchflower and Oswald 2008; Blanchflower 2020). Second, CH and LC are determinants for Veblenian consumption, thus I indeed observe here a cultural behaviour which is underpinned by the CBD paradigmatic understanding.

Table 5.5 is an estimation of model (2) using a panel estimator. I am now confident

¹⁵see Tubadji et al.(2021).

**Table 5.4: CBD Veblenian Signalling Model – Veblenian Consumption
– RE Panel Estimator**

	1		2		3		4	
dep.var.	E-Cigarettes		Jewellery		Fashion		Toy	
CH	-3906.29	*	8726.46		22697.21		-626.769	
LC	10638.42	***	34384.82	***	53618.29	***	7420.38	***
Income	6.042	***	12.001	***	19.609	***	0.815	
Income_square	-0.0001	***	-0.0001	**	-0.0001		0.0001	
Urban	-2569.97	***	-2102.02		-1356.94		141.761	
Constant	568899.3	***	53913.96		82518.4		5434.43	
Observations	119		119		119		119	
Number of provinces	17		17		17		17	
Post-Estimation tests:								
Hausman Test								
Test: Ho: difference in coencients not systematic								
	chi2(3) = 4.7		chi2(3) = 9.28		chi2(3) = 10.29		chi2(3) = 10.06	
	Prob>chi2 = 0.1951		Prob>chi2 = 0.0258		Prob>chi2 = 0.0163		Prob>chi2 = 0.0181	
Breusch and Pagan Lagrangian multiplier test for random effects								
Test: var(u) = 0								
	chibar2(01) = 73.43		chibar.2(01) = 116.36		chibar.2(01) = 111.57		chibar2(01) = 89.04	
	Prob >chibar2 = 0.0000		Prob >chibar2 = 0.0000		Prob >chibar2 = 0.0000		Prob >chibar2 = 0.0000	

• Note[1]: *** p<0.01, ** p<0.05, * p<0.1.

• Note[2]: Regressions were estimated using ordinary least squares (OLS).

to engage directly with model (2) as all the Steps 1 to 4 showed that the Veblenian mechanism is indeed present and clearly identified in the data.

This time, the results from the Hausman test support the use of a fixed effects estimator; therefore, the results presented in Table 5.5 are based on fixed effects panel estimation. In comparison to the results in Table 5.4, where a random effects model was preferred, the inclusion of CH, LC, and SC suggests that these three factors might serve a similar purpose as province or year fixed effects in controlling for effects at the provincial or yearly level. This further indicates that significant differences between provinces and years may contribute to the observed variations in the provincial migration.

I compare the pooled cross section estimation with the fixed effects panel estimation of model (2), in order to mimic the fact that Table 5.1 - 5.3 show a pooled cross section and Table 5.4 was employing a panel estimator. Thus, I test model (2) in entirely the same methodology as the extended model (3) was tested. The main findings regarding the hill-shaped relationship between inequality and Veblenian consumption is confirmed. I also confirm that CH and LC have the expected direction of impact on local labour supply (namely – negative from CH and positive from LC), in line with the findings in Tubadji et al. (2021) for the case of Italian regions. Most notably, I see that the use of Veblenian consumption alone is not enough to explain labour supply. Indeed, the multidimensional CH measure, which CBD expects to be associated with social closure, is the one which is confirmed here to have a negative association with the labour supply (approximated with migration). It shows that the Veblenian consumption effect that I find in Table 5.1 to Table 5.4 is in fact a

Table 5.5: CBD Veblenian Signalling Model – Migration – FE Panel Estimator

Estimator	Panel - Pooled OLS			Panel FE Estimator				
	1	2	3	4	5	6	7	8
dep.var	Migrant Percentage							
Avg_urban_wage 01	0.0001	0.0001	***	0.0001	0.0001	***	0.0001	***
Avg_house_Price 01	-0.0001	***	-0.0001	***	-0.0001	***	-0.0001	***
CH		-0.047	*		-0.064	**		
LC		0.0001			-0.005			
SC		0.002			-0.007			
E-Cigarettes			0.0001				-0.0001	
Income				0.0001				0.0001
Income_square				-0.0001	*			-0.0001
Constant	0.103	***	0.104	***	0.168	***	0.188	***
FE_Year	YES	YES	YES	YES				
FE_Province	YES	YES	YES	YES				
Observations	210	119	210	0.217	210	119	210	217
R-squared	0.967	0.984	0.967	0.968	0.112	0.245	0.114	0.117
Number of province					30	17	30	31
Post-Estimation tests:								
Hausman Test								
Test: Ho: difference in coefficients not systematic								
					model fails to meet the asymptotic assumptions	chi2(2)=21.56	model fails to meet the asymptotic assumptions	model fails to meet the asymptotic assumptions
Seemingly unrelated post-estimation (suest)								
					chi(2)=0.00			
					Prob >chibar2 = 1.0000			
Breusch and Pagan Lagrangian multiplier test for random effects								
Test: var(u) =0								
					chibar2(01)=213.49	chibar2(01)=30.75	chibar2(01)=237.37	chibar2(01)=160.70
					Prob >chibar2 = 0.0000	Prob >chibar2 = 0.0000	Prob >chibar2 = 0.0000	Prob >chibar2 = 0.0000

- Note[1]: *** p<0.01, ** p<0.05, * p<0.1.
- Note[2]: Regressions are estimated using three-stage least squares (3SLS).

CBD effect on the redistribution of growth through cultural frictions in the migration model, fully in line with the CBD findings in Tubadji et al. (2021). However, the estimations in Tables 5.1 to 5.4 demonstrate an alternative quantitative strategy for capturing the CBD effect of cultural gravity through indirect measures for social closure signalled by the level of Veblenian consumption. The negative sign of CH and the dominance of the multi-dimensional measures of cultural capital over the mono-dimensional measure of culture – the Veblenian consumption approximated with e-cigarettes – are entirely in-line with the expectations and predictions of the CBD paradigm¹⁶. Meanwhile, the precise estimators for panel data show the importance of all relevant elements of the Todaro model, including wage and house price, which both report the expected sign of impact as well. When I use the income variables, this takes away the effect of house-pricing. These results are also convincing and not surprising, not only because of their consistency with the previous findings, but also from the abundant literature on the link between inequality and house-prices in China (Li and Gibson, 2014; Harten and Kim, 2021).

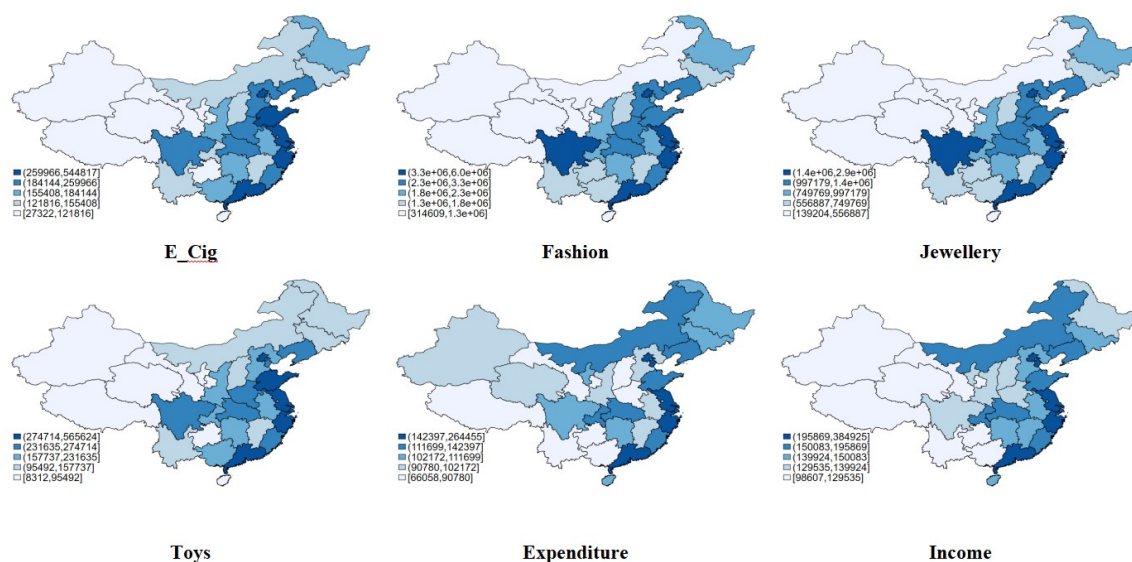
Robustness Checks are shown in Appendix 3 to 7. Robustness Check 3 employs alternative quantifications of CH and LC¹⁷. The results in Appendix 1 show clearly that independent of the alternative quantification of cultural capital, the results are consistent across all specifications. Robustness Check 2 employs the Theil index instead of income, in order to more directly and clearly identify the link between inequality and Veblenian consumption. The use of both alternative measures for inequality generates consistent results. Robustness Check 3 shows that using alternatively the fixed

¹⁶see Tubadji (2021, 2013, 2014).

¹⁷see Appendix 8 for the principle component procedure and Appendix 10 and 11 for the definition of each alternative variable.

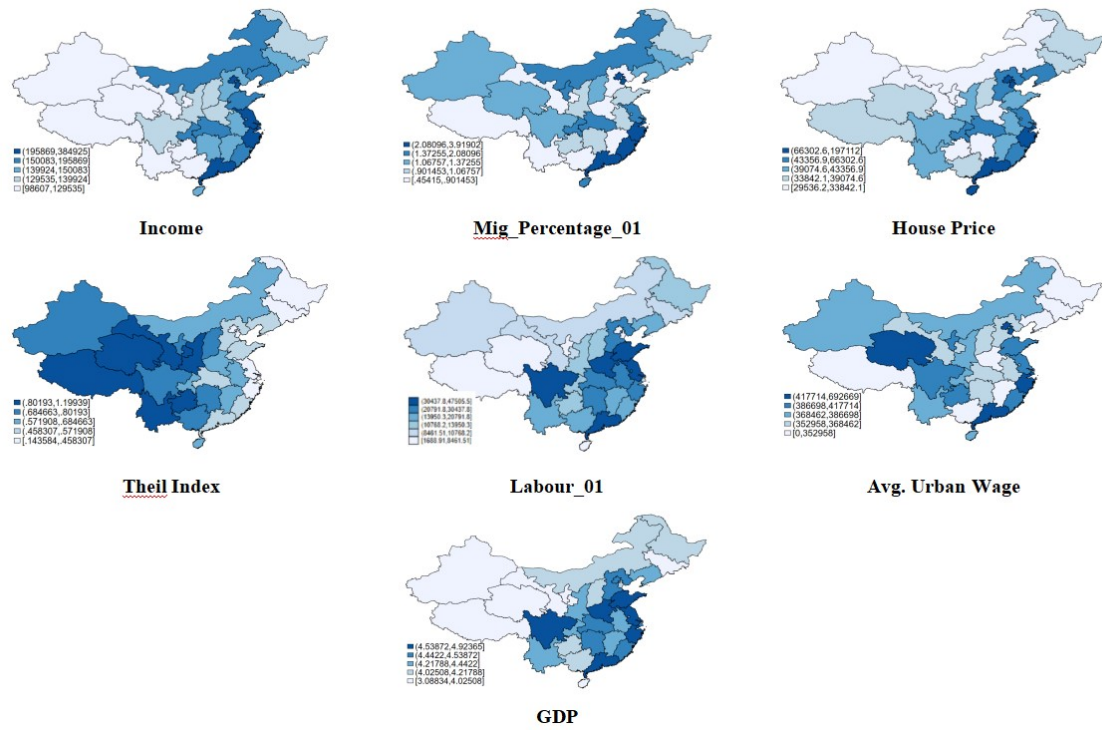
effects for region and fixed effects for province does not affect the main statistical and economic behaviour of the estimations. The specifications in Appendix 3 replicate all specifications from Table 5.1 to Table 5.3 and the results are not only consistent, but also stronger in statistical sense, in spite of the decreased degrees of freedom. Robustness Check 4 examines the relevance of the classical CBD analysis of the effect of cultural capital on local productivity for the case of China. Interestingly, in line with Figure 5.2 (a) to (c), It can be seen that local cultural capital (both CH and LC) are concentrated mostly to the east of the country. Lastly, Robustness Check 5 shows that when using E-cig as the proxy for provincial interests in conspicuous goods, resembling a Heckman selection model on migration decision on conspicuous goods and further to the provincial income level, the result where the relevance of LC, CH as well as the reflection of income still stands.

Figure 5.2: Regional Distribution of Key Variables by Categories

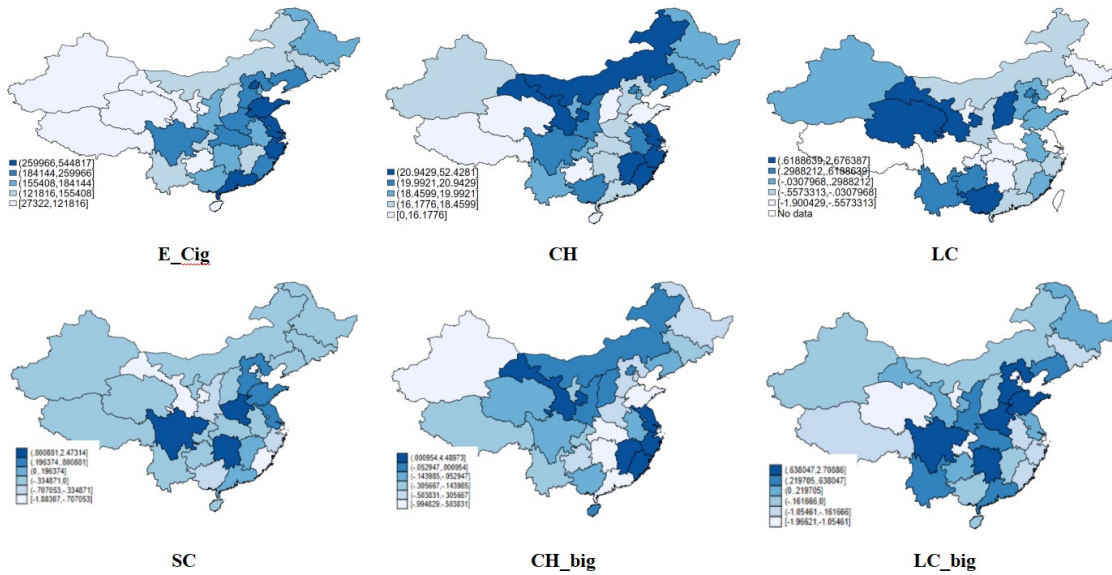


(a) Conspicuous Consumption Variables

In spite of this China-specific distribution (potentially related to the coastal posi-



(b) Economic Variables



(c) Cultural Capital Variables

tioning of the east provinces and its geostrategic role for trade), I still find that the positive effect from LC dominates the effect from CH in China, in terms of the size of the coefficient of LC in comparison to the one for CH. Thus, indirectly, the standard CBD setting is partially confirmed in the data. This allows me to consider the analysis for a valid CBD type of analysis. Robustness Check 5 demonstrates, through a Heckman model estimation, that when I model the local labour supply, using a preselection of high levels of labour supply on Veblenian consumption. This takes away the entire effect of other cultural and economic variables on the labour supply. This is true not only in comparison to a standard OLS, but even for alternative Heckman selection settings, where the preselection is based on inequality or other socio-economic variables, different than Veblenian consumption. This confirms that the Veblenian augmentation of the Todaro model is a dominant estimation strategy for capturing the cultural capital effect on redistribution of growth when certain data structure and selection biases are at stake. This is so because the Veblenian consumption measure approximates most closely the SC and social closure main mechanism through which cultural capital creates frictions in migration and labour supply across space.

The above CBD findings add an important understanding of the impact of cultural capital on social closure and socio-economic choices regarding migration and labour supply can be successfully signalled by Veblenian consumption. It is particularly important to further rethink the empirical evidence in light of its nonlinear dependence of Veblenian consumption on inequality. This detail has a sound link to happiness economics and it can be helpful to incorporate this novel insight in theoretical modelling of social closure in economics, termed in certain streams of literature as club theory (Buchanan, 1965; Ng, 1973; Helpman and Hillman, 1977, Hillman and Swan,

1983, Iannaccone, 1992).

5.7 Conclusion

The current chapter explored empirically the relevance of a novel quantitative approach to capturing the cultural gravity effect on spatial frictions in migration. Specifically, I adopt an alternative approach to cultural gravity (which uses an index based on openness and cultural distance). I instead model the effect of cultural capital on social closure and spatial frictions in migration through a Veblenian consumption mechanism. To do so, I augment the classical Todaro (1969) model with a Veblenian consumption component, which I explore in detail in terms of a CBD mechanism behind it.

The empirical tests employ for the first time a composite regional panel data for China, covering the years from 2013 until 2019 on provincial level. The dataset has a unique pool of hand-picked cultural indicators amounting to 63 variables. This allows me to implement the CBD principle component quantification of cultural capital with the biggest ever dataset that it has been implemented with so far. This is a particular strength and value added of this work to the CBD literature, since the principle component analysis performs at its best with big number of observations. I also use unique indicators for the Veblenian consumption, based on internet search interest index related to cultural markers for Veblenian consumption in China.

Using a variety of estimation approaches, ranging from those that are less demanding on degrees of freedom to the most rigorous panel estimator procedures, I find support for our main hypothesis that local inequality is hill-shaped in relation to Veblenian

consumption. Furthermore, i identify Veblenian consumption as a powerful determinant of local labor supply, particularly in pre-selection settings. However, as shown in Table 5.4, the reflection effect of income is not observed for Toys and Fashion. Specifically, the intensity of searching for toys is not identified, with the only explaining factor being living culture.

One potential explanation for this could be that toys are relatively new form of Veblenian goods in China, making their demand relatively less closely tied to the economic development of a province. While the interests in such goods may correlate more with living culture than with broader economic indicators. This suggests, despite the potential correlation between living culture and economic indicators such as income, living culture plays a distinct role in driving regional development through the redistribution of human capital. As also shown in the results of Tables 5.1 and 5.2, living culture contributes to the accumulation of human capital by enhancing local cultural capital. This is further illustrated in Table 5.2, where the average house price does not correlate with the overall supply of labor.

Nevertheless, the results confirm the relevance of the proposed by us augmentation of the Todaro (1969) model with Veblenian consumption mechanism, which seems to capture the CBD cultural gravity effect in an alternative manner from the Cultural Gravity Index by Hofstede (1980). Hofstede's index explains how cultures respond to uncertainty and unfamiliarity, reflecting the degree to which societies are comfortable with ambiguity and change. While CBD cultural gravity effect analyzed in this paper highlights the effect of cultural capital on social closure and the implications of this relationship for spatial frictions in migration.

The main limitation in this study is the presence of missing values for some provinces in the case of some cultural indicators in the dataset. This leads to decreasing the overall number of observations for the final estimations. I can avoid this by using only the 53 cultural indicators that do not have missing values. However, this is firstly at the expense of being able to use all the 63 indicators for the principle component analysis, which is an inferior application according to the requirements of the method itself. Second, the estimations are strongly consistent across various specifications and use of alternative estimators. I also tried quantifications of culture with lower number of cultural indicators based on apriori theoretical definitions. The results were again consistent with what is reported in the chapter. Thus, I am confident both about the validity of the findings for the observed provinces and for the generalizability of the effects for the entire territory of China and their transferability for analysis of other spatial cases.

Further analysis may see the here presented relationship between cultural capital and Veblenian consumption from a different angle. Namely, I can use the same data to explain the variability of Veblenian consumption in terms of the variability of CH and LC as well as their interaction with SC. This type of analysis remains as future planned work.

In a nutshell, my empirical study provides strong support for the CBD model of Veblenian signalling as a predictor of the spatial frictions in labour supply across Chinese regions and confirm the cultural attraction effect for Chinese inter-provincial migration. This is also the first study to link Veblenian consumption to social closure and to clarify the hill-shaped relationship of inequality with the consumption of Ve-

blen type of goods. These findings have also implications for the internal dynamics of club theory and its crucial implications for the cultural frictions in the redistribution of economic growth.

Chapter 6

Conspicuous Consumption, Cultural Entropy and Innovation in China

6.1 Abstract

Local culture has long been discussed as a hindrance to innovation across Chinese regions. The hypothesis is that the anthropocentric agency of Veblenian consumption might serve as a mechanism for achieving a positive cultural impact on innovation in China, where the ‘anthropocentric agency’ of culture recognizes that human beings and their actions are central to understanding and influencing cultural and economic phenomena. Namely, it acts as a multiplier of the local social capital and thus promotes local innovation. To operationalize this hypothesis, I use the measure of Cultural Entropy, which quantifies the variability between locally closed cultural milieu and locally open cultural milieu. Places with lower Cultural Entropy, where one type of milieu prevails, are expected to be more clubistic in nature. Hence, I test whether places with lower entropy trigger more Veblenian consumption aimed at surmounting the clubistic parochialism that prevents local innovation. I use a panel dataset for 31 Chinese regions for the period 2013 – 2019. The results confirm that conspicuous consumption is triggered by low Cultural Entropy and in the same time it is beneficial for local innovation.

6.2 Introduction

Innovation relies on the entrepreneurial spirit of the innovator. Entrepreneurial activity is a way for profit-making and a way out of poverty (Bruton et al., 2013; Quadrini, 2000). Thus, it is possible that innovation happens in societies with high levels of segregation between rich and poor, where the poor can hope to use their innovative ideas as a tool for socio-economic mobility (Aghion et al., 2018). China is exactly such a case of high inequality between the rich and poor, which persists over time and in spite of policy (Deng and Treiman, 1997; Xie and Zhou, 2014; Alesina et al., 2020).

In 2021, China officially declared that it had successfully eliminated absolute poverty according to international standards, meaning that the population no longer lives below the absolute poverty line (Xie et al., 2021). However, the country is still a place of a big gap between the poor and wealthy, which is a source of feelings of relative deprivation between people and between places (Rodríguez-Pose and Wilkie, 2016; Wan and Su, 2017). The presence of the group of the rich can be thought of as the club to which the poor aspire to belong.

Veblen has offered us the concept of conspicuous consumption as a cultural mechanism for people to break the social barriers and fit into their aspired clubs. This mobility could be achieved by the poor through the consumption of luxury goods, which are in fashion and are consumed by the higher economic class in which membership is aspired. Thus, while the previous chapter focused on the movement of human capital, this chapter will concentrate on the utilization of human capital. Together, they will provide empirical results related to the model proposed by CBD to explain how culture

affects regional economic growth and inequality.

Indeed, it has been empirically documented that there is high consumption of luxury goods in China, motivated with the consumer's desire to "keep up" with the higher economic classes, and this is found to be especially prominent among these who feel relatively deprived (Ling, 2009; Zhang, 2022). One additional reason why I observe high conspicuous consumption in China is also place specific for the country. Namely, it relates to the fact that there is an old cultural practice in China of "keeping face". "Keeping face", as a social law, originating from the Confucians teaching, which stresses social conformity and the maintaining of social hierarchy (Ho, 1976). It remains as one pivotal social code for Chinese society (Ambrose Yeo-chi and Myers, 1977). However, I argue here that wishing to consume conspicuously is not only a matter of individual preference, but it is also a behaviour triggered by the characteristics of the place where the consumers are situated.

The take is that people get more prone to consume conspicuously in cultural contexts and localities which are not favourable for their socio-economic mobility through the use of their innovative ideas. Displaying conspicuous consumption is a way to signal your social capital, or even booster your social capital (Lin et al., 2015). Therefore, in unfavourable for social mobility local contexts, people are likely to tap more often on conspicuous consumption in order to gain the social capital that can propel their innovation and consequently lead to their social mobility.

What is an unfavourable for social mobility local cultural context? From the work on cultural percolation of new ideas, it is known that innovative ideas may or may not pass through the social network and become realized depending on whether six

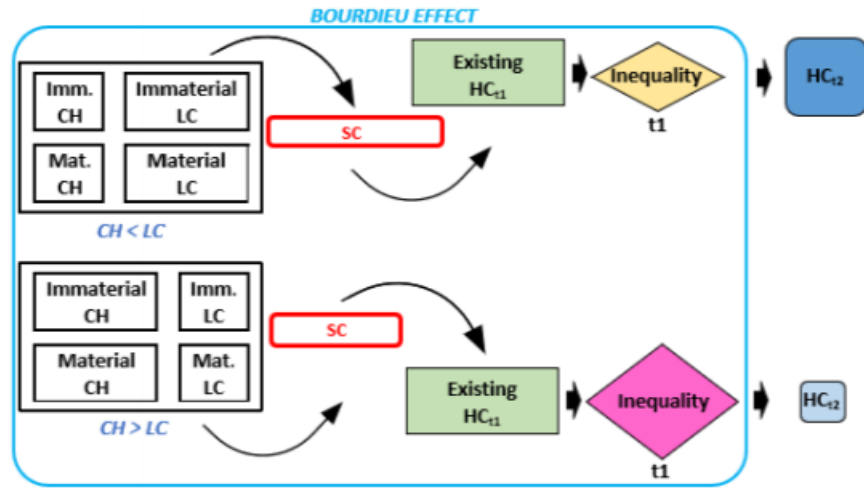
people in a row are likely to have sufficient cultural proximity to allow for the percolation to happen (Tubadji and Nijkamp, 2016b). Put differently, cultural proximity builds social capital in the network that allows for new ideas to percolate. Similarly, Muringani et al. (2021) finds that social capital, mostly of binding (between groups) rather than bonding (within a group) type helps the innovation and growth of places. Tubadji et al. (2021) finds that local interaction between cultural capital and social capital determines the local inequality across Italian regions. Finally, Tubadji (2022) has summarized the main take from the above relationship between culture, social capital and local inequality and innovation in what is termed cultural entropy. Tubadji (2022) defines cultural entropy as the measure of variety between the components in the local cultural milieu.

The study finds that places with low cultural entropy have low social capital which does not allow for innovation and local flourishing. So, places which have low cultural entropy are unfavourable for innovation and socio-economic prosperity. In other words, places with low cultural entropy will influence the utilization of human capital, which corresponds to the friction effect identified in the CBD process of regional development, as illustrated in the last part of the Figure 6.1. This builds on the previous chapter and emphasizes how regional culture impacts the use of human capital, particularly regarding individuals' ability and propensity for innovation.

Additionally, the current study aims to explore the interplay between the local cultural entropy and the mechanism of Veblenian consumption. I hypothesize that Veblenian consumption is used locally as a potential way to correct for local low cultural entropy, as an unfavourable condition for innovation (and by extension social mobility) in the

locality. This represents an additional contribution to the literature on CBD by applying cultural entropy measurement in empirical tests. while this study further enriches CBD research by exploring how culture relates to economic outcomes and regional development, particularly concerning the role of conspicuous consumption.

Figure 6.1: CBD Regional Development Mechanism: Cultural Milieu Effect in the Context of Regional Innovation



The remainder of the chapter is structured as follows. Section 2 offers a brief overview and systematization of the literature on innovation in China and its determinants, especially social capital. Section 3 outlines the Veblenian augmentation of the cultural entropy concept. Section 4 presents the database and elaborates the empirical strategy of the chapter. Section 5 presents the results. Section 6 contains a discussion and some final conclusions about the role of conspicuous consumption in the context of cultural entropy to help fully understand the necessary modelling of the cultural impact on innovation.

6.3 Literature Review

6.3.1 Innovation in China

During the past two decades, China has been making efforts to transform itself into an innovation powerhouse (Popkin and Iyengar, 2007). However, despite the great achievement, studies have shown that some problems in Chinese innovation system still persist, particularly when it comes to the territorial challenges (Rodríguez-Pose and Wilkie, 2016; Magnus, 2017). In recent years, R & D investment and foreign direct investments (FDI) are viewed as the vital forces to encourage innovation activities and technology upgrading for local firms and industries (Fu and Gong, 2011; Guo et al., 2016).

Knowledge and capital are important backbones of innovation. However, regions have varied local features in terms of geographic location, openness, innovation conducive local infrastructure and agglomeration intensity. These factors determine the regional disparities in terms of: regional capability to utilize knowledge (Fu, 2008; Fu et al., 2011; Li-Ying et al., 2013), industry-academia partnership (Kafouros et al., 2014; Hong and Su, 2012), attraction of external finance (Yuan et al., 2022). When using firms in Taiwan as a benchmark, Chinese firms generally face the problem of resource misallocation (König et al., 2020). I label all these under the expression ‘productivity decline’ as I assume these developments indeed lead to lower research productivity as reported by Boeing (2020).

The literature has also tackled the innovation ability of China with cultural lenses and has tried to better understand the historical evolution of Chinese innovation

capability. The famous work *Science and Civilization in China* by Joseph Needham (1956), documents Chinese invention from different Chinese historical dynasties and periods. This book ascertains China has once been a very innovative country, and asks, how China lost its edge in innovating? The argument has usually closely been around Chinese culture. The adoption and centrality of Confucianism ideology used by the Chinese imperial period led to the creation of imperial rules to discipline people and suppress rebellion, which rules are thought to have hindered the innovative spirit of the Chinese (Wang, 2022). Likewise, as the imperial Chinese exams were considered a crucial way for people at the time to break social hierarchy barrier, it channelled the intellectual resources from scientific endeavours to the overemphasis on Confucianism learning, which was extremely exhausting and competitive (Lin, 1995). Yet, the latter implies high human capital was developed due to Confucians and high human capital means high potential to innovate. Thus, the cultural puzzle of Chinese innovation is highlighted by this study.

While the literature maintains that the rewards people received from innovating were much lower than spending time on Confucian learning during the late imperial period, for modern China, the focus has been less on culture and more on political regime and policy as factors for innovation. Scholars pointed out that the regional economic inequality between more developed and less developed regions is due to the inefficiency in resolving the conflicts between efficiency and equality (Fan, 1995; Kenderdine, 2017). Moreover, the Chinese historical cultural legacy might be detrimental for economic health. Yao (2022) noted that the same privileged group in Chinese society tend to be long standing and led to collusion and corruption. And eliminating corruption is identified as one of the major reason for the city level economic growth

(Rodríguez-Pose and Zhang, 2019). This gives rise to one more aspect of the Chinese puzzle – how exactly do people handle the positive and negative cultural effects on their human development and innovation present for them by the local institutions as a context in which they are embedded?

6.3.2 Social capital and other factors for innovation

Regions are considered a suitable unit to study innovation, as a region has the autonomy of policy setting and differs in cultural base and institutional setting (Cooke et al., 1997; Boschma, 2004). Generally regional studies on innovation centre on how to reduce the cost of knowledge sharing and diffusion. There are two competing theories for explaining innovation in regions: the specialization (agglomeration) literature and the Jacobean variety literature.

Following the agglomeration literature rationale, industries can significantly benefit from industrial agglomeration, which refers to the concentration of firms and industries in specific geographic areas. This concentration leads to industrial specialization, resulting in reduced transportation costs, enhanced knowledge spillovers, and increased productivity (Ellison, 2010; Glaeser, 2010). Agglomeration facilitates a collaborative environment where firms can share resources, insights, and innovations, fostering a dynamic ecosystem that encourages growth and efficiency. This phenomenon is evident in the persistence of regional innovation capabilities, as new innovations are often built upon the foundations of earlier advancements. Past innovations not only enhance the receptivity to new ideas but also improve the diffusion of these ideas throughout the agglomerated area. Additionally, the presence of a shared and well-established knowledge base enables more efficient transfer of tacit

knowledge—knowledge that is difficult to codify and often gained through experience—thus amplifying the competitive advantage of firms within the cluster (Uzzi, 1997; Armington and Acs, 2002; Huggins and Thompson, 2017).

On the other hand, industry localization is further explored in the literature on Jacobian Related and Unrelated Variety, which also provides an explanation for regional innovation capability based on the concept of proximity. In contrast to the emphasis on knowledge sharing in the agglomeration literature, Related Variety, as described by Jacobs' externalities, refers to the diversification of industry types that can facilitate knowledge transfer and idea development based on industry complementarities. This approach emphasizes leveraging knowledge and information from the differences between industries to enhance innovation. According to Boschma and Iammarino (2009), a higher and more balanced variety of different sectors can create proximity that fosters innovation.

In terms of using “external knowledge,” as discussed in Related Variety, several types of proximity can exist: organizational, institutional, and cognitive proximity, all of which can affect knowledge diffusion. There is also social and geographical proximity, and these last two types are supposed to assist the first three types of proximity (Boschma, 2010). And all these spatial and non-spatial proximity factors construct the complexity of the regional knowledge base (Mattes, 2011). However, regional proximity is not always equally supportive for local innovation (Balland et., 2015; Gulati and Gargiulo, 1999). More frequent interaction could bring both positive and negative effects on innovation and proximity as it is itself in a constant dynamics and evolves with the already built knowledge network (Dasaratha, 2022).

In addition, social proximity is related to the notion of social capital ¹⁸. While there are many definitions for social capital, the definition from OECD (2007, p. 12) can be taken as a suitable operational definition in regional studies (Tubadji et al., 2021). It states that social capital is ‘the links, shared values and understandings in society that enable individuals and groups to trust each other and so work together’. Social capital could be a facilitator of social proximity or it could be the hindrance force for innovation due to the vested interests. De Vaan et al. (2019) found that social capital plays different roles during different stages of entrepreneurship. During the entrance stage, the entry of new firms in an industry could be hindered by social capital, while during the developing stage, social capital plays a supportive role in facilitating firm entrance rate. Depending on its direction of impact, social capital could be divided into bonding social capital and bridging social capital. The former one is associated with enclosure, and the latter one could be assisting connection between groups (Putnam, 2001; Muringani et al., 2022). This classification of social capital is in line with the classification of cultural capital according to the CBD, where enclosure is brought by cultural heritage, while openness is brought by living culture. In the next section, I review its empirical studies on culture, social capital and innovation.

¹⁸see Herrmann-Pillath et al. (2019) and Root (2022) especially for the context of China.

6.4 Veblenian Augmentation of the Cultural Entropy Mechanism

6.4.1 Cultural entropy

Cultural Entropy is a notion that has been introduced in the field of Culture Based development (CBD). CBD is a research paradigm that engages with the quantification of the local cultural milieu (Tubadji, 2012; 2013; Tubadji and Nijkamp, 2015).

According to CBD, culture is a complex entity and its complexity can be meaningfully reduced to two sub-entities: cultural heritage (inherited from past periods cultural attitudes) and living culture (currently experienced cultural attitudes). These are thought to be readily approximated with the stock of cultural assets that represent cultural heritage (CH) (cultural monuments, museum etc.) and living culture (LC) (libraries, music halls, art performance centers etc.).

Tubadji (2022) defines cultural entropy as the balance between the share of local living culture and cultural heritage. The latter balance was theoretically explained as a determinant for local innovation. Empirical evidence for its impact was provided for the case of the EU NUTS2 regions over the period 2007 – 2017. The cultural entropy measure relies on the Shannon entropy measurement. Entropy is frequently employed as a measure of a system's complexity, reflecting the diversity and arrangement of its components. It is often used in various fields, such as thermodynamics, information theory, and statistical mechanics. Higher entropy indicates greater disorder and a more complex interplay among components. The calculation of an entropy measurement is based on the proportion of each component in a system relative to the entire

system, which is as follows:

$$H(X) = - \sum_{i=1}^n p(x_i) \log p(x_i)$$

Where $H(X)$ is the entropy of the random variable x , $p(x_i)$ is the probability of the i^{th} outcome, while n is the number of possible outcomes. The entropy of a system reaches its maximum value when all components are evenly distributed and have equal shares. In a system with two potential outcomes, maximum entropy 1 is achieved when each outcome has a probability of $1/2$ (assuming a logarithmic base of 2). Thus, the Entropy measurement effectively captures the degree of imbalance within the system by considering how much each component deviates from an equal distribution.

CBD finds in various empirical studies that CH is detrimental for innovation, LC is positive for innovation (Tubadji and Nijkamp, 2016a; Tubadji et al., 2020). However, to create an ideal environment for innovative activities, a place must balance these two types of capital. Social capital reaches its highest level when local culture facilitates the cooperation and integration of local resources and talent inflow. Together with living culture, this balance can generate rich environments for new ideas. In this context, areas with the highest cultural entropy—characterized by a balanced interaction between cultural heritage (CH) and local culture (LC)—are the ones where the most innovation and socio-economic flourishing occur.

6.4.2 How Veblenian consumption augments CE – a social capital multiplier effect

Tubadji (2022) argues that when cultural entropy is higher, it indicates that places will possess more inclusive social capital (i.e., bridging social capital). The additional contribution in this study is thus to clarify the situation when entropy is low, which can lead to an unfavorable (excluding) environment for certain segments of the local population regarding social capital. In such contexts, inclusivity and opportunities are often available only to those from higher social classes.

In order to increase ones' opportunity for social mobility in such a context, I suggest that people tap on the Veblenian consumption mechanism. There is a solid base of micro-economic evidence for the presence of this mechanism linking Veblenian consumption and social distance and power relations especially in China¹⁹. Here, Veblenian consumption acts as a multiplier effect for the available social capital in the following way.

The local milieu is favourable and has high social capital among the rich and is unfavourable and offers no access to opportunities of the poor. By consuming luxury goods, the higher orders of the relatively poor claim access in the club of the rich based on mimicking their luxury type of consumption. Acquiring cultural acceptance and recognition as part of the club of the rich based on their consumption behaviour, these poor individuals can now enjoy an extended social capital equivalent to the social capital for a member of the club of the rich.

¹⁹see for example Belk, 1988; Gao et al. 2016.

Put differently, Cultural Entropy impacts the socioeconomic process by stimulating Veblenian Consumption when the entropy is low. In addition to that, as it is known from Agent Based Models (ABMs) (Schelling, 1971), individual preferences easily translate into magnified enactment of the preference in the entire system. While ABMs have shown this for segregation preferences, this can easily be analogically true for cooperation preferences. When dealing with unfamiliar actors in a business environment, people usually would prefer to form the relationship of contract with familiar people as they would tend to form higher trust level and consensus between them. A region could achieve higher development when these two types of people are equally distributed, as the risk-aversion would reduce people's intention to form business cooperation.

Furthermore, my claim is that this type of Veblenian multiplier for social capital will be more intensively tapped on in places with worse social capital conditions. As known from Tubadji (2022), places with low social capital are the places with low cultural entropy. Hence, where there is low cultural entropy, Veblenian consumption is likely to be more often observed as a mechanism used to serve as a multiplier for the social capital that is locally at stake.

6.4.3 How the multiplier effect of Veblenian consumption affects innovation

According to Tubadji (2022) places with high entropy are also places with high innovation – both social and economic. Thus, by the chain rule, places that correct their low level of social entropy with the Veblenian multiplier for the available social capital are hypothesized here to achieve improvements in their innovation output.

Again in Tubadji (2022) I read that cultural entropy and its effect may vary depending on whether the CH or the LC component is prevailing in the local cultural milieu when entropy is not at its maximum. If it is the CH component that is dominant, the social capital is directly lower than the one at maximum entropy. If the LC is the locally dominant sub-entity, the social capital is indirectly decreased by feelings of left behind and is still lower than the social capital at maximum entropy.

Thus, I expect that Veblenian consumption affects the social capital of a place when it is in below maximum entropy conditions in two alternative modes. If the CH is the more dominant type of local culture, then the Veblenian consumption is likely to have less corrective effect on the social capital. While when LC is the more dominant part in the local cultural milieu, the multiplier effect from the Veblenian consumption will be at its highest efficiency.

Based on the logic that Veblenian consumption affects how individuals are welcome in a society – and by extension – how their ideas are accepted in a society, I hypothesize that Veblenian consumption affects regional innovation. This relationship can be summed up in the following two hypothesis:

Hypothesis 6.1:

An unfavorable Cultural entropy triggers Veblenian consumption.

Hypothesis 6.2:

The Veblenian consumption counters the negative cultural entropy effects on innovation.

6.5 Data and Method

6.5.1 Data

The panel dataset used in this chapter crosses year 2013 to 2019, covering all 23 provinces, 5 autonomous regions, 4 municipalities, namely the total 31 provinces of mainland China. The economic variables are from *National Bureau of Statistics of China*, cultural indicators used are drawn from various sources, including *National Cultural Heritage Administration*, *Chinese QuYi Compilation*, *China Civil Affairs Statistical Yearbook*. List of data sources are available in Appendix 9.

The main independent variable is Culture Entropy, estimated following (Tubadji, 2022), which offers an index which comprehensively and accurately reflects the influence of both living culture and cultural heritage in terms of how balanced they are in the locality. A strength of the current chapter is that I use 63 cultural indicator to quantify the components of the cultural milieu estimated in the Cultural Entropy index. Like in last chapter, following the CBD recommendations, I reduce the complexity of all these 63 indicators to the two components of the cultural milieu CH and LC (Tubadji, 2012; 2013). Practically, applying Principal Component Analysis, the 63 indicators actually mainly grouped in three factors which I labelled as follows: (1) Cultural Heritage (CH), (ii) Living Culture (LC) and (iii) Social Capital (SC)²⁰. I use the CH and LC components to estimate the Cultural Entropy index following Tubadji (2022) as described in Appendix 12²¹. Descriptive statistics including the

²⁰see Appendix 7 for the outcomes of PCA loading

²¹I used the remaining factor variables obtained in the factor analysis in the empirical strategy according to the theoretical considerations and recommendations of CBD from previous studies (see Tubadji et al.(2021)).

three types of cultural and social capital from PCA are available in Appendix 10.

The main dependent variable in this chapter is the number of patents filed by firms. In this chapter, I use granted patent number of firms and research institutions as the main dependent variable. Compared to the number of patents filed each year, the number of granted patents serves as a better indicator of regional innovation ability, as granted patents are typically of higher quality.

To capture the regional industry structure. I respectively use two indexes. For regional industrial unrelated variety industry measurement, I use the measurement of unrelated variety (Boschma and Iammarino, 2009). For industrial specification rate, following Muringani et al. (2021), I use Krugman specification index.

The explanatory variables are the following. I include direct R&D capital investment in innovation and the number of persons working in R&D activities. I also use the regional overall physical investment, regional labour stock, regional human capital.

I control also for the regional economic structure in two ways. For regional industrial unrelated variety industry measurement, I use the measurement of unrelated variety (Boschma and Iammarino, 2009). To calculate the industrial specialization, I follow for comparability Muringani et al. (2021), and I use the Krugman specialization index.

To quantify the regional interest in using conspicuous goods as a social status booster, similar to the previous chapter, I aggregated the daily Baidu search index (a search engine similar to Google) for 30 major luxury goods brands in China, which is available for each province, thus generating a yearly provincial interest search indicator.

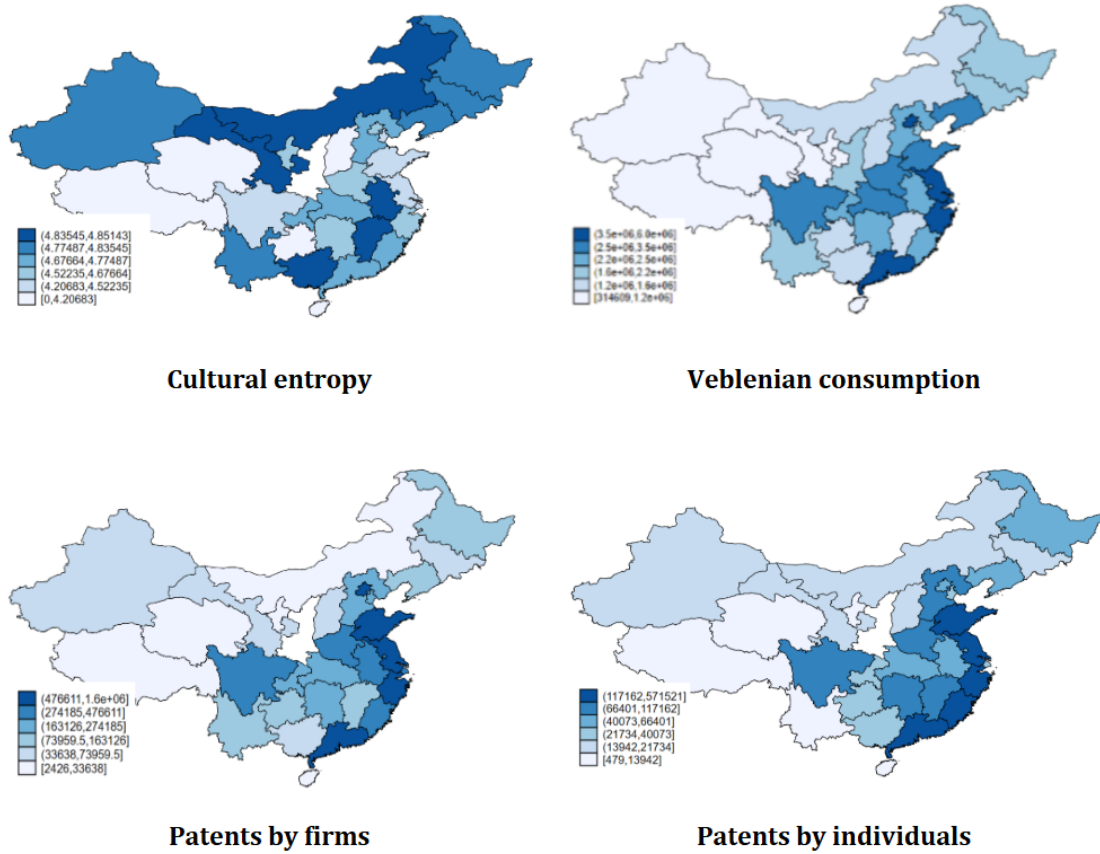
The rationale here is that luxury brands are a typical form of conspicuous goods. The use of the internet search interest indicator has several advantages over the use of sales data for goods. Firstly, people are interested in conspicuous goods even when they cannot truly afford them. Therefore, some individuals may buy counterfeits or purchase through illegal or unofficial sources, and they will behave conspicuously as their preferences dictate, even though their consumption statistics may not reflect it accurately. Consequently, part of consumption will be overlooked if we rely solely on official sales data due to the presence of a significant gray market for fake luxury goods. Secondly, in this study, I aim to assess the extent to which people in each region have developed a mindset and awareness of consuming and valuing luxurious goods, as well as the tendency to perceive individuals who consume these goods as belonging to a “higher social class.” In other words, the Baidu search index serves as an indicator that captures the genuine interests of people, rather than relying solely on real consumption data, which can be endogenous to income. From perspective, individuals who do not consume luxurious goods but still tend to value material wealth and evaluate others based on their displayed lifestyle and material possessions are an important factor to consider when analyzing the development of the local economy, as their behaviors and choices also contribute to economic outcomes. See Appendix 8 and 9 for the detailed definitions of all variables and their main descriptive statistics.

I also add controls for regional income, percentage of population aged between 15 to 64, urbanization rate, and internet coverage. These controls relate to teasing out the Veblenian consumption heterogeneities.

See below visualisation of the geographical spread of the main variables of interest.

The tables use the proxies which are most frequently used in the following analysis.

Figure 6.2: Geographic Maps for the Main Variables of Interest



As seen from Figure 6.2, Veblenian consumption and cultural entropy clearly have opposite concentration across space. Also, it is visible that Veblenian consumption has a geography that coincides better with the innovation in Chinese regions.

6.5.2 Method

In this study, I apply the concept of cultural entropy to capture both the influence of local culture of Chinese provinces and the reflection of local social proximity, as highlighted in the literature regarding the effects of local social context on innovation.

I propose a hierarchical model in which cultural entropy influences the propensity to consume luxury goods, with this consumption further affecting innovation, as expressed in the equations 6.1 and 6.2. Based on the literature review, the role of social capital and the influence of social proximity in driving innovation are clearly established. Here, I further analyze the interest in conspicuous goods as a form of social capital within the context of cultural complexity.

$$\text{Conspicuous consumption} = f(\text{CE}, Z_1) \quad (6.1)$$

$$\text{Patents} = f(\text{Conspicuous consumption}, Z_2) \quad (6.2)$$

For simplicity, I use the standard assumption that the production function is of Cobb-Douglas form and its linear transformation requires to take the logs of both sides of the equation. Thus, I operationalize the above model as follows:

$$\begin{aligned} \text{Fashion} = \alpha_0 + \beta_1 UV\_CULT\_ENTROPY + \beta_2 \ln(\text{income}) + \beta_3 \text{perc\_pop15to64} + \beta_4 \text{perc\_urb} \\ + \beta_5 \text{perc\_internet\_cov} + e_1 \end{aligned} \quad (6.3)$$

$$\begin{aligned} \text{Patents\_firms} = \alpha_1 + \beta_6 \text{Fashion} + \beta_7 \ln(\text{rnd\_expenditure}) + \beta_8 \ln(\text{rnd\_pers}) + \beta_9 \ln(K) + \beta_{10} \ln(L) \\ + \beta_{11} \ln(HC) + \beta_{12} UV\_sectors + e_2 \end{aligned} \quad (6.4)$$

In the above models, the variables are defined as follows:

- *Fashion* – provincial regional levels of interests in conspicuous consumption,

proxied using internet search intensity data;

- *Patents_firms* – number of patents granted to firms or public entity;
- *UV_CULT_ENTROPY* – the cultural entropy in each region;
- *perc_pop15to64* – percentage of population aged between 15 to 64 in a specific region;
- *perc_urbanization* – urbanization rate;
- *perc_internet_cov* – internet coverage;
- *ln_rnd_expenditure* – total expenditure on R&D activities;
- *ln_rnd_pers* – total number of personnel engaged in R&D activities;
- *ln_K* – physical capital investment;
- *ln_L* – labour (i.e. total employment);
- *ln_HC* – human capital (percentage of workers with tertiary educational degree);
- *UV_sectors* – unrelated variety of the provincial industries.
- e_1 and e_2 – error terms.

To examine the role of culture in the regional development and the formulation of social capital, it is necessary to control for factors that provide the necessary economic conditions for local socioeconomic development. This requires the inclusion of variables such as physical capital investment K , labor force L , and human capital HC . While this chapter focuses on innovation, direct investments in innovation activities are accounted for by including personnel and expenditures related to these activities. Furthermore, internet coverage and the urbanization rate are also important factors in the development and transmission of new ideas. While the effects of related variety

in the industry will be examined in additional specifications alongside the calculation of the measurement of unrelated variety.

As a robustness check, I first replace the dependent variable with the total number of patents (including both patents granted to individual and corporate innovators). Then, I triangulate the results with alternative proxies for conspicuous consumption, namely provincial-level interests in collectible urban vinyl toys (“ShouBan”) and e-cigarettes, denoted as `toy` and `E_Cig`, respectively. Lastly, I delve into the mechanisms behind the impact of conspicuous consumption—testing the full causal chain of how Veblenian consumption affects social capital and subsequently impacts innovation. The above three robustness checks provide an advantage in both testing the reliability of the model and validating the use of indicators.

6.6 Results

6.6.1 Main empirical tests

In this panel dataset covering all 31 provinces over 7 years, fixed effects for both year and region (province) are adopted. Regarding between-province effects, certain provinces have a higher capacity and a longer history of innovation due to their favorable locations for acquiring and transferring new knowledge. This can coexist with a higher level of historical cultural heritage, which in turn drives the estimation results. Provincial fixed effects help address the heterogeneity between regions in terms of the relationship between regional culture and innovation. Additionally, year fixed effects should be considered, as the time trend of the co-evolution of regional cultural capital and innovation capability might drive the observed correlation.

Table 6.1: Main Empirical Tests _ The Chinese Case Puzzle

specification	1		2		3		4		5		6		7	
dep.var.	ln_patents_firm													
UV_CULT_ENTROPY	-6.689	**	-8.014	**	-8.014	*	-23.576	*	10.223	-7.152			3.775	
perc_LC			2.148	***			-19.773			-6.272				
perc_CH					-2.148	***			19.773				6.272	
inter_CE_LC							33.799			10.927				
inter_CE_CH									-33.799				-10.927	
fashion										4.47E-06	***		4.47E-06	***
Constant	13.601	***	13.364	***	15.512	***	23.392	***	3.619	12.562	*		6.290	
FE_Year	YES													
FE_Region	YES													
Observations	195		195		195		195		195		195		195	
R-squared	0.577		0.598		0.598		0.601		0.601		0.798		0.798	

Note[1]: *** p<0.01, ** p<0.05, * p<0.1.

Note[2]: Regressions were estimated using ordinary least squares (OLS).

The results from Table 6.1 link the Cultural Entropy and Veblenian consumption concepts as follows. Surprisingly, for the case of China, I find that local Cultural Entropy has a negative association with local innovation. However, when I unpack the impact from the entropy and the CH and LC components, ultimately the Cultural Entropy effect seems to get faded away. Instead, when I use the Veblenian consumption proxy (fashion), it takes over in the horserace between the cultural variables and emerges as the most important factor that positively predicts innovation in the Chinese regions. I conclude that the anthropocentric agency is the one that overrides the cultural and institutional effects on innovation in Chinese regions. This is the first interesting result, which however merits further investigation, as I will clarify below. Indirectly, I find here that places with higher innovation have higher Veblenian consumption and lower Cultural Entropy –which is in line with model (1) and its empirical operationalization as shown in model (2). This is the vantage point

for further explorations.

I first conducted a three-stage-least regression to simultaneously test Hypothesis 6.1 and Hypothesis 6.2. The results are presented in Table 6.2. Across all three specifications, the results consistently show strong support for both of the hypothesis. I find that fashion is negatively associated with UV_CULT_ENTROPY, suggesting that the higher the cultural entropy is, the lower people would have the tendency to seek to impress by consuming luxurious goods, in line with the Veblenian consumption reasoning and previous findings (Tubadji et., 2022; Ling, 2009; Zhang, 2022). Furthermore, notably fashion is negatively related to perc_urbanization, implying that the interest in conspicuous consumption is more prevalent in regions with higher percentage of provincial population, rather than being only limited to more urbanized regions. This again confirms the Veblen effect – that it is the lower economic class that seeks to use Veblenian consumption as a vehicle to get acceptance among the wealthier circles.

My three specifications horserace two main alternative theories for innovation: (i) investment; (ii) economies of scale and (iii) their empirical horse race. In the first specification, I find that especially the concentration of human capital engaged in R&D is most important for innovation, along with the Veblenian consumption. The second specification, where the factors of total capital and human input in the economy are used as proxies for regional economies of scale, finds that the total amount of innovations in a region depend on the outcome of the total labour force in the economy. Specification 3, and its horse race between the two theories, show that most important economic endowment for innovation is clearly the presence of per-

Table 6.2: Investment vs Economies of Scale as Factors for Innovation

specification	1		2		3	
dep.var.1	fashion					
UV_CULT_ENTROPY	-1672155.004	***	-1632647.305	***	-1666882.979	***
ln_income	519701.069	***	507354.472	***	518900.277	***
perc_pop15to64	-12071.977		-46363.718		-24,622.650	
perc_urbanization	-8151.005	***	-7172.157	***	-8,130.176	***
perc_internet_cov	4662.486	**	4133.482	**	4666.69	**
Constant1	-3485358.865	***	-3392833.021	***	-3473147.144	***
Observations	192		192		192	
R-squared	0.648		0.647		0.648	
dep.var.2	ln_patents_firm					
fashion	1.04E-06	**	4.18E-06	***	1.09E-06	*
ln_rnd_expenditure	-0.164				-0.132	
ln_rnd_pers	1.132	***			1.176	***
ln_K			0.46	***	-0.136	
ln_L			0.175		0.003	
ln_HC			0.470		-0.618	
Constant2	-1.269		2.662	***	-0.905	
FE_Year	YES		YES		YES	
FE_Region	YES		YES		YES	
Observations	192		192		192	
R-squared	0.941		0.870		0.941	

• Note[1]: *** p<0.01, ** p<0.05, * p<0.1.

• Note[2]: Regressions are estimated using three-stage least squares (3SLS).

sonnel invested in R&D activities. This is generally in line with endogenous growth theory. Moreover, the R&D_expenditure across all three specifications remains insignificant, potentially in line with the known declining productivity problem in the Chinese economy (Zhang et al., 2003; Brandt et al., 2020).

Table 6.3 shows the explorations of innovation and the Veblenian augmented cultural entropy mechanism in the context of the competing theories of (i) Jacobean variety and positive spill-overs from diversity versus (ii) the Marshall-Arrow-Romer (MAR) theory of specialization, as the potential alternative drivers for regional innovation in China. My first specification includes UV_sectors (an index of unrelated variety between the industries in each region) and the second specification uses the Krugman's Specialization Index²². Specifications 3 and 4 horserace these variables in the presence of controls, respectively for investment or economies of scale.

The effect of cultural entropy on Veblenian consumption, and the effect of Veblenian consumption on innovation is confirmed across all specifications again. Further to this, I find that the Jacobean variety overruns the specialization MAR theories according to the data. While the UV_sectors determinant changes its significant across specifications, while the Veblenian consumption behaves consistently across all specifications.

One explanation might have to do with the data I used to calculate this index. As I used the three sector industry data instead of the industry classification data. Thus, UV_sectors would be high when a region has both advanced and less advanced indus-

²²This is in line respectively with Boschma and Iammarino (2009) and Muringani et al. (2021).

**Table 6.3: Jacobean Variety vs Marshall-Arrow-Romer Specialization
as Factors for Innovation**

specification	1		2		3		4	
dep.var.1	fashion							
UV_CULT_ENTROPY	-1685246.423	***	-1602586.431	***	-1684161.389	***	-1704879.060	***
ln_income	543398.739	***	541012.232	***	524574.849	***	519661.107	***
perc_pop15to64	183763.124		281576.983		18918.762		43191.681	
perc_urbanization	-9268.242	***	-9370.304	***	-8429.785	***	-7882.927	***
perc_internet_cov	4726.633	**	5017.946	***	4694.904	**	4273.458	**
Constant1	-3794901.391	***	-3907046.408	***	-3534108.616	***	-3498691.362	***
Observations	192		192		192		192	
R-squared	0.648		0.647		0.648		0.648	
dep.var.2	ln_patents_firm							
fashion	4.39E-06	***	3.39E-06	***	1.01E-06		2.76E-06	***
UV_sectors	1.646	***			-0.058		-4.432	***
Krugmans Specialization Index			-24247.213	**	-3611.671		-8109.273	
ln_rnd_pers					0.956	***		
ln_K							0.52	***
ln_L							0.373	**
ln_HC							-2.609	**
Constant2	6.626	***	8.527	***	-1.618	**	5.691	***
FE_Year	YES		YES		YES		YES	
FE_Region	YES		YES		YES		YES	
Observations	192		192		192		192	
R-squared	0.826		0.810		0.941		0.897	

• Note[1]: *** p<0.01, ** p<0.05, * p<0.1.

• Note[2]: Regressions are estimated using three-stage least squares (3SLS).

try such as farming and mining. While in farming and mining industries, innovations are relatively less likely to happen and high technology industries are less likely to transfer knowledge with them. Put differently, the UV_sectors it may contain hidden unwanted heterogeneity. Moreover, compared with specification 3 from Table 6.2, I could tell that when controlling for industry structure, $\ln\_K$, $\ln\_L$ and $\ln\_HC$ are all significant with human capital being negative. This result is in align with the potential waste of regional human capital problem (Gu et al., 2016).

6.7 Robustness Checks

As a robustness check, I use alternative proxies for innovation. I replaced the number of patents obtained by firms (which are organizations, firms and institutions) with the number of individuals who have patented or the total number of patents (including the firm patents as well as the individual investors who patented). Table 6.4 shows the estimations using the total number of patents, however, all results are generally internally consistent across the different proxies for innovation used. The results are also consistent with the overall analysis presented above.

The second robustness check involves using alternative proxies for conspicuous consumption. Following the same approach to proxy for Veblenian consumption through internet search data for fashionable brands, we alternatively used internet search data for brands of collectible urban vinyl toys, denoted as “toy,” and for e-cigarettes, denoted as “E_cig,” as substitutes for fashion. Table 6.5 shows the results. For toy, it shows the same result as fashion, while E_cig has no effect on innovation. These results may be due to the fact that the indicator toy, stands for a pure case of Veblenian consumption, while e-cigarettes might as well be consumed as a normal good

Table 6.4: Robustness Check 1 – Outcome Variable

specification	1		2		3		4		5	
dep.var.1	fashion									
UV_CULT_ENTROPY	-1663163.815	***	-1568179.067	***	-1705002.638	***	-1609538.710	***	-1639427.756	***
ln_income	533988.009	***	509612.182	***	542090.682	***	528249.249	***	527302.671	***
perc_pop15to64	81114.554		-27837.078		175396.667		273481.453		35874.479	
perc_rbanization	-8748.084	***	-7291.706	***	-9205.386	***	-8721.848	***	-8493.223	***
perc_internet_cov	4652.687	**	4231.337	**	4695.894	**	4911.947	***	4725.151	**
Constant1	-3667134.624	***	-3470391.991	***	-3764490.248	***	-3800973.869	***	-3601760.645	***
Observations	192		192		192		192		192	
R-squared	0.648		0.647		0.648		0.647		0.648	
dep.var.2	ln_total_patent									
fashion	5.59E-07		3.83E-06	***	4.42E-06	***	2.94E-06	***	6.45E-07	
ln_rnd_expenditure	-0.273	**							-0.149	
ln_rnd_pers	1.286	***							1.103	***
ln_K			0.476	***					-0.063	
ln_L			0.234						0.122	
ln_HC			0.152						-1.040	
UV_sectors					2.488	***			-0.623	
abs_KI							-25238.677	**	-4199.499	
Constant2	-3470391.991	***	-3764490.248	***	-3800973.869	***	-3601760.645	***	-0.260	
FE_Year	YES		YES		YES		YES		YES	
FE_Region	YES		YES		YES		YES		YES	
Observations	192		192		192		192		192	
R-squared	0.647		0.648		0.647		0.648		0.950	

• Note[1]: *** p<0.01, ** p<0.05, * p<0.1.

• Note[2]: Regressions are estimated using three-stage least squares (3SLS).

Table 6.5: Robustness Check 2 – Main Determinant Variable

specification	1		2		3	
dep.var.1	fashion		toy		E_Cig	
UV_CULT_ENTROPY	-1666882.979 *** (446418.431)		-146398.296 *** (44584.135)		-40363.472 (45471.139)	
ln_income	518900.277 ***		52536.867 ***		65905.398 ***	***
perc_pop15to64	-24622.650		-10075.883		-115698.747	***
perc_urbanization	-8130.176 ***		-511.215 *		-1333.756	***
perc_internet_cov	4666.69 **		294.865		644.164	***
Constant1	-3473147.144 ***		-374551.550 ***		-475982.669	***
Observations	192		192		192	
R-squared	0.648		0.676		0.615	
dep.var.2	ln_patents_firm					
fashion	1.09E-06	*				
toy			1.20E-05	*		
E_Cig					3.72E-07	
ln_rnd_expenditure	-0.132		-0.143		-0.205	
ln_rnd_pers	1.176 ***		1.195 ***		1.497 ***	***
ln_K	-0.136		-0.143		-0.257	**
ln_L	0.003		0.022		0.090	
ln_HC	-0.618		-0.849		-0.166	
Constant2	-0.905		-1.037		-2.781	*
FE_Year	YES		YES		YES	
FE_Region	YES		YES		YES	
Observations	192		192		192	
R-squared	0.941		0.937		0.939	

• Note[1]: *** p<0.01, ** p<0.05, * p<0.1.

• Note[2]: Regressions are estimated using three-stage least squares (3SLS).

besides being perceived by some customers as a Veblenian good associated with the wealthy class.

For the robustness check 3, results presented in Table 6.6, I included an additional level in the hierarchical model to better express the mechanism of impact and moderation of cultural entropy and Veblenian consumption which I previously only assumed to be passing through the channel of social capital. The estimations in Table 6 include social capital explicitly in the estimation.

I are using four alternative measures of social capital – a factor variable, in line with CBD approach of measuring social capital (SC_correct), number of volunteers (as a general proxy of altruism), and two measures of bonding and bridging social capital in line with (Muringani et al., 2021; Putnam, 2001). Across all my four specifications, I find that Veblenian consumption indeed affects positively social capital, indifferent of its type and its own effect on innovation. Moreover, I do not find a strong direct effect from social capital, presuming that Veblenian consumption is a more statistically clean indicator for the specific newly acquired through Veblenian behaviour social capital with impact on innovation. Put differently, social capital may mean many different things and what affects innovation seems to be the social capital gained in specific through Veblenian consumption.

6.8 Discussion

This section reflects on the results of this study, particularly focusing on how the actual cultural context of China is related to the existence of cultural imbalance, which further necessitates the use of cultural entropy measurement.

Table 6.6: Robustness check 3 – Effect of Conspicuous Consumption on Social Capital

specification	1		2		3		4	
dep.var.1	fashion							
UV_CULT_ENTROPY	-1676927.289	***	-1628737.591	***	-1586264.122	***	-1655818.480	***
ln_income	538883.46	***	532246.937	***	537629.1	***	536068.874	***
perc_pop15to64	120345.763		94,224.936		165761.704		295026.850	
perc_urbanization	-8879.191	***	-8,404.004	***	-7763.398	***	-8725.378	***
perc_internet_cov	4569.286	**	4306.872	**	3197.711	*	4087.519	**
Constant1	-3723573.712	***	-3684464.195	***	-3798783.473	***	-3820633.166	***
Observations	192		192		192		192	
R-squared	0.648		0.648		0.647		0.647	
dep.var.2	SC_correction		ln_volunteer		ln_Social_org (bridge)		ln_Social_group (bond)	
fashion	3.31E-06	***	6.97E-06	***	4.45E-06	***	3.81E-06	***
perc_urbanization	-0.010	*	-0.008		-0.054	***	-0.060	***
perc_pop_density	1.00E-07		1.00E-07	***	1.00E-07		1.00E-07	
Constant2	-0.604	*	9.727	***	11.471	***	11.38	***
Observations	192		192		192		192	
R-squared	0.440		0.386		0.563		0.530	
dep.var.3	ln_patents_firm							
SC_correction	0.060							
ln_volunteer			0.024					
ln_Social_org					-0.247			
ln_Social_group							-0.356	***
ln_rnd_expenditure	-0.126		-0.169		-0.155		-0.293	*
ln_rnd_pers	1.304	***	1.355	***	1.471	***	1.612	***
ln_K	-0.210	**	-0.269	***	-0.277	***	-0.293	***
ln_L	0.031		0.047		0.186		0.26	**
ln_HC	-0.123		-0.443		-0.603		-0.708	
Constant3	-1.771	***	-1.509		-1.410	**	-0.629	
FE Year	YES		YES		YES		YES	
FE Region	YES		YES		YES		YES	
Observations	192		192		192		192	
R-squared	0.942		0.947		0.943		0.939	

• Note[1]: *** p<0.01, ** p<0.05, * p<0.1.

• Note[2]: Regressions are estimated using three-stage least squares (3SLS).

First, the Veblenian and cultural bias mechanisms discussed in CBD are confirmed about China. For these who live in a relatively more culturally rich region, such as Beijing, Shanghai (according to the factor analysis result producing the social capital and cultural capitals, these two regions are denser in cultural heritage, despite the general belief that these are more living culture lively places), the barrier might come from the cultural esteem and arrogance, as historical culture is known for creating the sense of privileged identity (Tubadji et al., 2021). Combined with the idea of “keeping face”, it created incentives for people to try to impress and keep up with the pecuniary standard of living. From the perspective of CBD, the core idea underlying the interest in Veblenian goods as a means to build social capital—and ultimately promote innovative ideas—is grounded in cultural capital imbalance. This cultural imbalance arises from the interactions between historical culture and contemporary living culture, as suggested by the CBD framework. For people who are living in relatively more living culture intense regions, the low stock of cultural heritage might not be enough for them to maintain their sense of their cultural identity, and thus feel relatively culturally inferior. Combined with the wide spread of internet use, they might be more biased towards consuming luxurious goods as they might be more susceptible to become the victim of the influence of materialism and consumerism. For these two types of regions with profound interests in conspicuous consumption triggered by cultural imbalance (low Cultural Entropy), people are more likely to evaluate each other based on their material possession and display.

Secondly, as a result of the above dependencies, in business, potentially people judge innovators based on how much social value they carry, to decide how much resource to invest in them. Considering innovation in Chinese firms, it seems that innovation

strongly depends on social connections, relationships building, which crucial resulted in the choice of social capital building using conspicuous goods, and perhaps less on creative thinking and innovation ability. Thus, Chinese firms in different regions might benefit from regional consumerism and “keeping face” culture and build strong business relationship using their social capital. It eases their way with business connections and building business circles. However, our results also hint that game for signalling and social capital networking seem to drive the recognition of innovation and patenting rather than quality of the innovation. This might be part of the puzzle of productivity decline in the country (Boeing, 2020; Magnus, 2018).

6.9 Conclusion

This paper explores the conspicuous consumption (Veblenian behaviour) as a vehicle for increasing local social capital where social capital is potentially missing as a result of low cultural entropy which indicates the missing of a balanced cultural context conducive to innovation. This requires further the result that the Veblenian mechanism is conducive to higher local innovation.

Theoretically, I explain the above by relying on complexity theory for understanding the balance in the composition of regional culture, i.e. I use the notion of Cultural Entropy. Namely, I use Cultural Theory (Veblen and Bourdieu) and social mobility theories to form a testable hypothesis about the effect of Veblenian consumption on the construction and multiplication of social capital.

I have in fact two working hypotheses: (i) that Cultural Entropy affects Veblenian consumption and (ii) that Veblenian consumption boosts innovation. To test them

empirically, I employ the following strategy. I measure the Cultural Entropy by calculating the Theil index for entropy, applied on the local cultural capital, defined as a complex entity with two main sub components: cultural heritage (CH) and living culture (LC). I test the impact of Cultural Entropy (the balance between CH and LC) on local Veblenian consumption. I expect that the lower Cultural Entropy triggers the use of this social capital creating mechanism. Next, I model the local innovation as a function of the Veblenian consumption and the new social capital that it has created.

I used provincial data of China, from the period of 2013 to 2019. Based on the empirical tests, the two hypotheses could not be rejected, suggesting that cultural entropy has influence on conspicuous consumption, which is then used to accrue more social capital and thus obtain higher regional innovation output.

These findings are both in line and very much value adding to the existing literature as follows. First, the CBD paradigm noted that regional socioeconomic development is strongly determined by cultural heritage and living culture, their interaction determines whether a region is attractive enough for human capital and whether it would be efficient in the utilization of other forms of capital employed in the production of innovation (Tubadji et al., 2020). I confirm that China also has strong historical cultural impact in its economy, which could be captured by using the CBD approach and LC also seems to exhibit positive effects on innovation in China.

Second, the findings of this chapter extend the CBD literature as follows. My results show that the innovation ability witnessed in China is the outcome of the interaction of Cultural Entropy with a type of anthropocentric agency, namely a behaviour termed

Veblenian consumption, which is able to moderate the available stock of cultural capital in a locality. Put differently, this study suggests that Veblenian goods and conspicuous consumption serve as a multiplier for the social capital in Chinese society and its derived effects on innovation.

There are limitations of this study pertaining the data used to measure cultural capital and Veblenian consumption at an aggregate level. While there are notable advantages to utilizing internet search data as a proxy for provincial interests in specific goods, this approach presents challenges in terms of validity. While individual-level data, which could provide deeper insights into consumer behavior and preferences, is often inaccessible. Moreover, throughout the study period, it would have been beneficial to incorporate time-varying variables that influence the evolution of local living culture. Factors such as the influx of international visitors and migrants could significantly impact cultural dynamics and consumption patterns. These variables are not available at the regional level, limiting the comprehensiveness of the analysis. In summary, the reliance on aggregate data and the absence of certain contextual factors constrain the findings, making it essential for future research to seek more granular data and consider additional influences that shape cultural capital and consumption behaviors.

Overall, concerning the results of this study, future research should be necessary to deepen the understanding of the exact nonlinearities in the impact from Veblenian consumption on innovation. These are likely to vary when the local cultural entropy is away from its maximum level due to dominance of CH versus due to LC. Likewise, further research could be done using individual level data to confirm the identification of the here-assumed individual motivation behind the Veblenian consumption multi-

plier. The different modes of impact of the multiplier effect of Veblenian consumption on cultural entropy and ultimately on local innovation captures the stochastic nature of culture where living culture is considered to be constantly evolving and subject to external influences, as a factor for local development, which clearly merits further investigation.

This study is a first attempt to delve into the stochastic nature of culture as a determinant for local innovation. I have clearly documented that anthropocentric agency such as Veblenian consumption (i.e., human behaviour) creates volatility in the effect from the local cultural capital on local innovation. Individual behaviour (such as consumption) can affect the informal local culture and networking that generate social capital, and this can help to overcome the effect of local cultural capital, its balance (Cultural Entropy), the rigidity of the local formal institutions and even the cultural persistence of places.

Chapter 7

The Chinese Cultural Revolution and Conspicuous Consumption

7.1 Abstract

This study explores how individuals' social well-being relates to the socio-political context. It considers social well-being through the lens of conspicuous consumption behavior and reflects on the relationship between conspicuous consumption, social mobility, and the socio-political context of the *Great Proletarian Cultural Revolution* (1966-1976). This socio-political movement was a period of social unrest that brought about drastic changes in the social and political landscape in China, shaping Chinese socioeconomic lives. Utilizing cross-sectional data from the *Chinese General Social Survey* (CGSS) and the "China Political Events Dataset, 1966-1971" (Walder, 2014), the results show that individuals from the Cultural Revolution Cohort who experienced stagnation or a decline in their socioeconomic status are associated with a heightened tendency to consume branded goods under peer influence. Further examinations revealed potential explanations underlying this finding, including individuals' views on social conflicts, sources of success, preferences for redistribution, and the importance of keeping "face." This study calls for a comprehensive evaluation of people's ability to achieve well-being, especially considering the broader socio-political structure and environment.

7.2 Introduction

Across different cultures, religions, and regions, individuals exhibit varying interests in specific aspects of expressed needs and preferences, reflecting the diverse influences on the formation of beliefs. Relating to the ideas introduced in chapter two, it is understood that needs, wants, and desires are inherent features of all humans. However, they are also shaped by environmental influences and personal experiences accumulated throughout one's upbringing. Cultural, religious, and political factors are known to exert considerable influence. This study specifically focuses on the sociopolitical context.

Individuals' sense of well-being is influenced by their social environment (Duesenberry, 1949). Social wellbeing is achieved by having status, confirmation from others, and affection (Ormel et al., 1999). Keyes (1998) refers to it as "the appraisal of one's circumstances and functioning in society," highlighting the social aspect of overall well-being, which is crucial for individual health and functioning. As a result, Inequality often predicts conspicuous consumption, which serves to alleviate psychological distress and boost self-esteem (Wilkinson and Pickett, 2017; Oh, 2021; Liao, 2021).

Thus, the motivation to possess conspicuous goods is related to the societal structure concerning social and economic class. Social hierarchy uses goods to signify social status and organize interpersonal relationships (Clunas, 2004; Dubois and Ordabayeva, 2015). Bourdieu's theory of cultural capital highlighted the differentiation of taste often expresses cultural capital and distinguishes between social classes. Furthermore, in a democratic society, individuals' happiness is often determined by a

sense of equality, which is often reflected in individuals' consumption preferences (Baudrillard, 1998). Therefore, the use of conspicuous goods often allows individuals to assert their social "distinctiveness" in society and break social barriers by emulating the consumption patterns of higher social classes (Veblen, 1899). In this context, social mobility is associated with the use of conspicuous goods as these items can function as social capital or a means to demonstrate one's hidden human capital (Frank, 2010; Mason, 2000). In many contemporary societies, class mentality remains a factor influencing consumption behavior (Holt, 1997; Holt, 1998; Wisman, 2009; Burger et al., 2015).

Furthermore, the social and psychological effects of not achieving this social well-being can become a hindrance to one's overall development. As indicated by Sen (1983), "In the commodity space, therefore, escape from poverty in the form of avoiding shame requires a varying collection of commodities-and it is this collection and the resources needed for it that happen to be relative vis-a-vis the situations of others." From this perspective, assessing inequality involves not only measuring one's financial or physical characteristics but also understanding what people need to achieve their sense of social well-being. As a result, this social costs to meet their social wellbeing can inadvertently create a "poverty trap" for some individuals and households by diverting resources away from essential areas such as education and nutrition (Moav and Neeman, 2012; Jaikumar et al., 2018).

This study investigates how individuals' sense of social well-being, as proxied by their consumption choice, relates to the communist sociopolitical movement. The Chinese Cultural Revolution is known for its extreme violence and impact on

social trust while being an equalizing movement aimed at eradicating class differences and inequalities rooted in sociopolitical positions. Occurring during the period of China's socialist regime transformation after the founding of the People's Republic of China in 1949, and rooted in Mao's vision of communism, the Cultural Revolution aimed to reform the ideological superstructure of Chinese society (Heberer, 2009; Russo, 2020). Andreas (2002) suggested that the Chinese Cultural Revolution, as part of class transformation in China, highlighted the class conflicts between those who possessed communist cultural capital and those who inherited intellectual capital. However, its radical and extreme methods disrupted normal societal functioning, resulting in arbitrary killings, crimes, and faction conflicts. It further brought about significant impacts on the social landscape and shaped individuals' views regarding their socioeconomic identity and lives (Yang, 2000).

People who lived through the Cultural Revolution often experienced mental trauma from crimes committed by peers and the military, leading to decreased social trust and trust in government (Lu, 1994). They further developed more radical views on democracy, equality, and wealth distribution (Ou and Xiong, 2021; Wang, 2022; Calhoun and Wasserstrom, 1999). As communist ideology emphasizes equality and the importance of central redistribution systems, studies suggest that individuals who have lived under communist systems tend to maintain a stronger belief in equality and support for government-led redistribution systems (Alesina and Fuchs-Schundeln, 2007; Jami and Kemmelmeier, 2021).

Less attention has been paid to the perception of social needs and well-being regarding individuals' views on social standing. Communist ideology typically eschews

indulgence in material goods, suggesting that the Communism and Cultural Revolution aimed to liberate people from the desire to pursue personal material wealth. In contemporary China, consumption patterns no longer exhibit distinctions based on class differences (Zhang, 2017). People from various backgrounds and professions are now open to consuming almost every kind of commodity, indicating a shift away from class-based consumption patterns towards autonomy and freedom in terms of personal leisure activities (Davis, 2005; Wang, 2001).

While communist ideology could also be a source of conspicuous consumption. Communist egalitarian ideology could also contribute to social comparison by offering a sense of equalized social treatment (Mason, 2000). Additionally, collectivism may be at the root of maintaining a heightened sense of social comparison (Baldwin and Mussweiler, 2018; Knell, 1999), evidence shows that individuals in Eastern Germany tend to allocate a larger fraction of their income to positional goods (Friehe and Mechtel, 2014; Yang and Stening, 2012). Similarly, in other post-communist countries such as Latvia, consumption patterns continue to serve as a means of differentiation and social stratification (Eglitis, 2011). Thus, communism, rooted in the idea of general social welfare, determines the social and economic conditions for individuals, which further shape their preferences or even their perceived needs for goods that serve social purposes.

In the context of the Cultural Revolution, beyond ideological influence, there were direct causes for violence and conflicts arising from inequality and socioeconomic issues. During this period, “affirmative policies” and “class labeling policy” based on political backgrounds exacerbated feelings of unfairness. These policies aimed to rectify histor-

ical cultural and class advantages enjoyed by social and political elites before the 1949 Revolution, favoring children from "good" political backgrounds with more career and educational opportunities. Conversely, individuals from intellectual and "capitalist" families, while possessing skills and knowledge essential for production, faced systemic exclusion from opportunities crucial for securing promising and even dignified livelihoods. The coercion of intellectuals into labor work resulted in resource misallocation, ultimately stifling economic dynamism and technological progress. Meanwhile, two political groups emerged: one composed of political cadres and the other of intellectuals. These two groups differed in education level, societal function, lifestyle, and holding conflicting interests (Wang, 2003). As a result, what initially presented an opportunity to manifest communist ideological aspirations turned into an avenue for individuals to pursue a "revolution" in pursuit of their own interests.

With inequality serving as a direct driver of conspicuous consumption, alongside ideological influences, this study examines how people's acquisition of conspicuous goods was affected within the context of the Cultural Revolution, particularly considering their experienced social mobility.

The structure of this paper is as follows: The subsequent section provides essential contextual background for a comprehensive understanding of the Chinese Cultural Revolution. This is followed by an exploration of social inequality, mobility, and material well-being during the Maoist era. The fourth section reviews previous work on the relationships between the Cultural Revolution and various aspects of people's social preferences and perceptions. Section five introduces the data and the identification strategy, while section six presents the results. Robustness checks are conducted

in section seven. The paper concludes with the last section.

7.3 The Historical Context of the Cultural Revolution

7.3.1 The Chinese Cultural Revolution

7.3.1.1 The Cultural Revolution: unfolding events

The Cultural Revolution, later officially referred to as the "ten years of great disaster," was initiated under the banner of moving towards a more equal and classless society, according to Mao's vision. Mao believed it was urgent at the time to address the country's road problem—specifically, to correct the capitalist road and bourgeois reactionary line. Despite the completion of the transformation of the political system in 1949 and the nation-wide confiscation of private properties, there persisted a deep-seated cultural element of bourgeois mindset in society, which Mao perceived as a threat to the stability of the system. Consequently, Mao saw the need for a second revolution focused on culture. He asserted that the bourgeois spirit and recreational ideas had deeply permeated Chinese society, and the only way to address this was to continue the revolution by mobilizing the power of ordinary people. He believed that ideological revolution should be "carried out through a series of class-struggle 'Rectification Campaigns'" (Fan, p.3).

However, some scholars argue that the true nature of this movement was Mao's political struggle to reassert his central leading role in the party and the country. Mao sensed a decline in his influence after the failure of the Great Leap Forward (Bridgham, 1967). The Cultural Revolution lasted for ten years and ultimately ended with the demise of Mao and the arrest of the "Gang of Four" in 1976, who were later considered

to be the instigators of the upheaval.

In 1966, the Cultural Revolution commenced with the campaign of the "Red Guards," who were encouraged and supported by Mao to expose and criticize those whom they perceived as class enemies. During this period, there was an unprecedented fervor for Mao's thoughts. From 1966 to 1968, the Red Guards, composed of middle school pupils and college students who had been indoctrinated with Mao's ideology, violently purged individuals whom they deemed as threats to communist ideology. These "class enemies" included intellectuals, government officials, and previous landowners—individuals considered to be from "bad" political backgrounds due to their prestigious social status before the revolution. To demonstrate their loyalty to Mao's ideas, some Red Guard students committed horrendous crimes and indiscriminately targeted their friends, teachers, and even close relatives. Individuals deemed as enemies were usually brutally persecuted, publicly humiliated, and put into confinement. Additionally, in an effort to eradicate any remnants reflecting capitalist and class ideologies, the Red Guards launched a campaign to destroy the "four olds"—old ideas, old culture, old customs, and old habits—resulting in significant damage to China's historical legacies.

Intense factional conflicts among factory workers were prevalent during the Cultural Revolution. These conflicts involved descendants from cadre families, industry workers, and peasants from different work units and backgrounds. According to the prevailing ideas driving the revolution and support for local government, as well as personal interests, factions were usually categorized into radicals and conservatives.

Radicals were more inclined to support the overthrow of the local government, while

conservatives tended to be more moderate. Conservatives typically consisted of individuals from cadre and party families, with better political backgrounds, who were perceived as supporters of the local government due to their connections to government officials. Conversely, radicals were individuals who were unable to join the conservatives initially due to their backgrounds not being considered "good." These individuals were generally believed to be the group of people who had experienced greater social injustice and discrimination, leading to higher levels of discontent with the political arrangements.

Both factions claimed to be the truest reflection of Mao's thought and fought over the right to lead the regional party. Each faction accused the other of being a reactionary force in order to gain their rightful leading position in the movement. However, subsequent research suggests that people's membership in these factions could vary depending on their own evaluation of the movement's direction, rather than solely being determined by their backgrounds (Dong and Walder, 2011).

The Cultural Revolution had a profound impact on people's mentality and world-view. Individuals who lived through this era often experienced a sense of fear and guilt, whether due to their failure to protect their families and friends or the survivor's guilt of being among the few who survived while others suffered and died. The interviewed victim emphasized the loss of people's identities during the Cultural Revolution, describing it as "a period of anomie", where individuals were uncertain about the direction of China and their life goals, as well as their political views.

In essence, it was a turbulent time where beliefs were shattered, and views were reshaped, and it was marked by a loss of values, social morality, and normalcy. This

struggle was deeply intertwined with the difficulty victims faced in attributing meaning to their suffering. Despite the mental turmoil, interviewees for studies on the Cultural Revolution attempted to find meaning in their suffering, often by consolidating their beliefs in serving a revolutionary cause. They sought to establish and convince themselves that their actions were part of a meaningful mission.

Some have even drawn parallels between the Cultural Revolution and the Holocaust, noting similarities in the brutal loss of life and the psychological impact on survivors, particularly the sense of losing control over their lives. As Thurston (1985a) eloquently puts it, "Underlying all these responses is a profound sense of loss as a result of the Cultural Revolution—loss of culture and of spiritual values; loss of status and honor; loss of career and dignity; loss of hope and ideals; loss of time, truth, and of life; loss, in short, of nearly everything that gives meaning to life."

7.3.1.2 Social-economic explanations of the Cultural Revolution

The Cultural Revolution was a complex event that involved multiple intertwined social, economic, and political factors. Scholars have sought to understand why people joined and followed Mao's Cultural Revolution, with explanations ranging from psychological interpretations to individuals' sociopolitical decisions. It is generally recognized that Mao possessed charismatic leadership qualities, as defined by Weber's theory of Charismatic Authority. He was capable of mobilizing mass movements through his bureaucratic methods (Andreas, 2007). While for individuals who participated in the Cultural Revolution, particularly young students, there was often a need for an outlet for their revolutionary enthusiasm and anger. The Cultural Revolution became an opportunity to release their pent-up emotions, and the external influence

convincing them of the existence of class enemies only heightened their enthusiasm further.

In addition, as some believe that the origin of the movement stemmed from Mao's political struggle to regain his power, it led to conflicts within the party itself due to power struggles between party cadres and their superiors within the party. From this point of view, the Cultural Revolution can be seen as a nation-led mass movement (Walder, 2019).

However, the Cultural Revolution transcended mere political struggle among leaders and elites; it delved into deeper social and cultural issues within the society at that time (Wu, 2014). As White (1991) eloquently stated, "just saying 'big dragons' is not enough to show why the dragons stay in their caves most of the time, or why they came out in 1966." According to research by Thurston (1985a), the Cultural Revolution could be seen as inevitable, as many conflicts and revolutions had already occurred before the major upheaval. "It was not an aberration but rather an extension of policies" (Thurston, 1985a, p.24).

Based on interviews with victims of the Cultural Revolution, fear of its recurrence was palpable. In one interview, an individual expressed concerns about equality, social conditions, and economic reasons that paved the road to the Cultural Revolution. Their perspective sheds light on the underlying issues that fueled the upheaval. His interview is as the following:

"Maybe we can prevent it. But now I think there is still a danger. If our central government and provincial government can lead successfully ... I am not so sure. If the country becomes rich enough, if the living standard becomes good enough, if we

are progressive enough, maybe when the leftists launch another Cultural Revolution, people-most of them-won't believe. But if the country is not that rich, if we don't make progress, if we are still backward, maybe most people would believe that the intellectuals, the professors, are the spiritual aristocratic class and that cadres are capitalist roaders. It is quite possible. That is why I think we should have real equality. The sooner we abolish privilege, the sooner we abolish the back door, the better²³."

Based on the information gleaned from the interview, there is a clear indication of poverty and inequality-driven rage among people towards the "class enemies" during the Cultural Revolution. This rage acted as an incitement, leading people to be manipulated by the extreme leftist forces who exploited their feelings and incited hatred.

Thus, the reasons for ordinary people to join the movement were at least partially driven by economic concerns. Both radicals and conservatives participated to either change or protect their status quo (Dong and Walder, 2011). Additionally, there was significant peer pressure on workers and peasants to join the movement, as individuals were closely tied to their communities and work units at the time. The incentives for joining this political movement varied, depending on personal relationships and long-standing grievances due to unequal social treatment (Zhou, 1993; Dong and Walder, 2011). Consequently, individuals saw this as an opportunity to seek revenge on superiors who had treated them unfairly. As indicated by Lu (1994), the socioeconomic reality significantly influenced people's motivations and intentions in the movement.

The fact that the movement was not solely an ideological campaign to pursue communist goals is also evident in studies on the Red Guards. For students in the Red

²³The interview referenced herein is sourced from Thurston (1985a).

Guards during that time, they were political idealists eager to demonstrate their loyalty and understanding of political ideologies. However, they also had their own motivations and gains in the movement (Andreas, 2002). It is undeniable that students were particularly enthusiastic about pursuing communist ideology, viewing it as a reflection of their heroism and revolutionary spirit (Walder, 2019b). It was only after the "Sent-down" campaign that young students gained a clearer understanding of the nature of the movement and felt deeply manipulated by central leaders.

However, on the other hand, scholars have pointed out that as students' educational opportunities and future careers were evaluated based on their political performance, they felt compelled to navigate their way through the movement actively. They not only had to adapt to the changing political environment and guidance of central leaders but also establish good relationships with worker teams dispatched directly from revolutionary leaders. However, faced with the ever-changing political landscape, students' roles in this movement may have eventually become distorted, and their initial ambitious revolutionary spirits may have been stifled (Zheng, 2006).

In summary, for individuals of that generation, it was a time when they sought to achieve their ideological and political ambitions while also striving for personal interests.

7.3.2 Social mobility during Mao's era

With the aim of maintaining the leadership of the proletariat, the Communist Party correlates people's socioeconomic identity with their political identity. Under the leadership of the Communist Party, social mobility often reflects loyalty to the ruling

party, serving as a mechanism to reinforce its control and governance over the country.

With the aim of maintaining the leadership of the proletariat, the Communist Party correlates people's socioeconomic identity with their political identity. Under the leadership of the Communist Party, social mobility often reflects loyalty to the ruling party, serving as a mechanism to reinforce its control and governance over the country.

The Cultural Revolution was a movement that aimed to raise and utilize the awareness about existing inequalities and social differences, particularly regarding family backgrounds and class distinctions. As a result, it was characterized by political conflicts between the children of intellectuals and those from Communist Party elites (Andreas, 2011).

At the time, people were categorized into two groups based on the "bloodline theory": the "Five Red Categories" and the "Five Black Categories". The "Five Red Categories" typically included individuals from peasant, worker, and revolutionary family backgrounds—essentially those from formerly exploited families. In contrast, the "Five Black Categories" consisted of descendants of landlords, wealthy farmers, counterrevolutionaries, and individuals deemed as "bad elements" or "right-wingers", as well as those from intellectual elite families. These individuals were perceived as threats to Communist goals due to their conflicting interests with revolutionary goals.

Before the Cultural Revolution, during Mao's era, Chinese society underwent significant social and political structural transformations. Affirmative policies were implemented, which led to individuals from rural backgrounds and formerly exploited groups being assigned to important intellectual positions, even if they lacked the

necessary qualifications for such roles. Meanwhile, individuals from the "black five categories" had faced social discrimination and significant constraints in terms of their career, education, and even marriage (Walder, 1989; Deng and Treiman, 1997). Furthermore, political forces exerted a pervasive influence on individuals' lives. Prior to the Cultural Revolution, communal lifestyles characterized by household registration, food rationing, and collective consumption fundamentally subjected individuals to the authority of their corresponding party cadres. Administrative methods during this period were characterized by labeling, monitoring, and campaigning (White, 1991).

This potentially became the root of hatred towards this type of social political arrangement of individual life. Across work organizations, there were large gaps between people in terms of income distribution and consumption patterns. According to some perspectives, this outcome can also be viewed as a manifestation of class differences (Wu, 2004). Additionally, as political performance became a critical factor for individuals striving for upward mobility, it required them to foster good relationships with local officials. However, this dynamic often led to resentment from ordinary people towards superiors who abused their power (Walder, 1989). Consequently, it contributed to significant inequality and sense of unfairness and fostered animosity, which ultimately surfaced during the Cultural Revolution (Heberer, 2009; Lu, 1994).

As the Cultural Revolution failed to bring about fundamental changes to society in terms of political arrangements and social structures, inequality between people persisted in various aspects of individuals' lives after the revolution. The significant improvements in living standards seen in today's China were largely attributed to the economic reforms and opening-up policies initiated in the 1970s, which provided

more economic opportunities and freedom to people. However, as some individuals prospered financially, others continued to face limited career opportunities and remained economically vulnerable due to the inevitable consequences of inequality from economic reform policies (Lampton, 1979).

This disparity was pronounced for those who missed out on education and job opportunities due to the decade-long interruption of the Cultural Revolution and experiences of being sent down to rural areas (Zhou and Hou, 1999; Giles et al., 2019). After the experience of students and intellectuals being sent down, some individuals even encountered difficulties reintegrating into urban life and experienced significant hardships later in life. For this generation, egalitarian ideals of common prosperity were promoted during their youth, only to be disregarded later due to their lack of competitiveness during the economic reform. While some of them may remain positive about the experience, feelings of discontent and a sense of missing out are to be expected among this demographic (Chen, 1999; An, 1976).

7.3.3 The views on material possessions during the Mao era

As depicted in the first chapter, commodities serve not only practical daily needs but also social purposes. The consumption of positional goods, or conspicuous goods, is often theorized to be related to the notion of social class, as these goods primarily serve to indicate and differentiate social status. According to Bourdieu (1987), economic and cultural capital determine the foundation upon which social classes are constructed. Consequently, taste and the differentiation of taste emerge as indicators of distinction and social class. Thus, communist ideology typically eschews the indulgence in material goods.

As society is stratified based on consumption patterns, Veblen (1899) long suggests that the use of conspicuous goods is a method for individuals to achieve upward mobility and break social barriers to enter higher-class social circles by emulating the consumption patterns of those in higher social classes. Additionally, individuals tend to base their sense of well-being on their social environment (Duesenberry, 1949). Baudrillard (1998) suggested that in a democratic society, individuals' happiness is determined by equality, which is often reflected in their preferences for consumption goods. In terms of the Cultural Revolution, with communist ideals at its core, the process of the Cultural Revolution and China's transformation into a communist country were intended to liberate people from the desire to pursue individual material possessions and positional goods.

Capitalism on the other hand is often associated with the pursuit of personal indulgence and pleasure, leading to arguments that capitalist ideology is responsible for conspicuous consumption, as observed in the experiences of post-communist countries (Schöpflin, 1993). However, from the above points, communist egalitarian ideology could also contribute to social comparison by offering the sense of equal social treatment (Mason, 2000). Collectivism may be at the root of maintaining a heightened sense of social comparison (Baldwin and Mussweiler, 2018; Knell, 1999; Liao, 2021). Evidence suggests that individuals in Eastern Germany tend to allocate a larger fraction of their income to positional goods (Friehe and Mechtel, 2014; Yang and Stening, 2012). Similarly, in other post-communist countries such as Latvia, consumption patterns continue to serve as a means of differentiation and social stratification (Eglitis, 2011).

During the Mao era and the Cultural Revolution, the prevailing ideology and societal beliefs in China emphasized egalitarianism, frugality, and individual sacrifice for the collective good, while discouraging personal gain and material enjoyment (Zhang, 2017). This emphasis on collective equality resulted in the Cultural Revolution being viewed as a "levelling down" movement, as it was aimed to reduce the living standards of privileged individuals so that everyone could live more equally. However, as noted by Whyte (2010), this goal was not easy for people to accept.

Within the work units, controlled collective consumption and communal living were typically adopted to promote a collective lifestyle (Whyte, 2010). This further limited individuals' opportunities for personal material enjoyment and the use of goods for personal pleasure. Furthermore, due to the scarcity of goods during this period and relatively low productivity, there was limited opportunity for a materialistic mindset to develop (Sun and Johnson, 2014).

In contrast, contemporary China bears little resemblance to Mao's ideology in terms of the enjoyment of material goods. Surveys indicate that, generally, Chinese people today place a strong emphasis on monetary incentives for work and exhibit a positive attitude toward income differences (Whyte, 2010). This growing interest in conspicuous goods and material welfare is largely attributed to the improved living standards resulting from economic reforms and China's emergence as a global production powerhouse (Podoshen and Zhang, 2011).

However, concerning the mentality surrounding the use of conspicuous goods during the Cultural Revolution period, there were indications that people also harboured an emulative motive for consuming goods. In other words, the use of goods as social

signifiers of one's social differences was not entirely absent during Mao's era, despite the frugality ideologies promoted at the time. Evidence suggests that people indulged in commodity fetishism by acquiring Mao-related commodities as a means of demonstrating staunch support for Mao and their revolutionary background (Coderre, 2021; 2015).

It is thus reasonable to emphasize again that the fuel for the movement was partly driven by the desire for material improvement and exacerbated by the sense of political inequality, particularly against the backdrop of economic hardship during the time. The aftermath of the Great Famine and economic difficulties resulting from the Great Leap Forward program between 1959 to 1961 continued to haunt people (Lin and Yang, 2000). Consequently, Chinese society experienced increased unemployment, decreased university enrolment, stagnant wages, and poor conditions for material fulfilment, leading to a sense of disillusionment with the socialist system (Heberer, 2009). Shortages of food and consumer goods were prevalent in both urban and rural areas, fostering a growing perception that the communist promise was failing to deliver necessities (Wu, 2014).

Material fulfilment remained a priority for many within society. Evidence has shown that during the Cultural Revolution, despite industry workers being assigned to other crucial intellectual positions, they were still reluctant to accept. On the one hand, they felt incompetent; while on the other hand, they showed the preference to stay in their work units only for the full-month attendance bonus (Chen, 1999).

Thus, against the backdrop of poverty, inequality, and oppression, such a movement tapped into people's resentment and hatred towards the better-off and social inequal-

ity, while legitimizing violence and arbitrary attacks between citizens. It provided an opportunity for people to express their dissatisfaction and also exposed long-standing social, political and economic issues within the Chinese society. Regarding the overall subject of this thesis, it is meaningful to investigate individuals' sense of social well-being as a result of the communist movement era.

7.4 Literature Review

Veblen indicated that inequality is associated with conspicuous consumption, evidence suggests that such consumption is often a means to alleviate psychological distress and boost self-esteem (Wilkinson and Pickett, 2017; Oh, 2021; Liao, 2021). Regarding the motives behind conspicuous consumption among Chinese individuals, studies indicate that the urge to consume conspicuously may arise from the need to fit into one's social environment (Yang and Stening, 2012; Li and Su, 2007), as it serves to demonstrate conformity to one's community (Amaldoss et al., 2005). While there are also the needs for distinction, Chinese also engage in conspicuous consumption both to imitate others' consumption patterns and to differentiate themselves to signal social superiority (Matt, 2003; Zheng and Peng, 2015).

In contemporary society, class mentality remains a significant role in influencing consumption behavior across various countries and cultures (Holt, 1997; Holt, 1998; Wisman, 2009; Burger et al., 2015). Additionally, perceptions of social mobility impact cultural consumption, reflecting class differences based on Bourdieu's insights (Van Eijck, 1999).

In terms of the research on the effects of the cultural revolution, it impacts both

the economy and society, with findings from economists and sociologists revealing the direct impacts on people's mentalities due to the terror and violence of that period. The experiences from this time have influenced trust in government and interpersonal relationships (Wang, 2021; Wu, 2016; Kong et al., 2021). Ou and Xiong (2021) noted that individuals from the Cultural Revolution cohort are less likely to tolerate inequality and are less inclined to regard income and possessions as primary indicators of personal achievement.

In the long term, the Cultural Revolution adversely affected socioeconomic well-being (Bai and Wu, 2020) and fostered pessimistic views on democracy and freedom of speech (Wang, 2021; Calhoun and Wasserstrom, 1999). The practice of labeling individuals based on their family and political backgrounds contributed to social stratification, affecting individuals' life achievements (Chen, 1999; Zhou and Hou, 1999). Although the Cultural Revolution temporarily equalized educational differences among generations, Deng and Treiman (1997) argued that this was primarily due to the expansion of the education system rather than any deliberate attempt at "correction." Furthermore, the disruption of educational continuity negatively impacted economic decision-making; for instance, company CEOs who experienced the Cultural Revolution were found to be less likely to invest in innovation (Huang et al., 2020).

Moreover, it has been argued that the Cultural Revolution reshaped social and political relationships, centralizing power around the party once again. Meanwhile, interpersonal relationships transformed into comradeships characterized by mutual favor (Liu, 1983; Gold, 1985). This shift may have implications for corruption in

Chinese society post-revolution, often closely linked to the use of conspicuous goods.

The other relevant strand of literature concerns the study of economic legacies. Historical events profoundly influence both individuals and subsequent generations, impacting social and economic attitudes. For instance, individuals who have lived under communist systems tend to have a stronger belief in equality and greater support for government-led redistribution efforts (Alesina and Fuchs-Schündeln, 2007; Jami and Kemmelmeier, 2021). Similarly, those who have experienced economic depressions often show increased support for redistribution, likely as a result of their experiences with financial hardship (Alesina and Glaeser, 2004; Giuliano and Spilimbergo, 2014).

In studies focused on China, Chen et al. (2020) identified that the economic legacy of Confucian teachings continues to influence contemporary human capital. Additionally, the impact of foreign invasions has been shown to affect regional economic development. The memory of peasant revolutions during the Qing dynasty also influences the incidence of protests in later generations (Miao et al., 2022).

In light of the literature on the incentives for Chinese individuals to consume conspicuous goods and the socioeconomic impacts of the Cultural Revolution, this study delves deeper into how these effects relate to people's conformative conspicuous consumption and the possible explanations behind this correlation. To achieve this aim, the empirical strategy involves comparing differences between cohorts and cities regarding individuals' views related to conformative consumption choices. I provide evidence from the entire cohort, as well as focusing on individuals who experience varying levels of social mobility, highlighting how people's mindsets have been differentially shaped by the Cultural Revolution based on their social mobility. Ad-

ditionally, I explore the impact of missed education opportunities, which may have contributed to stagnated social mobility for those affected by the Cultural Revolution. Specifically, I compare views on conformative consumption among individuals whose education was interrupted for different lengths of time. Lastly, to understand the relevant factors that could explain the identified relationships, I investigate several explanations associated with people's views on the sources of social conflict, preferences for redistribution, perceptions of success, and the perceived importance of having "face."

7.5 Data and Method

7.5.1 Data and variables

The data used in this study are primarily sourced from two datasets. Firstly, information on Cultural Revolution-induced deaths on county level was acquired from the *China Political Events Dataset*, spanning from 1966 to 1971. This dataset, curated by Walder (2014a), was compiled from local gazettes as part of his extensive historical study on the Chinese Cultural Revolution. Refer to Appendix 12 for a summary of the statistics and Appendix 17 for the sources of data.

Secondly, survey data pertaining to individuals' beliefs, views and demographic characteristics were extracted from the 2010 *Chinese General Social Survey* (CGSS). Similar to the *World Value Survey*, the CGSS is a nationally representative survey conducted every three years, aimed at capturing evolving trends in the value, attitudes and beliefs of the Chinese population. Respondents in the survey were randomly selected from 89 cities across mainland China, with birth years ranging from 1921

to 1990, providing comprehensive coverage of individuals both before and after the Cultural Revolution.

Lastly, supplementary data used as controlling variables, including the rice suitability index and historical data on the density of Jinshi, were obtained from various sources. Refer to Appendix 12 for a summary of the statistics and Appendix 17 for the sources of data.

The regional revolution conflict intensity is measured as $\log\left(\frac{\text{deaths}}{\text{population}_{1966}} + 1\right)$. Walder (2014b) suggests that the majority of deaths during this period were not primarily the result of conflicts between citizens or persecution by Red Guards. Instead, the central leaders orchestrated oppressive measures to suppress local uprisings. Thus, higher death counts are indicative of more intense local insurgencies. Thus, this indicator is used to account for the intensity of local conflicts during the Cultural Revolution.

This study delves into the correlation between the Cultural Revolution and individuals' social well-being, with a specific focus on their perceptions regarding the equalization of welfare. To approach this mindset, I utilize a specific question from the 2010 survey as the dependent variable:

Q 1: "People around me have branded goods, so I should have them too."

The response variable is categorical, varying from 1 to 5. A score of 1 indicates the least agreement with the statement, while a score of 5 represents the highest level of agreement. This question captures individuals' attitudes toward material consumption of branded goods, and their inclination to align their lifestyle with the

standards set by their peers. I anticipate that this question could potentially reflect people's concerns about social well-being, as expressed through their reported need for branded goods under peer influence.

7.5.2 Identification strategy

This study explores the relationship between cultural revolution, social mobility, and the propensity of conformative conspicuous consumption. Some of previous research have explored the causal impact of the Cultural Revolution on mindset formation by treating it as an exogenous shock. For example, Bai and Wu (2019) employed a Difference-in-Differences (DID) approach, utilizing the variation of years of individuals' exposure to the Cultural Revolution and regional differences in the intensity of the revolution. While other studies, such as Wang (2019) and Bai and Wu (2022), utilized instrumental variables, including exogenous differences in proximity to local sulfur mines and precipitation rates. Given the available data, this paper adopts a similar strategy to that of Bai and Wu (2019).

However, as discussed in the previous section, the regional intensity of the Cultural Revolution was influenced by factors that could directly contribute to individuals' mindset regarding their opinions on social life. In other words, there might have been confounding factors. For example, the regional intensity of the Cultural Revolution, as the independent variable, might have been influenced by regional membership density, which could directly influence beliefs regarding their sense of egalitarian material welfare.

Likewise, there are also confounding factors from regional characteristics that affect

both regional Cultural Revolution density and the sense of social comparison and competitive consumption. While some of these factors are not directly observable due to a lack of adequate proxies, their omission can lead to incorrect inferences regarding causal relationships. For instance, certain regions may have historically experienced more conflicts due to specific regional characteristics, such as a higher racial composition. Despite these factors having long existed and potentially exerting an impact on the entire population regardless of people's age, it is reasonable to speculate that during the period around the Cultural Revolution, they might have been more pronounced.

Additionally, another difficulty arises from the data. The question of interest was only asked in the year 2010, which prevents the construction of a panel dataset spanning multiple survey years to examine the effect on the same age cohort over time. To address this limitation, as well as the unobservable regional and age or year-specific effects, I control for age and region fixed effects. These dummy variables help eliminate any effects from region, age, or year-specific influences, as the assumption is that individuals living in the same region tend to share similar beliefs, and changes in individuals' perceptions may also be influenced by age or year effects. Thus, I examine individuals who experienced different intensities of the Cultural Revolution while using observations for other age groups in the same region to control for regional effects. Meanwhile, the observations in this study are limited to individuals who were born and raised in the same cities. In this way, it can help address the selection issue related to migration, as individuals with similar mindsets and preferences for particular lifestyles often cluster in specific regions.

Due to the concerns noted above and the limitations of the dataset, despite employing the same estimators as in a Difference-in-Differences (DID) method, I do not necessarily claim a causal relationship. Nevertheless, the results are still informative in identifying the relationship as they provide insights into individuals' sense of well-being and social conflicts.

The next challenge lies in determining which age groups should be designated as the primary participants in the Cultural Revolution. Although the Cultural Revolution was a nationwide movement, its primary participants were young people involved in the Red Guard campaign and faction fights. On the other hand, the dataset from Walder (2014a) records the number of deaths from 1966 to 1971, when the highest number of deaths occurred due to faction fights and government oppression in those years. According to the "Impressionable Year Hypothesis", individuals' beliefs and preferences are typically formed between the ages of 18 to 25²⁴. Therefore, I anticipate that the generation who spent at least one year of their belief-formation years during 1966 to 1971 constitute the generation of the Cultural Revolution. Additionally, considering that individuals could participate in the Cultural Revolution during the Red Guard movement as early as 12 years old, I extend the earliest age to 12 at the beginning of the movement²⁵, resulting in the participating group being individuals aged 55 to 68 years old in the year 2010. In this study, I refer to this group of people as the "Cultural Revolution cohort." Meanwhile, I restricted the sample to individuals who were born and raised in the same region. In two specifications in the initial findings, I also compare the effects on individuals who were 5 years younger and 5

²⁴see Giuliano and Spilimbergo (2014).

²⁵As the Red Guard campaign mainly occurred during the first two years of the revolution, the sent-down program for students and intellectuals began afterward.

years older than the above age cohorts.

In terms of the key independent variable. To record an individual's experience of the intensity of the Cultural Revolution in each region, it is approximated by the interaction term between a dummy variable that indicates whether the person was born between 1942 and 1955 and the regional intensity of the revolution. In one specification, following Bai and Wu (2020), an additional variation is introduced. This variation involves considering the overall number of years spent in the revolution. For this investigation, the number of years spent in the revolution is multiplied by the aforementioned variable to assess whether the duration of exposure to the revolution contributes to the relationship.

This study specifically focuses on individuals who experienced either no change or a downward shift in their socioeconomic rank during or after the Cultural Revolution, particularly those with no or decreased social mobility. As discussed in the introduction of this chapter, this movement promoting egalitarian ideology may make these individuals more sensitive to the losses they have endured. I thus particularly focus on identifying the result on the entire cohort as well as grouping individuals based on their experienced social mobility: decreased, stable, and increased. For this aim, I utilize questions from the survey that inquire about individuals' perceptions of their current and past socioeconomic status. Specifically, respondents were asked, "At the age of fourteen, what socioeconomic rank do you believe your family was in?" and "What socioeconomic rank do you believe you were in ten years ago?" Responses to both questions are rated on a scale from 1 to 10, with 10 denoting the highest socioeconomic rank. Based on the differences in socioeconomic status rankings between

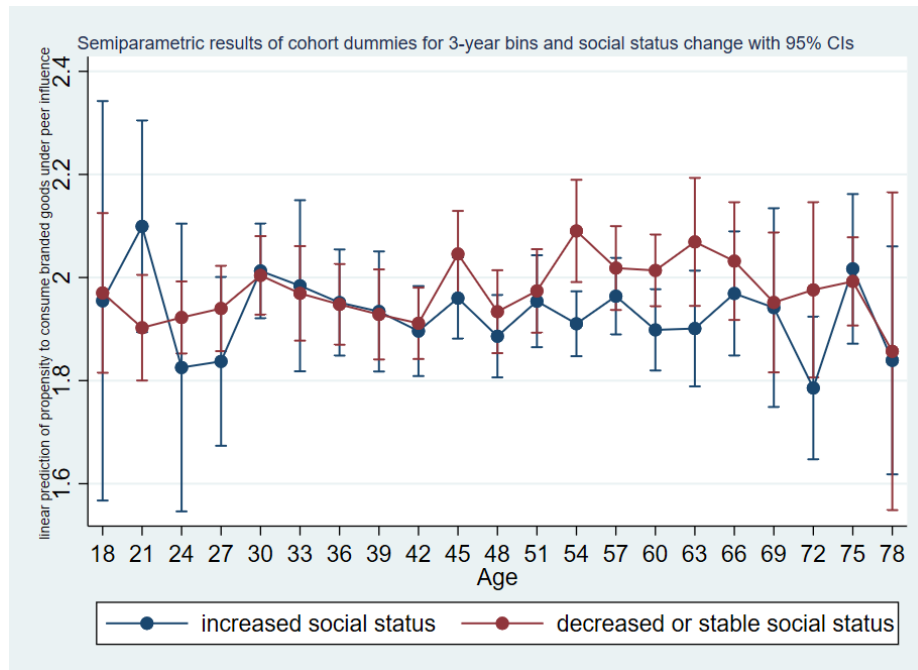
their family economic status at the age of 14 and their individual rank in 2000, I separate the observations into two groups. The first group comprises individuals who have experienced either downward mobility or no change in their socioeconomic status since the age of 14. Conversely, the second group consists of individuals who have witnessed upward social mobility. Out of the Cultural Revolution cohort, the number of people with upward mobility is 1448, while those with downward and no mobility are 1228.

Therefore, the primary independent variable is a three-way interaction term between the cohort of the Cultural Revolution, the intensity of the Cultural Revolution in each region, and the variable representing changes in individuals' socioeconomic status. This interaction allows for an examination of how the experience of the Cultural Revolution interacts with changes in socioeconomic status to influence individuals' beliefs and attitudes.

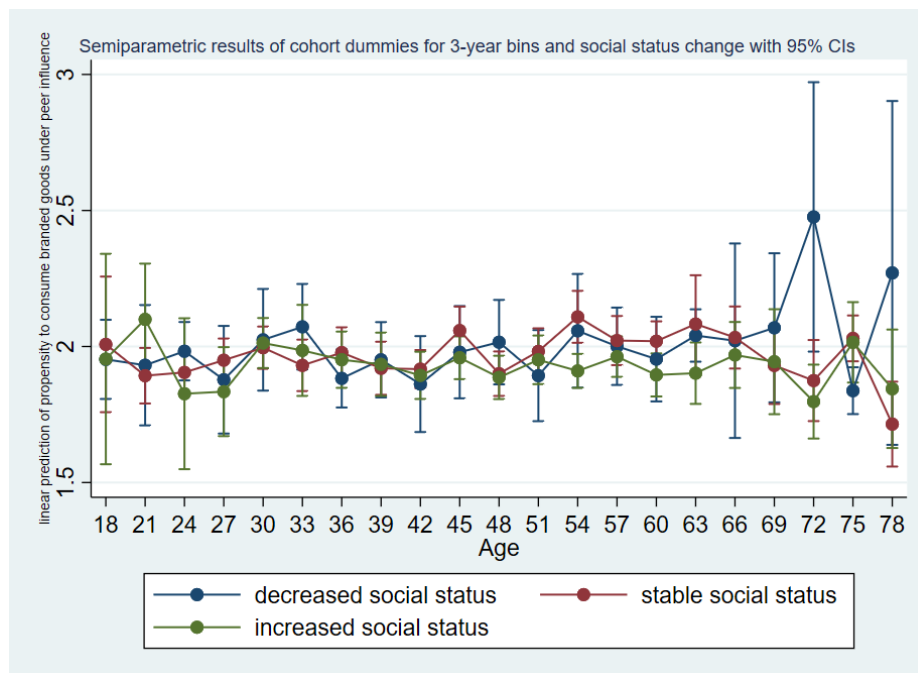
Finally, to capture region-specific trends in the importance of social status among different age groups, I included interaction terms of region dummies with first-order and second-order polynomials of age, representing time trends for each region respectively. This also allows for variations in social comparisons and the sense of material possessions to evolve over the life cycle within each region.

Figure 7.1 presents illustrative comparisons of changing trends in the propensity to consume branded goods based on age, segmented by groups according to changes in individuals' social ranks. These groups separate individuals according to the changes in their social ranks, either increased, decreased, or remained unchanged. This graph is generated by regressing the dependent variable on three-way interaction terms of

Figure 7.1: Illustrative Comparisons of Changing Trends in Propensity to Consume Branded Goods by Age and Social Mobility Groups



(a) Two Groups: Stable or Decrease in Socioeconomic Rank vs. Increase in Socioeconomic Rank



(b) Three Groups: Stable vs. Decrease in Socioeconomic Rank vs. Increase in Socioeconomic Rank

social rank groups, age group dummies, and regional revolution intensity. Here, age group dummies are generated based on grouping individuals into three-year cohort bins. It is evident that for the age group (between 55 and 68) under consideration, there is a notable discrepancy between social mobility groups, especially when compared with other age groups.

It should be noted in 7.1 (a), for generations who are 10 years younger than the revolutionary cohort, there is also a discernible but less pronounced difference between the two social mobility groups. This could result from two factors. Firstly, the actual revolutionary period was from 1966 to 1976. In this study, I proxied the intensity of the revolution with deaths that occurred during the first 5 years (as provided by the dataset) and examined the relationship among the corresponding age cohorts. As in the subsequent years, deaths significantly reduced as the movement pacified. Nonetheless, it could be expected regions still underwent revolution in other forms, and socio-political struggles could have persisted. Thus, it could be expected that people who were in their impressionable years during the latter five years were also impacted. Secondly, the influence of this mentality and beliefs could have been transmitted through other mechanisms such as peer effects to people who were relatively younger than the revolutionary cohort under study. Nonetheless, the hypothesis still holds that the primarily impacted group was the one under study. I provide evidence in robustness checks on other cohorts.

The baseline specification is as follows:

$$\begin{aligned}
 \text{Branded goods}_{x_{cy}} = & \alpha + \beta_1 \text{regional intensity}_c \times \text{cohort dummy}_y \times \text{rank\_change dummy}_{x_{cy}} \\
 & + \beta_2 \text{Indi\_cnt}_{x_{cy}} + \text{city\_trend}_c + \text{city\_fix}_c + \text{age\_fix}_y \\
 & + \text{city\_cohort\_linear effect}_{cy} + e_{x_{cy}}
 \end{aligned}
 \tag{7.1}$$

where,

- *regional_intensity_c* – City-level intensity of the Cultural Revolution.
- *cohort_dummy_y* – Dummy variables to record whether the individual experienced the Cultural Revolution (between the age of 55 to 68 in 2010).
- *rank_change dummy_{x_{cy}}* – The subjective assessment of changes in individuals' social rank.
- *individual_cnt_{x_{cy}}* – A vector of individual-level controlling variables, including age, gender, marital status, work experience, party membership, education, family socioeconomic status and individual socioeconomic status, individual annual income, and income square.
- *region_fix_c* – City fixed effect.
- *age_fix_y* – Age fixed effect.
- *region_time_trends_effect_{cy}* – City-specific time trends.
- *e_{x_{cy}}* – Idiosyncratic error term.

All specifications are estimated using ordered logistic regression, with errors clustered using two-way clustering on city and age.

7.6 Results

7.6.1 Initial results

I present the results from the main specification and the specification for the total years spent during the Cultural Revolution in Table 1. The first four columns examine the entire revolution cohort, while the last two columns examine an additional effect of whether the cohort of revolutionaries experienced an increase in their social rankings. Additionally, I also provide the results of age groups who are five years younger or older with each specification for comparison.

According to the results, people who were born 5 years earlier and 5 years after the Cultural Revolution cohorts had seen no impact, as seen from column 2 and column 4. Moreover, in columns 3 and 4, we observe the impact of accumulated years spent during the Cultural Revolution, indicating that the correlation strengthens with an increase in the number of impressionable years spent during this period. This finding suggests that individuals who experienced the Cultural Revolution more extensively tend to be the most affected.

However, based on the results from columns 5 and 6, when I separate the cohort into two groups according to their social mobility, the significant positive result is mainly from those who either observed no change or experienced a decline in their social status, as labeled by the dummy variable “stable_decrease_mobility dummy”. These findings might indicate signs of psychological despair or a sense of disappointment regarding their life outcomes. For individuals who experienced downward or no social mobility, they were exposed to and experienced a movement promoting egalitarian

**Table 7.1: Initial Results: Branded Goods Consumption
Whole Sample and Social Rank Changes**

specifications	Entire revolution cohort		Duration of years		Socioeconomic status changes	
	1	2	3	4	5	6
dep.var	Conformative Conspicuous Consumption					
CR intensity * cohort_dummy_5 prior		0.226				0.011
CR intensity * cohort_dummy	0.351 **	0.464 **			-0.14	-0.029
CR intensity * cohort_dummy_5 after		0.071				-0.124
CR intensity * cohort_dummy_5 prior				0.196		
CR intensity * cohort_dummy * total years			0.091 **	0.112 **		
CR intensity * cohort_dummy_5 after				0.256		
CR intensity * cohort_dummy * stable_decrease_mobility dummy_5 prior						0.392
CR intensity * cohort_dummy * stable_decrease_mobility dummy					0.937 ***	0.946 ***
CR intensity * cohort_dummy * stable_decrease_mobility dummy_5 after						0.639
cohort_dummy * stable_decrease_mobility dummy_5 prior						Yes
cohort_dummy * stable_decrease_mobility dummy					Yes	Yes
cohort_dummy * stable_decrease_mobility dummy_5 after						Yes
indi_control	Yes	Yes	Yes	Yes	Yes	Yes
region fixed	Yes	Yes	Yes	Yes	Yes	Yes
age fixed	Yes	Yes	Yes	Yes	Yes	Yes
region_cohort trends	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7588	7588	7588	7588	7588	7588
Pseudo R2	0.057	0.057	0.057	0.057	0.0577	0.0578

- Note[1]: Regressions were estimated using ordered logistic regression (ologit), with standard errors clustered using a two-way cluster on city and age.
- Note[2]: *** p<0.01, ** p<0.05, * p<0.1.
- Note[3]: The dependent variable is based on the survey question: ‘People around me have branded goods, so I should have them too.’ The response variable is categorical, ranging from 1 to 5, where a score of 1 indicates the least agreement with the statement, and a score of 5 represents the highest level of agreement.

ideology and general welfare for everyone, yet they did not benefit from opportunities for general welfare or failed to improve their living standards. Consequently, their sense of loss, regarding what they should have attained and deserved, appears to be profound. Based on these results, the subsequent sections of the paper will focus on exploring this effect among individuals who did not experience upward mobility²⁶.

7.6.2 Further results on socioeconomic status changes

In this section, further evidence regarding the effect of social rank change is provided, with the results presented in Table 7.2. In column 1, rather than utilizing the social rank change variable, I directly utilize the social economic rank of individuals' family at the age of 14 to interact with the term of revolutionary cohort and intensity. According to the result, there is a positive correlation between individuals' socioeconomic status of their family at the age of 14, as indicated by the coefficient for those with higher family backgrounds at 14. This suggests that individuals from relatively affluent families tend to have a stronger inclination towards pursuing branded goods, potentially influenced by their family environment.

One additional examination on the timing of social rank changes was also undertaken. It is unclear whether the decrease in social status is directly attributed to the Cultural Revolution or influenced by social mobility changes induced by other societal or life events and factors in subsequent years. Thus, I utilize an additional

²⁶In Appendix 13 and 14, results on comparisons with cohorts who are 10 years younger and older, as well as findings related to the duration of impressionable years spent during the Cultural Revolution by social mobility groups, are provided. I also show the result of calculating the overall duration of years spent during the Cultural Revolution follows the approach used by Bai and Wu (2020), which takes into account the impact of exposure over time. The results are presented in Appendix 15 and align with previous findings, indicating that only individuals who experienced decreased or stable social mobility are more likely to exhibit a propensity for conformative consumption.

Table 7.2: Further Findings on Socioeconomic Changes

specifications	Family_ecosta at 14	Social statues now vs. 10 years ago	Social mobility change_3 groups
	1	2	3
dep.var	Conformative Conspicuous Consumption		
CR intensity * cohort_dummy	-0.178	-0.194	
CR intensity * cohort_dummy* family_eco14	0.217	**	
CR intensity * cohort_dummy * stable_decrease_mobility dummy		0.915	***
CR intensity * cohort_dummy * stable_decrease_mobility dummy (now_10)		0.132	
CR intensity * cohort_dummy * decrease_mobility dummy			1.087
CR intensity * cohort_dummy * stable_mobility dummy			0.701
CR intensity * cohort_dummy * increase_mobility dummy			-0.153
cohort_dummy* family_eco14	Yes		
cohort_dummy * rank_change_dummies		Yes	Yes
indi_control	Yes	Yes	Yes
region fixed	Yes	Yes	Yes
age fixed	Yes	Yes	Yes
region_cohort trends	Yes	Yes	Yes
Observations	7588	7581	7581
Pseudo R2	0.0577	0.0576	0.0511

- Note[1]: In this table, cohort_dummy * rank_change_dummies for the second column include cohort_dummy * stable_decrease_mobility dummy and cohort_dummy * stable_decrease_mobility dummy (now_10); while for the last column, they include cohort_dummy * decrease_mobility dummy, cohort_dummy * stable_mobility dummy, and cohort_dummy * increase_mobility dummy.
- Note[2]: Regressions were estimated using ordered logistic regression (ologit), with standard errors clustered using a two-way cluster on city and age.
- Note[3]: *** p<0.01, ** p<0.05, * p<0.1.
- Note[4]: The dependent variable is based on the survey question: 'People around me have branded goods, so I should have them too.' The response variable is categorical, ranging from 1 to 5, where a score of 1 indicates the least agreement with the statement, and a score of 5 represents the highest level of agreement.

question from the survey, which probes respondents about their social rank changes between 2010 and 2000. This adjustment aims to capture changes in social rank further to the revolutionary years. This comparison of rank changes during different periods of one's lifetime potentially reveals which period of social rank changes has a greater impact contributing to the identified relationship. They are also included as triple interaction terms between revolutionary intensity, cohort dummies and social rank change dummies. The results from column 2 show a consistently positive coefficient for the main dependent variable, while no significant relationship is identified for changes during 2000 to 2010. This indicates that the primary factors influencing individuals' perception of the inclination to consume branded goods are mainly those factors related to the social rank change experienced during years closer to the Cultural Revolution. This, on the one hand, might have been due to people being more sensitive to the decline of social status during that period, under the impression of the Cultural Revolution. On the other hand, the objective factors contributing to social rank changes were found to be more perceived as "unfair" or "unequal."

Lastly, individuals are further divided according to their experienced changes in social rank into three groups. The first group comprises individuals who experienced downward social mobility, as labeled by the dummy variable "decrease_mobility dummy", while the second group consists of those who observed no change in social status, labeled as "stable_mobility dummy". The third group encompasses individuals who witnessed upward social mobility, labeled as "increase_mobility dummy". Notably, significant relationships are only evident for the first two groups, consistent with previous findings. In addition, Appendix 15 presents results that directly measure the extent of changes in individuals' social rank, rather than relying on dummy vari-

ables representing the directions of social mobility. These findings further support the primary conclusion. Specifically, a significant positive coefficient for the degree of decline in social rank suggests that individuals from the revolutionary cohort who experienced a greater decrease in social mobility are more likely to consume branded goods compared to those who experienced only a lesser decline.

7.6.3 The influence of limited education

Next, I proceed to investigate the impact of missing education. As discussed in the introduction section, the student movement was a major component of the revolution, and students were the primary group that experienced social and economic losses as a result of the Cultural Revolution. One major factor contributing to this was the interruption in education due to closure of schools. Studies suggest the closure of schools disrupted students born between 1947 and 1952 from pursuing higher education, thereby hindering their ability to pursue better careers later in life (Zhou and Hou, 1999; Giles et al., 2019). Consequently, this interruption might have directly impacted various aspects of people's individual development and, consequently, their well-being.

However, the information is limited regarding the duration of education interruptions for each individual in the dataset. Likewise, I cannot estimate the number of years of closure of schools for each region. Furthermore, it's important to recognize that education attainment is influenced by a myriad of factors during that era. These factors encompass family backgrounds, such as whether children needed to assist with labor due to family shortages, social dynamics like peer influence, and logistical considerations such as the accessibility of nearby schools. Given this complexity, I am

unable to even "hypothetically" estimate how many years of education each individual could have received.

To approximate the influence of education interruption, I instead choose a different strategy. I divided the cohort into two subgroups based on whether they were able to complete their college education at the time the Cultural Revolution began. The first group comprises individuals born between 1946 and 1955, while the second group consists of individuals born between 1942 and 1945. By the time of the Cultural Revolution, the second group would have already been able to complete their college degrees and were therefore less likely to be impacted by education interruption. While for the first group, they were more likely to be affected in terms of achieving higher education levels, including middle schools, high schools, and colleges. According to statistics on years of education received for people born between 1946 to 1955, over 80% (81.34%) of them received no more than 9 years of education. Conversely, for those born between 1942 to 1945, this number was slightly lower at 78.13%. However, for individuals born within the 10 years after this revolution cohort, this number increased to 62.63%. This indicates, on one hand, it was common for individuals to have fewer than 9 years of education during the period. On the other hand, the main affected group was those who experienced a loss of education, below 9 years.

Therefore, I will first examine the coefficients for two education groups: the high education group (with more than 9 years of education) and the low education group (with less than 9 years of education) for the entire revolution cohort from 1942 to 1955. Specifically, I will estimate the effect on these two groups by including interaction terms of dummy variables for individuals with respective low and high education

levels, along with the intensity of the Cultural Revolution. Next, I will compare the outcomes between these two age groups, which could further elucidate whether education loss was a significant factor in explaining the identified relationship. For this aim, I further segregate the groups according to age cohorts as indicated above and construct additional interaction terms based on the previous interaction terms of education levels and intensity with dummies for the two age groups. The results are presented in Table 7.3.

Table 7.3: The Impact of Limited Educational Attainment

specification	1942 to 1955		1942 to 1945 vs. 1946 to 1955	
	1	2	3	4
dep.var	Conformative Conspicuous Consumption			
CR intensity * cohort_dummy * edu_high	0.0481	0.529		
CR intensity * cohort_dummy * edu_low	0.432 **	0.853 ***		
CR intensity * cohort_dummy * stable_decrease_mobility dummy		0.916 ***		
CR intensity * cohort_dummy * edu_high_1946-1955			0.058	0.639
CR intensity * cohort_dummy * edu_low_1946-1955			0.442 **	0.952 ***
CR intensity * cohort_dummy * edu_high_1942-1945			0.012	0.123
CR intensity * cohort_dummy * edu_low_1942-1945			0.386	0.43
CR intensity * cohort_dummy * stable_decrease_mobility dummy 1945-1955				1.118 ***
CR intensity * cohort_dummy * stable_decrease_mobility dummy 1942-1945				0.117
cohort_dummy * rank_change dummies		Yes		Yes
cohort_dummy * edu_dummies	Yes	Yes	Yes	Yes
indi_control	Yes	Yes	Yes	Yes
region fixed	Yes	Yes	Yes	Yes
age fixed	Yes	Yes	Yes	Yes
region_cohort trends	Yes	Yes	Yes	Yes
Observations	7588	7588	7588	7588
Pseudo R2	0.0505	0.0512	0.0509	0.052

- Note[1]: In this table, cohort_dummy * rank_change dummies for the second column include cohort_dummy * stable_decrease_mobility dummy; while for the last column, they include cohort_dummy * no_downward_mobility dummy 1945-1955 and cohort_dummy * no_downward_mobility dummy 1942-1945. Cohort_dummy * edu_dummies for the second column includes cohort_dummy * edu_high and cohort_dummy * edu_low; while for the last column, they include cohort_dummy * edu_high_1946-1955, cohort_dummy * edu_low_1946-1955, cohort_dummy * edu_high_1942-1945, cohort_dummy * edu_low_1946-1955.
- Note[2]: Regressions were estimated using ordered logistic regression (ologit), with standard errors clustered using a two-way cluster on city and age.
- Note[3]: *** p<0.01, ** p<0.05, * p<0.1.
- Note[4]: The dependent variable is based on the survey question: 'People around me have branded goods, so I should have them too.' The response variable is categorical, ranging from 1 to 5, where a score of 1 indicates the least agreement with the statement, and a score of 5 represents the highest level of agreement.

Despite the coefficients for both education groups being positive, only the coefficient for individuals with less than a middle high school education is significant upon comparison. Additionally, the correlation can only be found for the latter age group according to the result in the last two columns. Conversely, for individuals old enough to have completed college education, no significant relationship was identified. Moreover, the coefficients for the education variables become larger when controlling for changes in individuals' social ranks. This indicates that the observed effect on the inclination toward conspicuous consumption is stronger among individuals with less education who have experienced limited social mobility. It is reasonable to suggest that these individuals may suffer more from losses in career and economic opportunities. In the context of equalization movements, their sense of loss may be more pronounced.

However, after running tests on the distribution of the coefficients across all four specifications, no statistically significant difference was found between the coefficients for individuals with higher education and those with lower education. This suggests that differences in educational attainment do not affect the degree to which a person's propensity for conformative consumption is influenced.

It should be noted that while parents' party affiliation and family backgrounds have been shown to have effects on people's belief formation in the context of the Cultural Revolution, this study did not find heterogeneity among these characteristics.

7.6.4 Influence from local characteristics

In this section, I control for two longstanding regional characteristics and two local factors from that time that might influence people's susceptibility to social comparison and potentially have a direct relationship with regional revolutionary intensity. This is crucial for identifying potential bias or confounding effects from these factors in my findings. Firstly, two long-existing regional factors are particularly relevant: Confucian ideology and interpersonal dependence due to agricultural reasons. Secondly, to explore further into the effects of potential confounding factors which are simultaneously related to the regional intensity of the Cultural Revolution as well as people's sense of social well-being, I tested two additional factors from the time of the Cultural Revolution. These factors are local party member density, urbanization rate at the time of the Cultural Revolution.

On one hand, Chinese culture places significant emphasis on interpersonal relationships, as prescribed by Confucian teachings (Tsui and Farh, 1997; Hwang, 2012). These teachings dictate that Chinese people have a greater sense of adhering to social hierarchies and exhibit higher levels of interpersonal interdependence, as it emphasizes social harmony, hierarchical relationships, and filial piety. Thus, despite Confucius ideas often emphasize frugality, it is also associated with the use of positional goods (Zhang and Wang, 2019; Cam Le and Quy, 2020). For this study, regions with a stronger adherence to Confucian principles may exhibit different patterns of social comparison and conspicuous consumption compared to those with weaker adherence. To capture this influence, the regional density of Jinshi (the highest achievement for scholars in the imperial examination in Imperial China during the Ming and Qing dynasties) is utilized to indicate the degree to which a given region is under the influ-

ence of Confucian teachings. This indicator is also frequently used by other studies²⁷. In this study, I expect that a higher concentration of Jinshi in a region suggests a more intensive adherence to Confucian principles.

On the other hand, the rice theory posited by Talhelm (2014, 2022) suggests that the agricultural production method also influences people's interdependence needs. Especially in China, agricultural regions, particularly those cultivating rice, tend to foster greater interdependence among individuals due to the labor-intensive nature of rice farming and the fact that farmers must share irrigation tools and facilities. This interdependence may influence attitudes toward social comparison and material consumption, contrasting with regions where rice isn't the primary staple crop. Thus, I also include the index of regional suitability to grow rice. See Appendix 18 for the resources for these indicators.

By analyzing these two variables, we can assess whether additional effects from regional factors impact the results obtained in the main specification. Specifically, I incorporate their influence by including them as time-varying variables to comprehensively address their effects on each age cohort. However, ordered logit regression does not converge due to the relatively small size of the dataset. Therefore, I include them as cohort-varying variables, with cohorts divided into age groups of 5-year bins. It is reasonable to suggest that although the effects of these two regional characteristics may change over time, within 5-year period of time, the effects should remain relatively stable. Additionally, for the results obtained using year-varying dummies with ordinary least regression (OLS), refer to the Appendix 16 for the results of OLS

²⁷see Chen et al.(2020) and Tang et al.(2022).

estimation.

The next step is the examination on the factors of communist leadership and urbanization rate in each region. Regions with a higher density of party members may have been more influenced by communist ideology, leading individuals to be more inclined to believe in egalitarian goals, which could affect the formation of the idea of generalized material welfare. As noted by Walder (2022), a smaller number of party members or cadres may indicate a weaker capacity of the party to control violence, potentially resulting in a higher death toll. Additionally, the urbanization rate serves as a control for the level of local development, which influences people's living standards. According to Walder (2009), the only characteristic of region that would impact the intensity of the revolution is the urbanization level, as it directly measures non-agricultural development, which was a main source of inequality during the time. These two variables were incorporated as interactions with the dummy variable representing the Cultural Revolution cohort.

The results are presented in Table 7.4. The inclusion of these four additional factors has minor impacts on the magnitude of the coefficient of the key explanatory variable. After including these four factors, the coefficients of the main variable are larger than in the original regression. While local party member density and urbanization rate may have some influence, the direct exposure to Cultural Revolution intensity remains the primary factor associated with the heightened inclination of conformative consumption. Nonetheless, this result indicates that these four factors have a restraining effect on the identified relationship. In other words, they either constrain the local revolution intensity or individuals' propensity for social comparison.

**Table 7.4: Influence from Local Characteristics:
Local Party Member Density, Urbanization Rate, Jinshi Density and Rice Index**

specification	Party density	Urbanization	Confucius	Rice_index	All
	1	2	3	4	5
dep.var	Conformative Conspicuous Consumption				
CR intensity * cohort_dummy	-0.159	-0.119	-0.201	-0.132	-0.174
CR intensity * cohort_dummy * stable_decrease_mobility dummy	0.915 ***	0.912 ***	1.025 ***	0.99 ***	1.072 ***
Party density * cohort_dummy * stable_decrease_mobility dummy	-0.123				-0.189
Urbanization * cohort_dummy * stable_decrease_mobility dummy		0.18			-0.262
year_5*Confucius			YES		YES
year_5*Rice_index				YES	YES
Party density * stable_decrease_mobility dummy	YES				YES
Urbanization * stable_decrease_mobility dummy		YES			YES
cohort_dummy * stable_decrease_mobility dummy	YES	YES	YES	YES	YES
indi_control	YES	YES	YES	YES	YES
region fixed	YES	YES	YES	YES	YES
age fixed	YES	YES	YES	YES	YES
region_cohort trends	YES	YES	YES	YES	YES
Observations	5671	7588	5978	7588	4334
R-squared	0.0591	0.0577	0.063	0.0599	0.0703

- Note[1]: Regressions were estimated using ordered logistic regression (ologit), with standard errors clustered using a two-way cluster on city and age.
- Note[2]: *** p<0.01, ** p<0.05, * p<0.1.
- Note[3]: The dependent variable is based on the survey question: ‘People around me have branded goods, so I should have them too.’ The response variable is categorical, ranging from 1 to 5, where a score of 1 indicates the least agreement with the statement, and a score of 5 represents the highest level of agreement.

7.6.5 Potential mechanisms

Up to this point, I have examined the relationship between individuals' sense of social well-being and the Cultural Revolution, particularly regarding the changes in individual social rank from various aspects. However, it remains unclear how this mindset is associated with or even originated in the formation of other opinions and beliefs. In other words, what are the factors related to the Cultural Revolution that might explain this identified relationship? As discussed in previous chapters, people's need to live up to other people's living standards might reflect their perceptions of sources of social mobility and wealth distribution. While the perceptions and preferences are also under the influence of the Cultural Revolution. From this perspective, further research is needed to explore these connections and provide some understanding of the underlying mechanisms at play.

In this section, I explore reported preferences and beliefs that might have also contributed to the observed correlation by comparing the answers between the two social mobility groups of the revolutionary generation. I utilize questions from the same survey to assess relevant mentalities, focusing on several aspects including concerns for the reasons for social conflicts, the source of success, redistribution, and "face" consciousness. The set of questions were as follows:

Q 2: "In your opinion, how would you characterize the conflict situation between the following groups in our country - the poor and the rich?"

Q 3: "In your opinion, how would you characterize the conflict situation between the following groups in our country - the working class and the middle class?"

Q 4: "In your opinion, how would you characterize the conflict situation between the

following groups in our country - the management and the workers?"

Q 5: "In your opinion, how would you characterize the conflict situation between the following groups in our country - the upper echelons of society and the lower strata?"

Q 6: "Most personal achievements are obtained through hard work and effort."

Q 7: "Most personal achievements are obtained through luck."

Q 8: "Most personal achievements are obtained by seizing opportunities."

Q 9: "The government can reduce the wealth gap through taxation and expenditure."

Q 10: "Poverty alleviation is the responsibility of the poor themselves."

Q 11: "To reduce income inequality, it is often suggested to impose higher taxes on wealthy individuals."

Q 12: "Wearing designer brands can enhance one's 'face'."

Studies have shown that people who had lived under the communist leadership tend to have greater beliefs in redistribution, potentially due to the impact of the egalitarian mindset (Alesina and Fuchs-Schündeln, 2007; Smith, 2018; Friehe and Mechtel, 2014; Yang and Stening, 2012). Similarly, in this study, if this mentality is a direct result reflecting the belief in shared affluence and egalitarian ideology on the sense of social well-being, then it is reasonable to suggest that there is a direct and positive relationship between the Cultural Revolution and preference in redistribution.

Moreover, this mentality might also stem from concerns about corruption. After the Cultural Revolution, corruption spread in Chinese society (Liu, 1983; Chow, 2005). People, on one hand, realized the importance of cultivating good relationships with others, while on the other hand, they were highly cautious of potential threats from others (Gold, 1985). In a society where the institutional system is weak, people

relied more on informal relationships. As discussed in the previous part of the thesis, conspicuous goods are often used as a kind of boost for social capital. Additionally, with the decrease of trust in government, it could be speculated that along with decreased social trust in the society, people tend to engage in more social capital-building activities, especially when they face political uncertainty (Suls et al., 2002). Consequently, this leads people to have a heightened sense of interpersonal reliance, and hence further perpetuate the corruption in society (Gu et al., 2008). Thus, I also assess people's attitudes towards source of success and inequality.

**Table 7.5: Formation of Other Beliefs and Views
Social Conflicts**

dep.var	the poor and the rich	working class and middle class	management and workers	upper echelons of society and lower strata
specification	1	2	3	4
CR intensity * cohort_dummy * decrease_mobility dummy	0.034	0.594	0.485	0.605
CR intensity * cohort_dummy * stable_mobility dummy	-0.107	0.351 *	0.002	0.040
CR intensity * cohort_dummy * increase_mobility dummy	-0.305 *	-0.018	-0.23	-0.092
cohort_dummy * rank_changes_dummies	Yes	Yes	Yes	Yes
indi_control	Yes	Yes	Yes	Yes
region fixed	Yes	Yes	Yes	Yes
age fixed	Yes	Yes	Yes	Yes
region_cohort trends	Yes	Yes	Yes	Yes
Observations	7545	7418	7455	7491
Pseudo R2	0.0435	0.0528	0.0538	0.0434

- Note[1]: Regressions were estimated using ordered logistic regression (ologit), with standard errors clustered using a two-way cluster on city and age.
- Note[2]: *** p<0.01, ** p<0.05, * p<0.1.
- Note[3]: Cohort_dummy * rank_changes_dummies include cohort_dummy * decrease_mobility dummy, cohort_dummy * stable_mobility dummy and cohort_dummy * increase_mobility dummy.
- Note[4]: Section 1.6.5 for the survey questions used as dependent variables.

As shown in Table 7.5, in terms of people's views on social conflicts, the only significant results can be observed between the rich and the poor, as well as between the working class and the middle class. Individuals who experienced upward mobility tend to believe there are no conflicts between the rich and the poor. Conversely, only among those who had seen no change in their social status, the belief in conflicts

between the working class and the middle class is significant. However, despite not reaching significance, it should be noted that interestingly, across all four questions, the views held by individuals with lower social mobility tend to be in the opposite direction compared to those with higher social mobility. Following Veblen's thinking, it is reasonable to suggest that different views and beliefs regarding the existence of social conflicts among people might also contribute to the tendency to resort to goods as a way to ease the feelings of class and social differences.

**Table 7.6: Formation of Other Beliefs and Views
Source of Success, Preference for Redistribution and "Face" Concern**

dep.var	Individual success			Redistribution			"Face"	
	effort	luck	opportunity	redistribution through tax	responsibility of poverty	tax on the rich		
specification	1	2	3	4	5	6	7	
CR intensity * cohort_dummy* decrease_mobility dummy	-0.057	0.726 *	-0.647 *	-0.667 *	0.436	0.817 *	0.502	
CR intensity * cohort_dummy * stable_mobility dummy	-0.327	0.574 **	-0.356	-0.262	-0.132	0.279	0.473 **	
CR intensity * cohort_dummy * increase_mobility dummy	-0.134	0.358 *	-0.152	-0.23	-0.008	0.036	0.186	
cohort_dummy * rank_changes_dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
indi_control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
region fixed	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
age fixed	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
region_cohort trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Observations	7585	7577	7563	7533	7570	7534	7578	
Pseudo R2	0.112	0.0422	0.048	0.0453	0.0559	0.0451	0.0458	

- Note[1]: Regressions were estimated using ordered logistic regression (ologit), with standard errors clustered using a two-way cluster on city and age.
- Note[2]: *** p<0.01, ** p<0.05, * p<0.1.
- Note[3]: Cohort_dummy * rank_changes_dummies include cohort_dummy * decrease_mobility dummy, cohort_dummy * stable_mobility dummy and cohort_dummy * increase_mobility dummy.
- Note[4]: Section 1.6.5 for the survey questions used as dependent variables.

Based on the results from Table 7.6, regarding the source of individual achievements, the cohort that experienced decreased social mobility exhibits a comparatively higher belief in luck and a decreased belief in the role of opportunity, with no significant changes observed in perceptions of effort. These findings might point to the fact that

that such individuals exhibit a heightened degree of pessimism regarding the sources and avenues for their social mobility.

Moreover, as hypothesized, this shift in beliefs may reflect concerns related to corruption. As the widespread prevalence of corruption is often associated with the utilization and exchange of luxury goods, as evidenced in the case of China (Ke et al., 2017) and other cross-country comparisons (Gokcekus and Suzuki, 2014; Tajaddini and Gholipour, 2018). This indicates a reliance on informal interpersonal relationships facilitated by the use of conspicuous luxurious goods, which underscores the complex dynamics at play in the realm of social mobility and corruption. However, it should be noted that based on the results from column 5, there was no difference in their opinions regarding political power as the source of social inequality.

While the findings regarding beliefs in redistribution following the Cultural Revolution are also to a degree mixed. On one hand, individuals express a belief that the wealthy should be taxed in order to help the poor, as seen in the column 6. However, the result also shows they might harbor skepticism toward the government's role in alleviating inequality through tax-based measures, as evidenced by the column 7. People's expectation about their future social mobility influences their attitudes toward distribution (Alesina et al., 2018). While it has also been argued their actual experience of social mobility also affects their preferences for taxation, depending on their evaluation of the need for redistribution (Picketty, 1995; Alesina and Giuliano, 2011). Applying this logic to the current study, it is more plausible to suggest that the decline in social mobility, coupled with the impact of the Cultural Revolution, is linked to people's desire for equality in various aspects of life, particularly in their

social spheres. These results remain significant even after controlling for trust in the central government.

Lastly, as evidenced by the significant positive coefficient within the "face" column, the findings reveal that individuals who experienced either no change or a decline in socioeconomic status demonstrated a heightened inclination towards consumptive tendencies aimed at enhancing their social image and maintaining their social relationships. "Face" is a traditional social construct within Chinese society. "To have face" can refer to the avoidance of morally unfavorable behavior, as represented by the concept of Lian, while it can also refer to the behavior of pursuing social prestige and fulfilling individual ego²⁸. From the language context of the question, it is inclined more toward the second aspect of meaning.

Thus, as highlighted in the introduction, "face" is related to the building of social capital in Chinese society, suggesting that individuals strategically utilize conspicuous goods to bolster their social standing. In this regard, the identified relationship underscores that individuals are more concerned about their social image. Moreover, the discrepancy between individuals' life expectations and their reality may also play a role in this behavior. Psychological studies have shown that individuals who perceive a lack of adequacy regarding certain aspects of their lives are more likely to overcompensate for it through the use of conspicuous goods (Braun and Wicklund, 1989; Mandel, 2017), indicating a potential psychological and emotional effects from this identified relationship. Therefore, this result indicates that conspicuous goods serve not only as a means to enhance social capital but also as a psychological cop-

²⁸see detailed explanations on "face" from Hu (1944) and Ho (1976).

ing mechanism, potentially stemming from experiences of downward mobility, which further intensifies concerns about “face”. As a consequence, individuals tend to place greater emphasis on the use of goods as a social indicator.

Collectively, these results underscore the connections between social upheaval and individuals’ beliefs in terms of their social and political preferences. According to the results of assessing the mechanisms, the observed increase in interest in branded goods might, on one hand, reflect individuals’ despair resulting from the loss of their socioeconomic status and potentially their social mobility. On the other hand, it might also be related to their demand for equalization, including the equalization of individual social standing, as promoted by the Cultural Revolution. Thus, social upheaval can relate to not only people’s preferences and attitudes concerning political life but also other aspects of wellness-related life, including material aspirations and the sense of well-being related to their social life.

7.7 Robustness Checks

I conducted four robustness checks, including two examinations for placebo effects. Specifically, to investigate placebo effects, instead of using the age groups of the Cultural Revolution generation, I examined the relationship within age cohorts of 41 to 54 and 69 to 82, respectively. This is to assume a hypothetical scenario where the revolution occurred ten years earlier or later than the actual time. Additionally, I replace dependent variables by utilizing two additional questions from the same survey. These questions are: "I think things that are beneficial to my family and friends, even if they don’t agree, I will try to persuade them to do" and "How much pressure do you feel medical expenses put on families?" The answers to these questions should

have no correlation with the main independent variable, as views on paternalism and family medical pressure are not immediately affected by the revolutionary experience. The results are presented in Table 7.7.

Furthermore, to deal with the potential influence of extreme observations that could disproportionately impact the overall relationship, I excluded observations from the Guangxi province. This region was infamous for its intense revolutionary activities, with significantly higher death counts compared to other areas. Excluding data from this province helps to ensure that the analysis is not unduly influenced by outliers and provides a more accurate representation of the overall relationship. According to the results in column 1 of Table 7.8, when Guangxi province is excluded, the coefficient becomes larger, indicating a stronger correlation. This might be because the dependent variable is categorical, allowing people to reach their “saturation point” of selecting a 5 (the highest likelihood) with a less intensive Cultural Revolution than that experienced in Guangxi province. This result indicates that the identified relationship was not driven by extreme cases of the revolution.

Finally, to address reporting bias, I narrowed down my sample to regions with more extensive and detailed reporting on Cultural Revolution deaths in local gazetteers. I focused on the results from regions with more than 4000 words (the median of the number of words for all gazetteers) in gazetteers about the Cultural Revolution, as these regions are known to be more capable of providing honest and accurate death counts. Additionally, I compared the results between these regions and regions with fewer than 4000 words of records. The findings are consistent in both cases, suggesting that my results are robust under both underreporting and overreporting, as shown in

Table 7.8. The results remain robust across all tests.

Table 7.7: Results of Placebo Effect Checks

	Age 41_54	Age 69_82	alternative variables	
dep.var	Conformative	Con-	Paternalism	Medical expense
specification	spicuous Consumption			pressure
	1	1	2	3
CR intensity * cohort_dummy	-0.307	-0.42	0.093	0.049
CR intensity * cohort_dummy * stable_decrease_mobility dummy	0.107	0.021	-0.038	-0.088
cohort_dummy * stable_decrease_mobility dummy	Yes	Yes	Yes	Yes
indi_control	Yes	Yes	Yes	Yes
region fixed	Yes	Yes	Yes	Yes
age fixed	Yes	Yes	Yes	Yes
region_cohort trends	Yes	Yes	Yes	Yes
Observations	7588	7588	7582	7528
Pseudo R2	0.057	0.0569	0.0366	0.0684

- Note[1]: Regressions were estimated using ordered logistic regression (ologit), with standard errors clustered using a two-way cluster on city and age.
- Note[2]: *** p<0.01, ** p<0.05, * p<0.1.
- Note[3]: The dependent variable is based on the survey question: ‘People around me have branded goods, so I should have them too.’ The response variable is categorical, ranging from 1 to 5, where a score of 1 indicates the least agreement with the statement, and a score of 5 represents the highest level of agreement.

7.8 Conclusion

The Chinese Cultural Revolution was a radical movement aimed at achieving equality by exploiting perceived conflicts of interest among various social and political factions. It sought to equalize society through extreme measures guided by communist ideology, but ultimately fell short of its political and social objectives. Instead, it resulted in widespread terror and devastation, leaving an enduring impact on Chinese society. This chapter explores how individuals who lived through the Cultural Revolution, particularly those with stagnant or declining socioeconomic status, develop a propensity for conformative consumption, which is often linked to their sense of well-being. As people often utilize such goods to pursue social respect and acceptance. I found that among individuals with decreased social mobility, there is

Table 7.8: Results of Robustness Checks

	excluding Guangxi	less detailed reporting	detailed reporting
dep.var	Conformative Conspicuous Consumption		
specification	1	2	3
CR intensity * cohort_dummy	-0.122	-0.279	0.0548
CR intensity * cohort_dummy * stable_decrease_mobility dummy	1.178	** 0.966	*** 0.92
cohort_dummy * stable_decrease_mobility dummy	Yes	Yes	Yes
indi_control	Yes	Yes	Yes
region fixed	Yes	Yes	Yes
age fixed	Yes	Yes	Yes
region_cohort trends	Yes	Yes	Yes
Observations	7408	4933	4035
Pseudo R2	0.056	0.0661	0.0566

- Note[1]: Regressions were estimated using ordered logistic regression (ologit), with standard errors clustered using a two-way cluster on city and age.
- Note[2]: *** p<0.01, ** p<0.05, * p<0.1.
- Note[3]: The dependent variable is based on the survey question: ‘People around me have branded goods, so I should have them too.’ The response variable is categorical, ranging from 1 to 5, where a score of 1 indicates the least agreement with the statement, and a score of 5 represents the highest level of agreement.

a significant tendency toward conspicuous consumption compared to those with no changes in social mobility. While no such relationship was identified for individuals with increased social mobility. Additionally, I present possible explanations that may lie in people’s views associated with the revolution regarding redistribution, sources of success, the existence of social conflicts, and the importance of maintaining “face.” This result potentially suggests that the experience of downward mobility against the background of the Cultural Revolution may heighten the desire for socially recognized goods as a means of validating one’s social standing. It underscores the importance of thoroughly assessing the reasons behind individuals’ socioeconomic behaviors and choices, particularly in societies where inequality is a significant concern.

It should be noted that one limitation of this study lies with the identification and model specifications. The R-squares across all specifications are generally less than 0.1. After all, individuals’ preferences and views are shaped by various influences, making it challenging to develop a model that fully explains how people’s ideas are

formed, especially regarding preferences related to their social aspects of life. Additionally, compared to political beliefs and views, preferences may be more volatile as they are more subject to one's social environment and life experiences. However, despite the low R-squared values, it is worth noting that the relationship of interest remains robust across all specifications. Moreover, while the R-squared values are generally below 0.1, they are comparable to those found in other studies on the formation of trust and preference distribution ²⁹. Therefore, despite the limitations of the model, the findings from this identification strategy are likely to be valid.

Communist ideology espouses equal opportunities and widespread material welfare for all. However, during the Cultural Revolution, this noble vision devolved into a period of social upheaval, where individuals sought to engage in political movements and demonstrate allegiance only to maximize personal gains. Moreover, the consequence had a profound impact on people's mentality and beliefs. In this case, conspicuous consumption potentially served as a means to preserve their sense of social well-being, potentially by strengthening social connections and upholding their social standing. These outcomes stand in stark contrast to communist ideals. This potentially reveals the pursuit of material and social well-being, is inherent and likely precedes the aspiration to achieve the pinnacle of communist ideals.

²⁹see, for example, Bai and Wu (2020) and Giuliano and Spilimbergo (2009).

Chapter 8

Conclusion

Conspicuous consumption is a phenomenon that attracts attention from various disciplines including sociology, economics, and anthropology, owing to its partly socially motivated nature and its strong foundation in human behavior. However, there are still research gaps that need to be addressed. On one hand, research has only paid limited attention to its role in terms of being a crucial economic choice, which in turn affects individuals' social and economic aspects of life. On the other hand, ongoing efforts should be made to gain a deeper understanding of its societal origins. Additionally, in the study of culture and economy, as discussed in Chapter Three, there is a lack of systematic evaluation of the relationships and mechanisms. This thesis attempts to further understanding regarding these knowledge gaps by conducting three quantitative studies, using various sources of data, including a specially tailored dataset for cultural capital.

Specifically, this thesis utilizes the CBD analytical framework to examine the roles of conspicuous consumption primarily in the context of interregional migration and regional innovation in China and addresses how the changing cultural and social landscape shapes individuals' inclination towards conspicuous consumption. As a pilot study of the use of CBD for the context of China, this thesis also devotes one study to the analysis of regional cultural capital and entrepreneurship. The results reveal the positive influence of living culture and the negative impact of cultural heritage on regional entrepreneurship, which aligns with previous findings in Central

Business Districts (CBDs), further affirming the applicability of CBD analysis in the context of China, particularly regarding business activities.

In the context of migration and innovation in contemporary China, conspicuous consumption acts as a method for accruing social capital. Through this lens, in the first study, migrating workers evaluate their benefits from migrating along with the potential for integration into the local society. While for the second study, innovators use this social capital “booster” to better promote their innovative ideas. Based on these two studies, it becomes clear that regional inequality in cultural capital fosters the need of conspicuous consumption. In addition, conspicuous consumption as a phenomenon deeply is related to social, cultural, economic, and political forces. Particularly within the context of China, it is intertwined with shifts in the sociopolitical landscape. Thus, the three questions addressed here are: (1) how regional culture affects the human capital accumulation; (2) how regional culture dynamics affect the staying human capital; (3) how changing cultural milieu affect the people’s behaviors and sense of well-being.

In the initial study, we delve into the dynamic relationship between conspicuous consumption and local cultural capital. Our findings highlight a positive correlation between the prominence of conspicuous consumption and the vibrancy of local culture, aligning with previous research. Furthermore, our analysis identifies a saturation threshold: as regional income levels reach a certain point, the appeal of conspicuous goods typically diminishes. This suggests that when regional inequality reaches significant levels, individuals may be deterred, indicating a decline in human capital due to excessive regional inequality.

The subsequent study delves deeper into the intricate relationship between conspicuous consumption, cultural dynamics, and their subsequent influence on regional innovation capacity. Specifically, regions characterized by a more "balanced" cultural environment tend to exhibit increased levels of conspicuous consumption, which, when modeled directly, negatively impacts innovation. This finding contrasts with prior CBD research focused on European contexts, where cultural entropy was positively correlated with innovation capability. Consequently, within the Chinese context, the influence of cultural complexity on innovation capacity is nuanced, influenced significantly by the presence of social capital. Regarding previous research on the path-dependency of innovation in China (see Fu, 2015; Lim 2017), this finding emphasizes that innovation is not solely determined by historical trajectories of regional innovability. While historical innovation capabilities and local formal institutions can indeed furnish resources for present-day innovation, it's equally crucial to scrutinize the mechanisms through which the "new" culture interacts with the local culture. This interaction gives rise to a "cultural milieu," which subsequently influences innovation outcomes. Furthermore, the discerned differences between Europe and China may be explained by the historical and structural distinctions in their perspectives on innovation. Nevertheless, one thing remains evident: regional cultural dynamics, as evidenced by cultural entropy, directly correlate with innovation outcomes.

In summary, these findings furthered the understanding that that individuals' propensity to employ conspicuous goods either as a means of boosting their social capital or as a psychological remedy due to perceived inferiority is intricately connected to local cultural inequality. This, in turn, influences economic development by shaping the allocation and utilization of regional human capital. Such insights resonate well

with prior empirical evidence of CBD.

From the third study, the results highlight significant differences in the propensity to consume conspicuous goods among individuals from the Cultural Revolution cohort, particularly those who experienced varying degrees of social mobility. This might reflect the fact that individuals from the Cultural Revolution cohort exhibit more radical and progressive views, potentially regarding social identity and their perception of equality. This result is also in align with previous findings on the effects of cultural revolution on people's views of equality and wealth (see Ou and Xiong (2021)).

Altoghter, utilizing the CBD framework, this thesis contributed to the knowledge by illustrating the role of culture in the function of economy while at the same time bettering the understanding of the interplay of inequality, individual choices and economic development.

Conspicuous consumption, serving as an indicator of material affluence, is as innate as what is often observed in the animal kingdom, where displaying feathers to indicate health and fitness is common. While one might assume that increased material well-being would universally result in satisfaction, the Easterlin hypothesis noted otherwise. Over the long term, the satisfaction from material comfort isn't guaranteed. In the context of China, insights from these three studies shed light on the profound cultural, social and political forces at play. Persistent regional and interpersonal inequalities exert considerable pressures on individuals. These pressures can potentially skew perceptions related to opportunities and social well-being, thereby contributing to the phenomenon where conspicuous consumption is utilized as a means of address-

ing or navigating these complexities.

China's trajectory was distinctive in its deviation during the transition from capitalism to socialism. While capitalism was acknowledged as a crucial phase for societal evolution, particularly for enhancing productivity, China embarked on this journey with its unique approach. As a result, the Chinese populace navigated significant ideological transformations throughout this transitional period, shaping the country's socio-economic landscape in distinctive ways. While individuals may have been liberated from the imminent threat of starvation, they remain subject to the pervasive pressures exerted by societal expectations and the inequalities resulting from the central economic plan.

Based on the findings above, there are **remaining questions** left to be discussed in the future. On the one hand, the prevalence of conspicuous consumption might signify a more "equal" and "classless" society in terms of people's social and economic positions. This contrasts with a society where the right to use goods is based on one's social status which was assigned and fixed. Galbraith (2001) pointed out that during Veblen's era, showcasing wealth was also critiqued due to the perceived lack of "merit," as some individuals' wealth was not always based on intellectual or moral merit. Nonetheless, it was generally viewed positively. This might be rooted in the high levels of upward social mobility evident during Veblen's time, as corroborated by studies on American social mobility (see Olivetti and Paserman, 2013). Industrialization facilitated significant upward social mobility, enabling individuals to use conspicuous goods to demonstrate their individual capability as well as to integrate into the "upper-class" societal stratum. Thus, from this perspective, the universaliza-

tion of conspicuous consumption might be seen as an indication of social progress in terms of people's social roles.

On the other hand, the regional inequality and interpersonal inequality stemming from China's development policies has been a significant driver of economic disparities in contemporary China as indicated by the two studies in this thesis. Workers are compelled to migrate to secure employment and sustain their livelihoods, yet they concurrently grapple with social exclusion and inequality. Despite the purported absence of political and social class distinctions under communism, economic class discrepancies emerged and persist in contemporary China. This scenario potentially indicates constrained avenues for upward social mobility in China. As observed in the context of other developing countries such as South African, the prominence of conspicuous consumption signifies the precarious situation faced by individuals lacking opportunities for upward mobility (Dawson, 2022). Similarly, such dynamics may also resonate within the context of China.

Thus, it is reasonable to suggest that as a product of both innate human nature and social forces, conspicuous goods do not inherently entail utility. In another word, the display of individual talent and ability does not have to rely on luxury goods which entice jealousy. Several evidences suggest that conspicuous consumption is not always perceived as a positive feature. In societies with a more advanced social economic background, the ostentatious display of wealth and a frivolous lifestyle might be perceived as decadent and wasteful (Bellezza et al., 2016). Research also indicates that the societal significance attributed to conspicuous consumption is malleable (Goenka and Thomas, 2020). This point could be seen from the prevailing trend among the

affluent in China to opt for inconspicuous luxury goods (Wu et al., 2017). In essence, the multifaceted relationship between conspicuous consumption and culture, social, economic backgrounds underscore the need for a nuanced understanding of the significance of conspicuous consumption.

Additionally, It's essential to address the **limitations** of this thesis, particularly concerning the notions of conspicuous goods. Based on the results of chapter five, it becomes evident that certain items, which were not traditionally classified as conspicuous or luxurious goods, also serve this role. For instance, "Shouban" and "e-cigarettes" are notable examples. "Shouban" is often collected and displayed by enthusiasts, featuring characters from popular culture such as anime, manga, video games, or movies. Similarly, despite electronic cigarettes often being used as a substitute for real cigarettes to reduce smoking (Malas, 2016), they also serve social functions (Xiao et al., 2018; Amin, 2020) and can be seen as gifts as well (Lyu et al., 2022). Likewise, they are often associated with use by young smokers as a way of expressing their social "identity" of being unique and attractive (Pokhrel et al., 2015). Although these items may not adhere to the traditional definition of luxury goods, they can still command high prices and serve as a means of conspicuously displaying one's lifestyle and spending habits. According to the findings of this thesis, in terms of their function in building one's social capital, they serve similar purposes to traditional conspicuous goods such as expensive jewelry and branded fashion clothes.

However, the findings from chapter five do not allow me to conclusively demonstrate whether the effect is primarily driven by the traditional Veblen effect of consuming conspicuous goods to build social capital or by other channels, such as simply goods

demonstrating novelty and attracting new workers to the region. From this perspective, it appears to be more a reflection of the openness of a region, which is also a significant factor in accumulating human capital (Florida, 2003). Further research is needed for a thorough investigation.

Similarly, the second limitation concerns the data used in this thesis. Due to practical reasons regarding the constraints in obtaining representative-level data on conspicuous consumption, internet search indices were employed to measure interest in conspicuous goods. While such indices have been widely used in previous research and offer some flexibility in quantifying the inclination to consume conspicuous goods, obtaining survey data or sales data of conspicuous goods at the individual level would have been preferable. This would have provided more detailed information for studying peer effects and examining the aggregation issue when measuring regional interest in conspicuous goods.

Nonetheless, as discussed in the corresponding chapter, utilizing internet search indices has its advantages. They offer the overall benefit of measuring regional "interests" or "awareness" of such goods. This approach aligns with the adoption of using aggregate-level data in CBD literature. Additionally, using the composite index helps to circumvent issues such as the use of counterfeits or the failure to take into account the differences in considering brands as luxury brands between regions and individuals.

Altogether, Individuals' choices regarding conspicuous consumption, and more broadly, their economic choices and strategies to maximize utility and achieve well-being, are profoundly influenced by factors such as culture, ideologies, and social conditions.

Forces from these factors and beyond are simultaneously shaping economic well-being and development through various mechanisms, as identified in different lineages of research, including cultural economics studies, the impact of socio-political events, institutional economics, and happiness economics. After all, how people make decisions and choices is generally a process where individuals strive to formulate strategies to achieve their aims, including satisfying various aspects of their wants and needs. In this sense, needs are partly innate to humans while also being generated as an endogenous factor within society. This presents itself as an economic problem as, on one hand, it has a direct impact on both individuals' and regional economic development, as identified in the two Chinese regional economic development studies; on the other hand, it might reflect people's sense of social well-being, as identified with the last study. As a result, this also highlights the need for economists to consider how to account for the well-being of people from a more comprehensive perspective.

Appendix

**Appendix 1: Chapter 4 - Alternative Specifications:
The Effect of Foreign Tourists and Public Facilities**

specification	1		2		3		4		5	
dep.var	number of private enterprises in each province									
K	18.9	***	19.56	***	12.92	***	13.05	***	12.92	***
L	1.56E+06	***	1.08E+06	**	-323,041		-264,696		-443,015	
HC	-58,760		316,101		993,969	***	1.08E+06	***	1.18E+06	***
Public Facility	12.83	***	10.12	**	-7.395	*	-7.48	*	-6.699	
Foreign Tourist	30,442	***	22,274	**	-9,315		-8,078		-9,227	
IH_CC			1,626	***	811.1	***	740.3	**	554.1	*
MH_CC			-606.2	***	-336.2	***	-332.5	***	-281.1	**
ML_CC					114.2	***	115.4	***	115.2	***
IL_CC					4,388	***	4,429	**	3,948	**
Urb_Level							-94,405		-127,918	
middle									-40,189	*
west									-22,996	
northeast									-59,188	*
Constant	-323,926	***	-344,403	***	-160,209	***	-125,186	**	-57,772	
Observations	310		310		309		309		309	
R-squared	0.706		0.727		0.858		0.858		0.86	

Note[1]: *** p<0.01, ** p<0.05, * p<0.1.

Note[2]: Regressions were estimated using ordinary least squares (OLS).

Appendix 2: List of search words used to generate Veblenian consumption indicators from Baidu search interests

Names of brands or associated search terms (in Chinese)			
Toy (Shouban)	E-cig	Fashion	Jewellery
田宫模型	feelm	berluti	梵克雅宝
Good smile	iqos	爱马仕	卡地亚
万代玩具	蒸汽巴士	香奈儿	古驰
BANPRESTO	jve非我	LV	宝格丽
泡泡玛特	柚子电子烟	迪奥	蒂芙尼
actoy	电子烟品牌	菲拉格慕	宝诗龙
孩之宝	电子烟	范思哲	forevermark
海洋堂	悦刻	prada	海瑞温斯顿
HOT TOYS	电子烟	fendi	qeelin
NECA		armani	mikimoto
volks		burberry	tasaki
盲盒		纪梵希	chaumet
手办		华伦天奴	周大福
		Kenzo	周生生
		杰尼亚	施华洛世奇
		SANDRO	戴比尔斯
		圣罗兰	
		LOEWE	
		亚历山大·麦昆	
		BOTTEGA VENETA	
		balmain	
		巴黎世家	
		蔻驰	
		furla	
		bally	
		kate spade	
		michael kors	
		登喜路	
		Lancel	
		moncler	

Appendix 3: Chapter 5 - Robustness Check 1 - CBD Veblenian Signalling Model
– for Labour & Alternative Quantifications of Cultural Capital

specification	1		2		3		4		5	
dep. var. 1	Income									
CH	-103.799									
LC	4723.74	***								
CH2			180.326							
LC2			4725.34	***						
CH3					655.249					
LC3					4552.24	***				
CH_factor1							1698.02	**	2640.88	***
CH_factor2							421.288			
LC_factor1							4088.9	***	3618.41	***
LC_factor2							3892.86	***		
K	0.242	**	0.24	**	0.222	**	0.117		0.157	*
Road	-1262.09	***	-1273.37	***	-1225.4	***	-1065.47	***	-1106.1	***
Constant1	41939.95	***	42192	***	41799.59	***	39453.4	***	40547.98	***
dep. var. 2	E-Cigarettes									
Income	10.155	***	9.606	***	9.578	***	9.285	***	9.826	***
Income square	-0.001	***	-0.001	***	-0.001	***	-0.001	***	-0.001	***
Urban	-3267.19	***	-3081.82	***	-3071.6	***	-2946.29	***	-3173.56	***
Constant2	30418.31	**	30154.69	**	30238.62	**	28485.05	**	32464.9	**
dep. var. 3	Labour_01									
Avg house price_01	-0.252	***	-0.256	***	-0.256	***	-0.257	***	-0.256	***
E-Cigarettes	0.105	***	0.112	***	0.11	***	0.11	***	0.108	***
Constant3	4002.86	***	3992.04	***	3996.51	***	4117.69	***	4074.82	***
FE_Year	YES		YES		YES		YES		YES	
FE_Region	YES		YES		YES		YES		YES	
Observations	102		102		102		102		102	
R-squared1	0.597		0.592		0.579		0.704		0.563	
R-squared2	0.498		0.508		0.508		0.513		0.498	
R-squared3	0.638		0.61		0.616		0.615		0.623	

Note[1]: *** p<0.01, ** p<0.05, * p<0.1.

Note[2]: Regressions are estimated using three-stage least squares (3SLS).

Appendix 4: Chapter 5 - Robustness Check 2 – CBD Veblenian Signalling Model – Theil Index

specification	1		2		3		4	
dep.var.1	Theil index							
CH	-0.002		-0.003		-0.001		-0.001	
LC	-0.011	***	-0.008	**	-0.007	**	-0.007	**
K	-0.0001	***	-0.0001	***	-0.0001	***	-0.0001	***
Road	0.003	***	0.003	***	0.003	***	0.003	***
Constant1	0.064	***	0.065	***	0.066	***	0.066	***
dep.var.2	E-Cigarettes		Jewellery		Fashion		Toy	
Theil index	1858335.162	***	6882114.201	***	13024972.46	***	911,520.89	***
Theil index square	-7973381.73	***	-2.91E+07	***	-5.57E+07	***	-3849962.8	***
Urban	2,288.54	***	11,807.90	***	22,958.81	***	2,041.56	***
Constant2	-192,209.08	**	-839,988.31	***	-1549172.4	***	-128,173.13	***
dep.var.3	Labour_01							
E-Cigarettes	0.103	***						
Jewellery			0.015	***				
Fashion					0.008	***		
Toy							0.082	***
Avg house price_01	-0.242	***	-0.256	***	-0.258	***	-0.266	***
Constant3	3,897.79	***	3,281.40	***	2,915.99	***	2,535.94	***
FE Year	YES		YES		YES		YES	
FE Region	YES		YES		YES		YES	
Observations	102		102		102		102	
R-squared1	0.377		0.384		0.387		0.387	
R-squared2	0.202		0.537		0.563		0.705	
R-squared3	0.64		0.695		0.722		0.737	

Note[1]: *** p<0.01, ** p<0.05, * p<0.1.

Note[2]: Regressions are estimated using three-stage least squares (3SLS).

Appendix 5: Chapter 5 - Robustness Check 3 – CBD Veblenian Signalling Model – Province Fixed effects

specification	1	2	3	4	5	6	7
dep.var.1	Income						
CH	-1,075.86	-1,092.44	-971.954	-1,006.08	-1,087.18	-1,555.08 *	-1,573.30 *
LC	4,071.88 ***	4,054.33 ***	3,292.01	3,505.65 ***	3,567.17 ***	3,658.06 ***	3,629.18 ***
K	0.309 ***	0.311 ***	0.308	0.31 ***	0.308 ***	0.279 ***	0.282 ***
Road	-1,286.84 ***	-1,289.24 ***	-1,344.05	-1,325.00 ***	-1,322.99 ***	-1,437.90 ***	-1,440.80 ***
Constant	40,642.67 ***	40,614.88 ***	41,559.33	41,190.03 ***	41,213.03 ***	43,949.58 ***	43,924.31 ***
dep.var.2	E-Cigarettes	E-Cigarettes	Fashion	Jewellery	Toy	E-Cigarettes	E-Cigarettes
Income	7.492 ***	7.476 ***	46.053	24.63 ***	2.156 ***	7.457 ***	7.435 ***
Income square	-0.0001 ***	-0.0001 ***	-0.0001	-0.0001 ***	-0.0001 ***	-0.0001 ***	-0.0001 ***
Urban	-2,445.69 ***	-2,453.32 ***	-3,945.20	-2,948.85 *	562.588	-2,425.75 ***	-2,427.65 ***
Constant	29,352.73 **	29,932.96 **	-178,893.58 *	-92,769.49 *	-35,027.98	28,895.30 **	29,299.37 **
dep.var.3	-	-	-	-	-	SC	SC_socialorg
E-Cigarettes	-	-	-	-	-	0.0001 **	0.0001 **
Urban	-	-	-	-	-	-0.065 ***	-0.065 ***
Constant	-	-	-	-	-	3.59 ***	3.591 ***
dep.var.4	Labour_01	Migrant Percentage_01	Labour_01	Labour_01	Labour_01	Labour_01	Labour_01
E-Cigarettes	0.003 **	0.0001					
Fashion			0.001				
Jewellery				0.001 **			
Toy					0.015 ***		
SC						-347.393	
SC_socialorg							141.011 ***
Avg house price_01	-0.001	0.0001 ***	-0.001	0.0001	-0.004	0.012 *	0.007
Constant	4,810.08 ***	0.195 ***	4,692.51 ***	4,679.92 ***	4,412.67 ***	5,682.57 ***	4,897.35 ***
FE Year	YES	YES	YES	YES	YES	YES	YES
FE Region	YES	YES	YES	YES	YES	YES	YES
FE Province	YES	YES	YES	YES	YES	YES	YES
Observations	102	102	102	102	102	102	102
R-squared1	0.604	0.604	0.599	0.601	0.602	0.585	0.581
R-squared2	0.53	0.531	0.692	0.701	0.744	0.531	0.529
R-squared3	0.997	0.983	0.997	0.997	0.997	0.388	0.47
R-squared4	-	-	-	-	-	0.996	0.998

Note[1]: *** p<0.01, ** p<0.05, * p<0.1.

Note[2]: Regressions are estimated using three-stage least squares (3SLS).

Appendix 6: Chapter 5 - Robustness Check 4 – CBD Growth Model

specification	1	2	3	4	5	6
dep.var	GDP					
CH		2,314.65 **				
LC		8,894.00 ***				
CH2			1,451.63			
LC2			6,724.76 ***			
CH3				1,517.87		
LC3				6,697.19 ***		
CH_factor1					2,651.05 **	2,890.13 **
CH_factor2					1,801.80	
LC_factor1					4,255.84 ***	4,106.52 ***
LC_factor2					3,423.65 ***	
L	6.91 ***	2.612 **	3.983 ***	4.029 ***	5.989 ***	5.258 ***
K	0.633 ***	0.685 ***	0.68 ***	0.681 ***	0.416 **	0.554 ***
Road	-542.669 ***	-235.438	-427.238 *	-387.048	-478.383 **	-365.763
Constant	-1,591.12	10,329.72 ***	7,488.16 *	6,730.38	3,769.35	1,475.78
FE Year	YES	YES	YES	YES	YES	YES
FE Region	YES	YES	YES	YES	YES	YES
Observations	217	119	119	119	119	119
R-squared	0.847	0.879	0.849	0.85	0.869	0.84

Note[1]: *** p<0.01, ** p<0.05, * p<0.1.

Note[2]: Regressions were estimated using ordinary least squares (OLS).

**Appendix 7: Chapter 5 - Robustness Check 5 - CBD Veblenian Signalling Model
– Heckman Selection Model**

dep. var. 1		Income								
CH	-103.799									
LC	4723.74	***								
CH2			180.326							
LC2			4725.34	***						
CH3					655.249					
LC3					4552.24	***				
CH_factor1							1698.02	**	2640.88	***
CH_factor2							421.288			
LC_factor1							4088.9	***	3618.41	***
LC_factor2							3892.86	***		
K	0.242	**	0.24	**	0.222	**	0.117		0.157	*
Road	-1262.09	***	-1273.37	***	-1225.4	***	-1065.47	***	-1106.1	***
Constant1	41939.95	***	42192	***	41799.59	***	39453.4	***	40547.98	***
dep. var. 2		E-Cigarettes								
Income	10.155	***	9.606	***	9.578	***	9.285	***	9.826	***
Income square	-0.001	***	-0.001	***	-0.001	***	-0.001	***	-0.001	***
Urban	-3267.19	***	-3081.82	***	-3071.6	***	-2946.29	***	-3173.56	***
Constant2	30418.31	**	30154.69	**	30238.62	**	28485.05	**	32464.9	**
dep. var. 3		Labour_01								
Avg house price_01	-0.252	***	-0.256	***	-0.256	***	-0.257	***	-0.256	***
E-Cigarettes	0.105	***	0.112	***	0.11	***	0.11	***	0.108	***
Constant3	4002.86	***	3992.04	***	3996.51	***	4117.69	***	4074.82	***
FE_Year	YES		YES		YES		YES		YES	
FE_Region	YES		YES		YES		YES		YES	
Observations	102		102		102		102		102	
R-squared1	0.597		0.592		0.579		0.704		0.563	
R-squared2	0.498		0.508		0.508		0.513		0.498	
R-squared3	0.638		0.61		0.616		0.615		0.623	

Note[1]: *** p<0.01, ** p<0.05, * p<0.1.

Note[2]: Regressions are estimated using three-stage least squares (3SLS).

Appendix 8: Descriptive Statistics 1 – Cultural Capital Factors – CBD Quantification Approach

Variable	Factor1	Factor2	Factor3	Variable	Factor1	Factor2	Factor3
Intangible cult. Heritage	0.5	0.43	0.36	Book borrowing	0.62	0.54	0.08
Historic site	0.3	-0.11	0.63	Books & periodicals lent	0.41	0.66	-0.19
Historic town	0.67	0.16	0.35	Lecture at library	0.05	0.89	0.25
Historic countryside	0.38	0.21	-0.01	Lecture at library - audience	-0.03	0.74	0.14
Opera	0.1	-0.14	0.52	Training at library	0.2	0.9	0.04
Opera celebrities	0.63	-0.05	-0.36	Training at library - audience	0.14	0.66	0.06
Quyi	0.68	0.08	-0.06	Exhibitions at library	0.24	0.83	0.17
Quyi celebrities	0.75	-0.15	0.07	Exhibitions at library - audience	0.07	0.94	0.06
Litterateur	0.96	0.15	-0.05	Museum	0.27	0.26	0.34
Litterateur- Qing period	0.94	0.19	-0.05	Museum employees	0.16	0.08	0.37
Litterateur - Ming period	0.96	0.1	-0.04	Museum collections	-0.07	0.07	0.21
Litterateur - Yuan period	0.81	0.14	-0.05	Museum exhibitions	0.32	0.56	0.13
Ancient academy	0.31	0.25	0.49	Museum visitors	0.42	0.44	0.49
Story	-0.25	0.27	0.35	Jinshi exams	0.8	0.12	0.16
Folktale	0.1	0.48	-0.13	Karaoke	0.56	0.34	0.4
Books	0.34	0.13	-0.16	Internet cafes	0.24	0.24	0.75
New books	0.34	0.05	-0.18	Animation enterprises	0.35	0.36	-0.25
Book printing	0.38	0.31	0.21	Employees at animation enterprises	-0.06	0.62	-0.09
Journals	0.03	0.17	-0.07	Cultural community institutions	-0.09	-0.04	0.94
Journal printing	-0.01	0.08	0.05	Cultural community venues	-0.09	0.03	0.9
Art groups	0.12	0.14	0.19	Cultural community stations	-0.08	-0.05	0.94
Performance of art groups	0.13	0.07	0.18	Cultural community activities	0.22	0.55	0.23
Audience of art performances	0.23	0.07	0.12	Autonomy groups	-0.08	0.05	0.76
Art Venues	0.64	0.33	0.18	Divorce	0.1	0.24	0.79
Non-art performances by art venues	0.75	0.05	-0.06	Social organizations	0.53	0.57	0.35
Art performance by art venues	0.61	0.3	-0.1	Social groups	0.54	0.5	0.34
Audience at non-art events at art venues	0.65	0.41	-0.11	Volunteers	-0.04	-0.02	-0.27
Audience of art events at art venues	0.36	0.55	-0.17	Time volunteering	-0.05	-0.02	-0.24
Library	-0.05	0.08	0.92	Junior social workers	0	0.82	0.01
Books in library	0.37	0.7	-0.11	Social workers	0.03	0.87	-0.06
Library cards	0.7	0.56	-0.01	Marrow_donation	0.16	0.15	0.23
Book circulation	0.47	0.81	-0.02				

Appendix 9: Descriptive Statistics 2 for Chapter Five - Panel Data

Variable		Mean	Std. Dev.	Min	Max	Observations
Labour_01	overall	2679.04	1831.55	213.68	7150.25	186
	between		1854.89	247.23	6864.09	n 31
	within		83.31	2230.64	2965.19	T 6
Migrant Percentage_01	overall	0.21	0.12	0.01	0.62	186
	between		0.12	0.07	0.55	n 31
	within		0.03	0.13	0.29	T 6
CH	overall	1.46E-09	1	-1.35	2.93	119
	between		1.02	-0.83	2.72	n 17
	within		0.12	-0.52	0.31	T 7
LC	overall	1.36E-09	1	-0.81	5.15	119
	between		0.85	-0.67	2.84	n 17
	within		0.56	-2.11	2.31	T 7
SC	overall	1.09E-09	1	-2.07	2.59	119
	between		1.02	-1.88	2.47	n 17
	within		0.11	-0.28	0.53	T 7
Road	overall	15.08	7.97	1.26	33.71	217
	between		8.03	1.31	32.14	n 31
	within		0.9	11.91	19.43	T 7
E-Cigarettes	overall	27795.24	22199.16	316	129263	217
	between		15441.55	3903.14	77831	n 31
	within		16155.02	-30339.76	80237.24	T 7
Jewellery	overall	152308.2	105982	7867	524401	217
	between		97316.14	19886.29	415478.4	n 31
	within		44998.08	-55685.22	261230.8	T 7
Fashion	overall	343052.5	216465.2	17667	1040834	217
	between		203025.1	44944.14	854858	n 31
	within		82358.71	-66582.5	529028.5	T 7
Toy	overall	30381.69	22526.26	534	126511	217
	between		20822.72	1187.43	80803.43	n 31
	within		9267.71	2787.26	76089.26	T 7
Avg urban wage	overall	57215.64	14570.62	36356	129308	210
	between		11319.25	46863.11	98952.69	n 30
	within		9373.14	36697.86	87570.96	T 7
Income	overall	24116.92	10681.68	9740	69442	217
	between		9871.56	14086.71	54989.29	31
	within		4399.71	11301.63	38569.63	7
Urban	overall	57.76	12.63	23.71	89.6	217
	between		12.58	28.62	88.4	n 31
	within		2.41	51.8	62.99	T 7
Avg house price_01	overall	8091.57	6041.51	3605	38433	186
	between		5752.52	4300.2	29876.37	n 31
	within		2074.31	-3285.79	16648.21	T 6

Appendix 10: Descriptive Statistics 3 - Full Dataset – Definitions of Variables

Part of the CBD Model	Variable	Definition	Source	Obs.	Mean	Std. Dev.	Min	Max
Cultural Heritage	Intangible cult. Heritage	Intangible culture heritage (item)	Intangible Culture Heritage, http://www.ihchina.cn/	217	99	49	18	233
	Historic site	Major historical and cultural sites protected at the national level (unit)	National Cultural Heritage Administration, http://www.ncha.gov.cn/	217	172	117	34	538
	Historic town	Historical and cultural town protected at the national level (unit)	National Cultural Heritage Administration, http://www.ncha.gov.cn/	217	10	8	0	31
	Historic countryside	Major historical and cultural countryside protected at the national level (unit)	National Cultural Heritage Administration, http://www.ncha.gov.cn/	217	16	21	0	96
	Opera	Count of local variety of kinds of opera	Chinese Opera Gazette/ Zhong Guo Xi Qu Zhi	217	17	11	2	41
	Opera celebrities	Local notable opera stars and contributors to opera art	Chinese Opera Gazette/ Zhong Guo Xi Qu Zhi	217	129	95	9	399
	Quyi	Count of local variety of kinds of the Quyi art form	Chinese Quyi Gazette/ Zhong Guo Xi Qu Zhi	203	31	16	8	80
	Quyi celebrities	Local notablestars and contributors to the Quyi art form	Chinese Quyi Gazette/ Zhong Guo Xi Qu Zhi	203	83	56	7	265
	Litterateur	China ancient litterateurs (number of all persons)	Atlas of Chinese Ancient Literature /Zhong guo Li Dai Wen Xue Jia Zhi Di Li Fen BU	217	121	228	0	970
	Litterateur- Qing period	China ancient litterateurs recorded in Qing dynasty (number of persons)	Atlas of Chinese Ancient Literature /Zhong guo Li Dai Wen Xue Jia Zhi Di Li Fen BU	161	76	120	1	484
	Litterateur - Ming period	China ancient litterateurs recorded in Ming dynasty (person)	Atlas of Chinese Ancient Literature /Zhong guo Li Dai Wen Xue Jia Zhi Di Li Fen BU	140	75	110	2	429
	Litterateur - Yuan period	China ancient litterateurs recorded in Yuan dynasty (person)	Atlas of Chinese Ancient Literature /Zhong guo Li Dai Wen Xue Jia Zhi Di Li Fen BU	154	23	33	1	149
	Ancient academy	Ancient academies in China (count)	Chinese Dictionary of Ancient Academies / Zhong guo Shu Yuan Ci Dian	217	253	254	0	989
	Story	Number of local ancient stories (count)	Encyclopaedia of Chinese Stories / Zhong Guo Ming Jian Gu Shi Ji Cheng	217	628	185	219	1029
	Folktale	Number of local ancient legends and folktales (count)	Encyclopaedia of Chinese Stories / Zhong Guo Ming Jian Gu Shi Ji Cheng	217	337	102	156	557
	Museum	Museums (count of registered entities)	China Statistical Yearbook	217	138	97	2	541
	Museum employees	Employed persons at museums (count)	China Statistical Yearbook	217	2981	2124	75	9354
Living Culture	Museum collections	Collections at museums (count of permanent collections)	China Statistical Yearbook	217	974104	932963	39895	4380555
	Museum exhibitions	Regular exhibitions at museums (unit)	China Statistical Yearbook	217	692	598	6	2958
	Museum visitors	Visitors to museums (10000 person-time)	China Statistical Yearbook	217	2754	2188	10	10034
	Jinshi exams	Number of imperial examiners in qing and ming dynasties (count)	Register of Individuals Examined at the Empirical Exams in the Ming-Qing Dynasty / Ming-Qing Jinshi Timing Beilu Suoyin	217	1615	1704	0	6390
	Books	Number of publications (count)	China Statistical Yearbook	217	9363	7007	520	30892
	New books	Number of new published book titles (count)	China Statistical Yearbook	217	4796	3564	237	16516
	Book printing	Printed copies of books (count in 100 millions)	China Statistical Yearbook	217	2.2	1.6	0.1	7.5
	Journals	Number of periodicals titles published (count)	China Statistical Yearbook	217	227	132	35	641
	Journal priting	Printed copies of periodicals (count in 100 millions)	China Statistical Yearbook	217	0.6	0.5	0	3.1
	Art groups	Number of art performance troupes(unit)	China Statistical Yearbook	217	417	477	30	2859
	Performance of art groups	Performances of art groups (10000 time)	China Statistical Yearbook	217	76.9	112.2	2.9	646.6
	Audience of art performances	Audience of demostic art performance (1000 person)	China Statistical Yearbook	217	34921.2	48947.6	1635	329685
	Art Venues	Art performance venues (unit)	China Statistical Yearbook	217	68	63	3	365
	Non-art performances by art venues	Non-art performances at art performance venues (per 10000 show)	China Statistical Yearbook	216	36.3	64.7	0.03	424.4
	Art performance by art venues	Art performances at art performance venues (per 10000 show)	China Statistical Yearbook	216	5.1	6.1	0	42
	Audience at non-art events at art venues	Audience at art venues (count of persons in 10000s)	China Statistical Yearbook	216	3608	4135	11	22371

Appendix 10 (Continued)

Part of the CBD Model	Variable	Definition	Source	Obs.	Mean	Std. Dev.	Min	Max
Living Culture	Audience of art events at art venues	Audience at art venues for art performances (count of perons in 10000)	China Statistical Yearbook	216	1236.1	1296	0	7640
	Library	Public libraries (unit)	China Statistical Yearbook	217	102	46	21	206
	Books in library	Total collection of books (in 10000 of copies)	China Statistical Yearbook	217	2831.2	2203.9	100.3	10543
	Library cards	Active library cards distributed (in 10000 count)	China Statistical Yearbook	217	177.4	277.4	1	1656
	Book circulation	Book circulations (10000 person-time)	China Statistical Yearbook	217	21700000	23800000	110800	139000000
	Book borrowing	Borrowing from libraries of books and periodicals (10000 person-time)	China Statistical Yearbook	217	778.7	695.7	3.62	3216.57
	Books & periodicals lent	Books and periodicals lent to readers (10000 copies-time)	China Statistical Yearbook	217	1692.5	1802	7	8681
	Lecture at library	Lectures held in libraries (time)	China Statistical Yearbook	217	2166	1711	27	9996
	Lecture at library - audience	Participants to lectures at libraries (10000 person-time)	China Statistical Yearbook	217	40	65.7	0.24	793.76
	Training at library	Training classes held at public libraries (count)	China Statistical Yearbook	217	1474	1678	24	12030
	Trainingm at library - audience	Participants to training classes at public libraries (10000 person-time)	China Statistical Yearbook	217	10.3	13.2	0.04	110.32
	Exhibitions at library	Exhibitions held at libraries (count)	China Statistical Yearbook	217	828.2	717.1	19	5329
	Exhibitions at library - audience	Visitors who attended exhibitions at libraries (10000 person-time)	China Statistical Yearbook	217	193.8	269.3	1.43	2076.1
	Karaoke	Karaoke and other entertainment institutions (unit)	China Statistical Yearbook on Culture and Related Industries	217	2522	1867	125	8657
	Internet cafes	Internet cafes (bars) where people can pay for internet use by time of use (count)	China Statistical Yearbook on Culture and Related Industries	217	4246	3219	151	12548
Social Capital	Animation enterprises	Comic and animation enterprises (unit)	China Statistical Yearbook on Culture and Related Industries	211	19	19	1	77
	Employees at animation enterprises	Persons engaged in comic and animation enterprises (count)	China Statistical Yearbook on Culture and Related Industries	210	923	1421	5	11603
	Cultural community institutions	Community centres where people can enroll for art classes and other hobby related activities (count of entities)	China Statistical Yearbook on Culture, Relics and Tourism	217	1431	888	228	4808
	Cultural community venues	Big community centres (count if entities)	China Statistical Yearbook on Culture, Relics and Tourism	217	107	51	17	207
	Cultural community stations	Small community centres (count if entities)	China Statistical Yearbook on Culture, Relics and Tourism	217	1324	844	207	4601
	Cultural community activities	Cultural activities organized by cultural institutions (time)	China Statistical Yearbook on Culture, Relics and Tourism	217	33715	23863	1933	148863
	Autonomy groups	Autonomous organizations (unit)	China Statistical Yearbook	217	21482	17451	2741	81285
	Divorce	Divorces (in 10000 and per couple)	China Statistical Yearbook	217	13.2	8.2	0.2	35.65
	Social organizations	Social organizations (unit)	China Statistical Yearbook	217	22799	17784	536	97013
	Social groups	Social groups (unit)	China Statistical Yearbook	217	10793	7639	478	38081
	Volunteers	Volunteers (person)	China Civil Affairs Statistical Yearbook	217	299844	1204786	5	12000000
	Time volunteering	Time of volunteering activities (hour)	China Civil Affairs Statistical Yearbook	217	782416	3582259	0	43000000
	Junior social workers	Junior social worker (count)	China Civil Affairs Statistical Yearbook	217	1115	2131	2	22666
	Marrow_donation	Number of Marrow donors (person)	Statistics by CMDP Branch Registries (Annual reports of : China Marrow Donor Program)	217	4949.95	3444.55	0	17345
	Social workers	Social worker (count)	China Civil Affairs Statistical Yearbook	216	601	786	1	5953
Veblenian Consumption	E-Cigarettes	count of internet search for 9 keywords related to e-cigarettes (such as brand names of producers and names of websites offering e-cigarettes)	Obtained from the most widely used search engine in China: https://zhishu.baidu.com/v2/index.html	217	27795.24	22199.16	316	129263
	Fashion	count of internet search for 30 key words, such as leading Western brand names: Prada, Fendi, Armani, Burberry etc.	Obtained from the most widely used search engine in China: https://zhishu.baidu.com/v2/index.html	217	343052.5	216465.2	17667	1040834
	Toy	count of internet search for 13 keywords related to collectible urban vinyl toys, their exact terms in Chinese (such as shouban) and their brands	Obtained from the most widely used search engine in China: https://zhishu.baidu.com/v2/index.html	217	30381.69	22526.26	534	126511
	Jewellery	count of internet search for 16 keywords related to related to luxurious jewelry brands in China.	Obtained from the most widely used search engine in China: https://zhishu.baidu.com/v2/index.html	217	152308.2	105982	7867	524401

Appendix 11: Alternative Quantification of Cultural Capital and Relevant Variables

Part of the CBD Model	Variable	Definition	Source	Obs.	Mean	Std. Dev.	Min	Max
Cultural Heritage	Ich	Intangible culture heritage (item)	Intangible Culture Heritage, http://www.ihchina.cn/	217	99	49	18	233
	Historic_site	Major historical and cultural sites protected at the national level (unit)	National Cultural Heritage Administration, http://www.ncha.gov.cn/	217	172	117	34	538
	Historic_town	Historical and cultural town protected at the national level (unit)	National Cultural Heritage Administration, http://www.ncha.gov.cn/	217	10	8	0	31
	Historic_countryside	Major historical and cultural countryside protected at the national level (unit)	National Cultural Heritage Administration, http://www.ncha.gov.cn/	217	16	21	0	96
	Opera	Opera types (kind)	Zhong Guo Xi Qu Zhi	217	17	11	2	41
	Opera_person	Local notable opera personals (person)	Zhong Guo Xi Qu Zhi	217	129	95	9	399
	Quyí	Quyí types (kind)	Zhong Guo Qu Yi Zhi	203	31	16	8	80
	Quyí_person	Local notable quyí personals (person)	Zhong Guo Qu Yi Zhi	203	83	56	7	265
	Litterateur	China ancient litterateurs (person)	Zhong guo Li Dai Wen Xue Jia Zhi Di Li Fen BU	217	121	228	0	970
	Litterateur_qing	China ancient litterateurs recorded in qing dynasty (person)	Zhong guo Li Dai Wen Xue Jia Zhi Di Li Fen BU	161	76	120	1	484
	Litterateur_ming	China ancient litterateurs recorded in ming dynasty (person)	Zhong guo Li Dai Wen Xue Jia Zhi Di Li Fen BU	140	75	110	2	429
	Litterateur_yuan	China ancient litterateurs recorded in yuan (person)	Zhong guo Li Dai Wen Xue Jia Zhi Di Li Fen BU	154	23	33	1	149
	Ancient academy	Ancient academies in china (unit)	Zhong guo Shu Yuan Ci Dian	217	253	254	0	989
	Story	Ancient stories (piece)	Zhong Guo Ming Jian Gu Shi Ji Cheng	217	628	185	219	1029
	Folktales	Ancient legends and folktales (piece)	Zhong Guo Ming Jian Gu Shi Ji Cheng	217	337	102	156	557
	Museum	Museums (unit)	China Statistical Yearbook	217	138	97	2	541
	Employee_museum	Employed persons at museums (person)	China Statistical Yearbook	217	2981	2124	75	9354
	Collections_museum	Collections at museums (piece/set)	China Statistical Yearbook	217	974104	932963	39895	4380555
	Exhibitions_museum	Regular exhibitions at museums (unit)	China Statistical Yearbook	217	974104	932963	39895	4380555
	Visitors_museum	Visitors to museums (10000 person-time)	China Statistical Yearbook	217	974104	932963	39895	4380555
Living Culture	Jinshi	Emperial examiners in qing and ming dynasties (person)	Ming-Qing Jinshi Timing Beilu Suoyin	217	1615	1704	0	6390
	Book	Number of publications (kind)	China Statistical Yearbook	217	9363	7007	520	30892
	New_book	Number of new publications (kind)	China Statistical Yearbook	217	4796	3564	237	16516
	Book_printing	Printed copies of books (100 million copie)	China Statistical Yearbook	217	2.20	1.60	0.10	7.50
	Journal	Number of periodicals published (kind)	China Statistical Yearbook	217	227	132	35	641
	Journal_priting	Printed copies of periodicals (100 million copie)	China Statistical Yearbook	217	0.60	0.50	0.00	3.10
	Art_group	Number of art performance troupes(unit)	China Statistical Yearbook	217	417	477	30	2859
	Art_group_performance	Performances of art groups (10000 time)	China Statistical Yearbook	217	76.90	112.20	2.90	646.60
	Audi_performance	Audience of demostic art performance (1000 person)	China Statistical Yearbook	217	34921.20	48947.60	1635.00	329685.00
	Venue	Art performance venues (unit)	China Statistical Yearbook	217	68	63	3	365
	Performance	Performances at art performance venues(10000 show)	China Statistical Yearbook	216	36.30	64.70	0.03	424.40
	Artperformance	Art performances at art performance venues(10000 show)	China Statistical Yearbook	216	5.10	6.10	0.00	42.00
	Audi_venue	Audience at art venues (10000 person-time)	China Statistical Yearbook	216	3608	4135	11	22371
	Audi_art_venue	Audience at art venues for art performances(10000 person-time)	China Statistical Yearbook	216	1236.10	1296.00	0.00	7640.00
	Library	Public libraries (unit)	China Statistical Yearbook	217	102	46	21	206
	Book_library	Total collection of books (10000 copie)	China Statistical Yearbook	217	2831.20	2203.90	100.30	10543.00
	Library_card	Active library cards distributed (10000 unit)	China Statistical Yearbook	217	177.40	277.40	1.00	1656.00
	Book_circulation	Book circulations (10000 person-time)	China Statistical Yearbook	217	21700000	23800000	110800	139000000
	Book_borrowing	Borrowing from libraries of books and periodicals (10000 person-time)	China Statistical Yearbook	217	778.70	695.70	3.62	3216.57
	Book_periodicals_lend	Books and periodicals lent to readers (10000 copies-time)	China Statistical Yearbook	217	1692.50	1802.00	7.00	8681.00
	Lecture_library	Lectures held in libraries (time)	China Statistical Yearbook	217	2166	1711	27	9996
	Lecture_audience	Participants to lectures at libraries (10000 person-time)	China Statistical Yearbook	217	40.00	65.70	0.24	793.76
	Training_library	Training classes held at public libraries (unit)	China Statistical Yearbook	217	1474	1678	24	12030
	Training_lib_audience	Participants to training classes at public libraries (10000 person-time)	China Statistical Yearbook	217	10.30	13.20	0.04	110.32
	Exhibitions_library	Exhibitions held at libraries (unit)	China Statistical Yearbook	217	828.20	717.10	19.00	5329.00
	Exhibitions_lib_participants	Visitors attended exhibitions at libraries (10000 person-time)	China Statistical Yearbook	217	193.80	269.30	1.43	2076.10
	Entertainment_institutions	Entertainment institutions (unit)	China Statistical Yearbook on Culture and Related Industries	217	2522	1867	125	8657
	Internet_bars	Internet bars (unit)	China Statistical Yearbook on Culture and Related Industries	217	4246	3219	151	12548
	Animation_enterprises	Comic and animation entterprises (unit)	China Statistical Yearbook on Culture and Related Industries	211	19	19	1	77
	Employees_animation_ent.	Persons engaged in comic and animation enterprises (person)	China Statistical Yearbook on Culture and Related Industries	210	923	1421	5	11603

Appendix 11 (Continued)

Part of the CBD Model	Variable	Definition	Source	Obs.	Mean	Std. Dev.	Min	Max
Altruism	Marrow_donation	Marrow donation enlisted doners (person)	China Marrow Donor Program Annual Reports	217	5317	3458	0	17387
CBD Factor Variables	CH	Cultural heritage variable, obtained from principle component factor analysis with all aforementioned variables	Authors' caculation using principle factor analysis	119	0.00	1.00	(1.30)	2.90
	LC	Living culture variable, obtained from principle component factor analysis with all aforementioned variables	Authors' caculation using principle factor analysis	119	0.00	1.00	(0.80)	5.20
	SC	Social capital, obtained from principle component factor analysis with all aforementioned variables	Authors' caculation using principle factor analysis	119	0.00	1.00	(2.10)	2.60
	CH1	Cultural heritage variable, obtained from principle component factor analysis with selected aforementioned variables	Authors' caculation using principle factor analysis					
	LC1	Living culture variable, obtained from principle component factor analysis with selected aforementioned variables	Authors' caculation using principle factor analysis					
	SC1	Social capital, obtained from principle component factor analysis with selected aforementioned variables	Authors' caculation using principle factor analysis					
	CH2	Cultural heritage variable, obtained from principle component factor analysis with selected aforementioned variables	Authors' caculation using principle factor analysis					
	LC2	Living culture variable, obtained from principle component factor analysis with selected aforementioned variables	Authors' caculation using principle factor analysis					
	SC2	Social capital, obtained from principle component factor analysis with selected aforementioned variables	Authors' caculation using principle factor analysis					
	GDP	Gross domestic product (100 million yuan)	China Statistical Yearbook	217	24974.20	20816.80	828.20	107986.90
Economic Variables	K	Total investment in fixed assets (100 million yuan)	China Statistical Yearbook	217	18488.40	12866.10	876.00	55202.70
	HC	Employed persons(10000 person)	Provincial Statistical Yearbooks from each Province	217	2671.00	1826.80	205.50	7150.30
	Mig_percentage	Percentage of immigrants (%), calculated with the percentage of people with permanent household registration elsewhere and away from their registration place for more than 6 months and the total population in a province.	Chinese Statistical Yearbook	217	0.20	0.10	0.01	0.60
	Avg_urban_wage	Average wage for urban employees (yuan), calculated with number of urban employees in public sector, average urban wage in public sector, number of urban employees in private sector, average urban wage in private sector.	China Statistical Yearbook	210	57215.60	14570.60	36356.00	129308.00
	Ave_resprice	Average selling price of residential buildings (yuan/sq.m)	China Statistical Yearbook	217	7792.90	5786.20	3605.00	38433.00
	Income	The average per capita disposable income (yuan)	China Statistical Yearbook	217	24116.90	10681.70	9740.00	69442.00
	Theil_index	Theil index of urban and suburb income, calculated with urban and suburb income data.	China Statistical Yearbook	217	0.09	0.04	0.02	0.19
	Expenditure	The average per capita expenditure (yuan)	China Statistical Yearbook	217	17280.80	7021.70	6307.00	45605.00
	Urb	The percentage of urban population in the whole population (%), calculated with urban population and total population data	Chinese Statistical Yearbook	217	57.80	12.60	23.70	89.60
	Road	Total length of highways (10000 km)	China Statistical Yearbook	217	15.10	8.00	1.30	33.70
	Tob_are	Sown areas of tobacco (1000 hectare)	China Statistical Yearbook	217	39.80	87.00	0.00	542.50

Appendix 12: Descriptive Statistics for Chapter Six

Theoretical motivation	Variable	Obs	Mean	Std. Dev.	Min	Max
Veblenian Consumption	fashion	217	342787.2	215635.3	17667	1000000
	toy	217	30381.7	22526.3	534	126511
	E_Cig	217	27795.2	22199.2	316	129263
Cultural Entropy	UV_CULT_ENTROPY	195	0.7	0.0	0.6	0.7
Social Capital	SC_correction	195	0	1	-0.8	6.7
	volunteer	217	299844.3	1204786	5	1.20E+07
	Social_Organization	217	22798.9	17784.4	536	97013
	Social_Group	217	10793.1	7638.9	478	38081
Innovation	ln_patents_firms	217	9.7	1.6	4.4	13.0
	ln_patents_indiv	217	8.5	1.5	3.0	11.5
	ln_total_patents	217	10.0	1.6	4.8	13.2
	ln_rnd_output	213	13.9	1.9	6.0	17.9
	ln_rnd_expenditure	217	14.7	1.5	10.0	17.2
	ln_rnd_personel	217	11.1	1.4	7.0	13.6
Controls (Z)	ln_K	217	9.6	0.9	6.9	11.0
	ln_L	217	7.6	0.9	5.3	8.9
	HC_real	217	0.1	0.1	0.0	0.5
	UV_sectors	217	0.9	0.1	0.5	1.1
	Krugman Specialization Index	217	0.0	0.0	0	6.54E-05
	ln_income	217	10.0	0.4	9.2	11.1
	per_pop15~64	217	0.7	0.0	0.66	0.81
	perc_urbanization	217	57.8	12.6	23.71	89.6
	perc_internet_coverage	210	52.4	10.7	32.46	78
	pop_density	217	2850.2	1120.7	1059	5541
	year	217	2016	2	2013	2019
	west	217	0.4	0.5	0	1
	east	217	0.3	0.5	0	1
	middle	217	0.2	0.4	0	1

Appendix 13: The Calculation of the Cultural Entropy Variables

The cultural entropy variable is generated following Tubadji (2022). Here, I present the codes used in Stata for generating the cultural entropy index. I have adapted the approach according to the availability of proxies for CH and LC in my dataset, as shown below:

```
gen CC = (LC + CH)
gen perc_LC = LC/CC
gen perc_CH = CH/CC
gen ln_1_CH = ln(1/CH)
gen ln_1_LC = ln(1/LC)
gen S_LC = ( perc_LC * ln_1_LC)
gen S_CH = ( perc_CH * ln_1_CH)
gen UV_CULT = (S_LC + S_CH)
```

Appendix 14: Descriptive Statistics for Chapter Seven

	Variable	Obs	Mean	Std. dev.	Min	Max
Individual variables	Han ethnic (dummy)	11584	0.9046098	0.2937658	0	1
	Religion (dummy)	11584	0.1295753	0.3358501	0	1
	Income (log)	8950	9.266309	1.175933	2.079442	15.60727
	Income_square (log)	8950	18.5	2.35	4.158883	31.2
	Family socioeconomic status	11555	2.61	0.767	1	5
	Family socioeconomic status at the age of 14	11490	2.951175	1.870785	1	10
	Age	11581	47.79086	15.34395	20	94
	Age_square	11581	2519.383	1548.481	400	8836
	sex	11584	1.518301	0.4996865	1	2
	Edu	11569	2.142277	1.472424	0	6
	Marital statue	11576	0.813407	0.3896012	0	1
	Political status (Party membership)	11767	3.577547	0.9953567	1	4
Region variables	Work type dummy	11431	0.0199458	0.13982	0	6
	Cutural revolution death per 1000 persons (log)	85	0.2939689	0.3600765	0.0019672	1.910473
	GDP per capital in 1964	86	23189.94	17392.4	3814.864	79755.72
	Jinshi density	72	0.000105	0.0001383	0.00000087	0.0008246
	Urbanization rate in 1964_standardized	85	-0.0087599	0.5958297	-0.8546356	2.20717
	Suitability index for rice_standardized	86	0.0288057	0.9015944	-1.397353	3.066788
	Party member density	67	0.0252752	0.0112774	0.0073034	0.0800775

**Appendix 15: Initial Results with Comparisons on 10 Years Younger and Older Groups:
Branded Goods Consumption
Whole Sample and Social Rank Changes**

specifications	Entire revolution cohort		Duration of years		Socioeconomic status changes	
	1	2	3	4	5	6
dep.var	Conformative Conspicuous Consumption					
CR intensity * cohort_dummy_10 prior		0.334				0.134
CR intensity * cohort_dummy	0.351 **	0.651 **			-0.14	0.158
CR intensity * cohort_dummy_10 after		0.357				0.143
CR intensity * cohort_dummy_10 prior				0.24		
CR intensity * cohort_dummy * total years			0.091 **	0.133 **		
CR intensity * cohort_dummy_10 after				0.2		
CR intensity * cohort_dummy * stable_decrease_mobility dummy_10 prior						0.374 *
CR intensity * cohort_dummy * stable_decrease_mobility dummy					0.937 ***	0.947 ***
CR intensity * cohort_dummy * stable_decrease_mobility dummy_10 after						0.347
cohort_dummy * stable_decrease_mobility dummy_10 prior						Yes
cohort_dummy * stable_decrease_mobility dummy					Yes	Yes
cohort_dummy * stable_decrease_mobility dummy_10 after						Yes
indi_control	Yes	Yes	Yes	Yes	Yes	Yes
region fixed	Yes	Yes	Yes	Yes	Yes	Yes
age fixed	Yes	Yes	Yes	Yes	Yes	Yes
region_cohort trends	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7,588	7,588	7,588	7,588	7,588	7,588
Pseudo R2	0.057	0.0571	0.057	0.0571	0.0577	0.058

- Note[1]: Regressions were estimated using ordered logistic regression (ologit), with standard errors clustered using a two-way cluster on city and age.
- Note[2]: *** p<0.01, ** p<0.05, * p<0.1.
- Note[3]: The dependent variable is based on the survey question: ‘People around me have branded goods, so I should have them too.’ The response variable is categorical, ranging from 1 to 5, where a score of 1 indicates the least agreement with the statement, and a score of 5 represents the highest level of agreement.

**Appendix 16: Duration of Years_comparison Between Social Mobility Groups :
Two Groups vs. Three Groups**

specifications	Two groups		Three groups			
	stable_decrease	increase	decrease	stable	increase	
dep.var	Conformative Conspicuous Consumption					
CR intensity * cohort_dummy * total years	0.165	*** -0.0196	0.2043	*** 0.152	*** -0.021	
cohort_dummy * stable_decrease_mobility dummy	Yes					
cohort_dummy * increase_mobility dummy	Yes					
cohort_dummy * stable_decrease_mobility dummy						
cohort_dummy * stable_stable_mobility dummy						
cohort_dummy * stable_increase_mobility dummy						
indi_control	Yes					
region fixed	Yes					
age fixed	Yes					
region_cohort trends	Yes					
Observations	7588					
Pseudo R2	0.0574					

Note[1]: Regressions were estimated using ordered logistic regression (ologit), with standard errors clustered using a two-way cluster on city and age.

Note[2]: *** p<0.01, ** p<0.05, * p<0.1.

Note[3]: The dependent variable is based on the survey question: 'People around me have branded goods, so I should have them too.' The response variable is categorical, ranging from 1 to 5, where a score of 1 indicates the least agreement with the statement, and a score of 5 represents the highest level of agreement.

Appendix 17: Estimated Results Based on Degree of Rank Change

dep.var	Conformative Conspicuous Consumption	
CR intensity * cohort_dummy	-2.358	***
	(0.735)	
CR intensity * cohort_dummy *rank change degree	0.294	***
	(0.078)	
cohort_dummy *rank change degree	Yes	
indi_control	Yes	
region fixed	Yes	
age fixed	Yes	
region_cohort trends	Yes	
Observations	Yes	
Pseudo R2	0.0578	

Note[1]: Regressions were estimated using ordered logistic regression (ologit), with standard errors clustered using a two-way cluster on city and age.

Note[2]: *** p<0.01, ** p<0.05, * p<0.1.

Note[3]: The dependent variable is based on the survey question: 'People around me have branded goods, so I should have them too.' The response variable is categorical, ranging from 1 to 5, where a score of 1 indicates the least agreement with the statement, and a score of 5 represents the highest level of agreement.

**Appendix 18: Chapter 7: OLS Estimation for the Influence from Local Characteristics:
Local Party Member Density, Urbanization Rate, Jinshi Density and Rice Index**

specification	original		Party density		Urbanization		Confucius		Rice_index		All	
dep.var	Conformative Conspicuous Consumption											
CR intensity * cohort_dummy	-0.107		-0.1		-0.104		-0.131		-0.0979		-0.0875	
CR intensity * cohort_dummy * stable_decrease_mobility dummy	0.499	***	0.482	***	0.492	***	0.564	***	0.516	***	0.598	***
Party density * cohort_dummy * stable_decrease_mobility dummy			-0.00689								-0.0232	
Urbanization * cohort_dummy * stable_decrease_mobility dummy					0.0168						0.089	
Party density *stable_decrease_mobility dummy			YES								YES	
Urbanization *stable_decrease_mobility dummy					YES						YES	
year*Confucious							YES				YES	
year*Rice_index									YES		YES	
cohort_dummy *stable_decrease_mobility dummy	YES		YES		YES		YES		YES		YES	
indi_control	YES		YES		YES		YES		YES		YES	
region fixed	YES		YES		YES		YES		YES		YES	
age fixed	YES		YES		YES		YES		YES		YES	
region_cohort trends	YES		YES		YES		YES		YES		YES	
Constant	1.608	***	1.693	***	1.608	***	-52.97	***	9.876		560.8	
	-0.192		-0.401		-0.192		-18.81		-7.204		-363.3	
Observations	7588		5671		7588		5978		7588		4334	
R-squared	0.107		0.108		0.108		0.135		0.12		0.166	

Note[1]: Regressions were estimated using ordered logistic regression (ologit), with standard errors clustered using a two-way cluster on city and age.

Note[2]: *** p<0.01, ** p<0.05, * p<0.1.

Note[3]: The dependent variable is based on the survey question: 'People around me have branded goods, so I should have them too.' The response variable is categorical, ranging from 1 to 5, where a score of 1 indicates the least agreement with the statement, and a score of 5 represents the highest level of agreement.

Appendix 19: Data Sources for Chapter 7

Variables	Sources
Cultural revolution death count and partymember density	China Political Events Dataset, 1966-1971; url: https://drive.google.com/drive/folders/1SsuHl4wEikEdCbLaJr6hHB0JK1KXpg4G
Urbanization index and Rice index	Wang Y. The Political Legacy of Violence During China's Cultural Revolution. British Journal of Political Science. 2021;51(2):463-487. doi:10.1017/S0007123419000255
Data on the number Jinshi	Chinese Research Data Services(CNRDS) Platform
Survey questions and individual data	The Chinese General Social Survey 2010

Appendix 20: Chapter 6: Regional Trends of Key Variables of Interests: 2013 to 2019



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