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The role of religious beliefs in productive entrepreneurship and personal social responsibility: insights from a non-WEIRD nation

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ABSTRACT

What channels entrepreneurial effort towards activities that generate broad social and economic value, rather than towards rent-seeking or destructive pursuits, remains a critical question for developing nations. This study investigates whether and how religious beliefs steer entrepreneurs towards productive outcomes. Employing Upper Echelons Theory as a lens, we argue that religious beliefs shape productive entrepreneurship through the mediating mechanism of personal social responsibility (PSR), and that this process is influenced by the entrepreneur's entry mode (necessity versus opportunity). Data from 390 entrepreneurs in Iran, analysed using partial least squares structural equation modelling (PLS-SEM), reveal that religious beliefs do bolster productive entrepreneurship. However, this relationship is fully mediated by PSR, i.e. religious faith increases productive entrepreneurship primarily by fostering a sense of social and ethical duty. Furthermore, while necessity-driven entry typically weakens PSR, strong religious commitment effectively neutralizes this negative effect. These findings highlight the role of internal value systems as a foundation for ethical venturing, offering valuable insights for policy-makers and practitioners seeking to foster productive entrepreneurship and advance social welfare.

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1. Introduction

Admitting that religion is an integral part of the general doctrine of duties, the problem now is to determine the boundaries of the science to which it belongs. (Kant 1996, p. 275)

While entrepreneurship is widely celebrated as an engine of economic growth, its impact on society is profoundly ambiguous. The crucial challenge for non-WEIRD nations (Shepherd, Wincent, and Chase 2025) lies not merely in stimulating entrepreneurial activity, but in ensuring that this entrepreneurial energy is channelled towards creating genuine social and economic value (Acs, Boardman, and McNeely 2013; Bowen and De Clercq 2008; Lucas and Fuller 2017). This distinction lies at the heart of Baumol's (1990) seminal thesis, which crucially noted that entrepreneurship can also be unproductive or even destructive, diverting resources and effort towards rent-seeking and

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wealth appropriation rather than value creation – a crucial counterpoint to Schumpeter's (1911/1934) canonization of the entrepreneur as an agent of creative destruction and economic progress. The pivotal question, therefore, is not merely how to foster entrepreneurship, but how to foster *productive* entrepreneurship. Scholars have increasingly turned to socio-institutional context analysis to explain these divergent entrepreneurial paths, identifying factors such as legal systems, property rights, and cultural norms as critical determinants (Autio, Pathak, and Wennberg 2013; Lounsbury, Gehman, and Glynn 2019). Among these influential institutional settings, *religion* stands out as a profound, yet underexplored, force shaping human motivation, ethics, and behaviour (Sine, Cordero, and Coles 2022; Smith et al. 2019).

Religion, as a system of meaning and a cultural resource, can establish the social foundations necessary for socio-economic exchange (Guiso, Sapienza, and Zingales 2006; Zelekha, Avnimelech, and Sharabi 2014). At the individual level, it represents a cultural-cognitive schema that shapes a person's worldview and moral identity (Smith et al. 2019), acting as a *value-laden lens* through which they interpret and evaluate opportunities. It strengthens ethical decision-making (Weaver and Agle 2002), reinforces a positive work ethic (Lamont 2000; Wuthnow 1998), and increases persistence in pursuing opportunities (Smith, Gümüşay, and Townsend 2023). Consequently, a growing body of research has begun to examine the link between religiosity and entrepreneurial intention, generally finding a positive association (Audretsch, Bönte, and Tamvada 2013; Dana 2009; Henley 2017; Parboteeah, Walter, and Block 2015). However, an important theoretical gap persists. We know relatively little about the specific *mechanisms* through which religious beliefs influence the fundamental *type* of entrepreneurship an individual pursues – whether they are inclined towards Baumol's (1990) ideal of productive value creation or are susceptible to unproductive avenues. Dana's (2009) review suggests that religion shapes entrepreneurial patterns, but the underlying psychological and motivational mechanisms of this relationship remain a 'Black box'.

We propose that the missing link here is personal social responsibility (PSR). While corporate social responsibility (CSR) has been extensively studied at the organizational level (Carroll 1999; Uhlig, Mainardes, and Nossa 2020), PSR – defined as an individual's felt moral obligation to benefit society (Leung 2019) – has been overlooked, particularly in entrepreneurship, which is fundamentally an individual-level phenomenon (Packard 2017). We theorize that religious beliefs do not directly translate into productive outcomes but are instead bolstered through an entrepreneur's strategic orientation, primarily their sense of PSR. This perspective is powerfully framed by Upper Echelons Theory (UET) (Hambrick and Mason 1984), which posits that organizational outcomes are reflections of the values and cognitive frames of its top executives. Extending UET to entrepreneurship, we argue that founders' deep-seated characteristics – in this case, their religious beliefs – shape their strategic orientations (PSR), which in turn guide their pursuits and venture-level outcomes towards productive entrepreneurship.

Furthermore, the context of entrepreneurial entry is critical. The dichotomy between opportunity-driven and necessity-driven entrepreneurship (Reynolds et al. 2005) represents a fundamental situational factor that may interact with an entrepreneur's value system. While opportunity entrepreneurship is often linked to value creation, necessity entrepreneurship, born from a lack of alternatives, may be more susceptible to short-term survivalism that overlooks social responsibility (Amorós et al. 2017; Angulo-Guerrero, Pérez-Moreno, and Abad-Guerrero 2017). We investigate whether religious beliefs can act as a moderating buffer, strengthening the often-weaker link between necessity-driven entry and PSR, thereby guiding even constrained entrepreneurs towards more productive pursuits.

The non-WEIRD context of this study – Iran – provides a uniquely powerful setting to examine these relationships. For over four decades following the Islamic Revolution, Shia Islam has been not only a dominant cultural force but also integral to the nation's legislative and governance structures. This creates a socio-institutional environment where religious principles are explicitly intertwined with economic life, offering a distinct perspective beyond the predominantly Western, secular (WEIRD) contexts that dominate the literature (Shepherd, Wincet, and Chase 2025). Studying

entrepreneurs within this context allows for a nuanced exploration of how religiously-informed values interact with economic motivations under conditions common to many non-WEIRD nations.

Therefore, this research is guided by the following central question: *How do religious beliefs influence productive entrepreneurship, and what roles do personal social responsibility and entrepreneurial entry mode play in this relationship?* To address this, we develop and test a conceptual model in which PSR mediates the relationship between religious beliefs and productive entrepreneurship, and where religious beliefs moderate the relationship between entrepreneurial entry mode (necessity versus opportunity) and PSR.

This study contributes to the emerging subfield of religious entrepreneurship (Du 2017; Smith, McMullen, and Cardon 2021), which seeks to understand how religious beliefs shape the formation, enactment, and exploitation of entrepreneurial opportunities. Responding to calls for research that moves beyond WEIRD contexts (Shepherd, Wincent, and Chase 2025), we examine these dynamics in Iran – a setting where religion is deeply embedded in socio-economic life. Specifically, our work makes several key contributions. First, we move beyond establishing a direct correlation between religion and entrepreneurship by unveiling personal social responsibility (PSR) as a primary explanatory mechanism, thereby answering calls to explore the micro-foundations of entrepreneurial action (Baker and Welter 2017) and addressing a key gap in understanding the *micro-foundational mechanisms* through which religion influences entrepreneurial outcomes. Second, we integrate Upper Echelons Theory into the religion-entrepreneurship discourse, providing a robust theoretical scaffold that connects founders' deep-seated beliefs to strategic orientations and venture outcomes. Third, we offer a more nuanced understanding of entrepreneurial entry modes by demonstrating how religiosity can mitigate the potential ethical limitations of necessity entrepreneurship. Finally, by grounding our investigation in a non-WEIRD nation, we alleviate the Western-centric bias in entrepreneurship research and provide valuable insights into the complex interplay of religion, identity, and economic activity in a developing, religiously-oriented society.

The paper is structured as follows. First, we present our theoretical background, integrating UET with literature on religion, PSR, entry modes, and productive entrepreneurship to develop our hypotheses. We then detail our methodology, including the Iranian context, measures, and analytical approach. After presenting the results, we discuss their implications for theory, practice, and policy, concluding with limitations and avenues for future research.

2. Theoretical background

2.1. An upper Echelons theory lens on religion and entrepreneurial outcomes

To provide a coherent framework for understanding how an entrepreneur's inner beliefs translate into venture-level outcomes, we draw upon Upper Echelons Theory (UET) (Hambrick 2007; Hambrick and Mason 1984). While UET has been widely used in strategy and entrepreneurship (Neely et al. 2020), its application to social entrepreneurship is a more recent and evolving development. As early as 2009, scholars called for the introduction of UET into this domain (Short, Moss, and Lumpkin 2009), and a growing body of research has begun to employ UET to explore factors such as founders' political ideology, social entrepreneurs' perspectives on financing, and top management team functional background (Gauthier, Cohen, and Meyer 2019; Lucas and Park 2023; Shahi and Parekh 2022). Zhuang, Wang, and Li (2025) further examine how entrepreneurs' 'business facet' characteristics – their financial motivations and experiential characteristics of business work experience – impact social enterprise outcomes. Our study builds directly upon this emerging conversation and responds to the acknowledged need for more studies to fully understand how UET can be effectively applied to the social and value-driven entrepreneurship context.

UET posits that firm strategy and performance are fundamentally shaped by the personalized interpretations, values, and cognitive bases of its top leaders. These 'upper echelons' constitute lynchpin actors through which information is processed and acted upon. The *strategic orientation* of

these top leaders – how they perceive and process complex situations and render strategic choices – reflect their unique backgrounds and character, their ‘cognitive base and values’ (Hambrick and Mason 1984, 195).

So far, however, these cognitive bases and values have received insufficient scrutiny. Instead, focus has been on many of the more peripheral (and observable) factors and processes that moderate the link between upper echelons’ characteristics and outcomes (Carpenter, Geletkanycz, and Sanders 2004). For example, Zhuang, Wang, and Li (2025) examine governance structure as a moderator. However, these peripheral factors proffer little by way of understanding how or why key leaders think and act as they do in strategic situations.

Here we aim to extend UET by examining the contextual antecedents of upper echelons’ ‘cognitive bases and values’. Specifically, we assert *religious belief* as a deep-level factor that manifests in top leaders’ personalized perceptions, interpretations, beliefs, values, and actions. Religious beliefs constitute a foundational part of an individual’s worldview and moral identity (Smith et al. 2019), forming a ‘value-laden filter’ through which opportunities are perceived, risks are assessed, and the very purpose of entrepreneurship is defined. While prior research has established a correlation between religiosity and entrepreneurial intention (Audretsch, Bönte, and Tamvada 2013; Henley 2017), UET directs our attention to the process – the mediating psychological mechanisms – through which this influence operates.

We propose that religious beliefs shape a foundational strategic orientation: the entrepreneur’s personal social responsibility (PSR). This orientation, in turn, guides the venture towards specific outcomes, which in our study is *productive entrepreneurship*. This theoretical lens allows us to move beyond asking *if* religion matters to explaining *how* it matters, by linking a deep-seated characteristic (religious belief) to a strategic orientation (PSR) and, ultimately, to a venture-level outcome (productive entrepreneurship). We also assess entrepreneurial entry mode – whether by necessity or opportunity – as a key situational factor that can strengthen or weaken the relationship between the entrepreneur’s religious beliefs and their manifestation of PSR.

2.2. Strategic choice of productive entrepreneurship

From a UET perspective, the type of entrepreneurship pursued is a key strategic choice. Schumpeter (1911/1934) canonized the entrepreneur as an innovator whose activities create new economic value, driving economic growth and development (Mises 1998; Packard 2017). These activities lead to the creation of industries, markets, jobs, and enhanced social welfare (Audretsch, Keilbach, and Lehmann 2006; De Wit and De Kok 2014), correlating with higher standards of living (Baumol, Litan, and Schramm 2007).

However, as Baumol (1990) crucially noted, not all entrepreneurship is productive. While productive entrepreneurship is a *rent-creating* practice (Baumol 1990; Box, Gratzler, and Lin 2020; Davidsson and Henrekson 2002; K. Foss and Foss 2002; Padilla, Gohmann, and McCrickard 2016), other forms are merely *rent-seeking*. Unproductive entrepreneurship pursues wealth, power, and advantage over others through activities like lobbying, corruption, tax evasion, litigation, and patent trolling (Baumol 1990, 2010; Collins, McMullen, and Reutzel 2016; Doh et al. 2003; Hmieleski and Lerner 2016; Sobel 2008). These activities generate private gains but no net social value. More severely, destructive entrepreneurship is *rent-destroying*, creating societal losses through destructive (and usually illegal) activities such as racketeering, human trafficking, theft, and fraud (Baumol 1990, 2002; Box, Gratzler, and Lin 2020; Collins, McMullen, and Reutzel 2016; Desai, Acs, and Weitzel 2013; Douhan and Henrekson 2010; Lucas and Fuller 2017).

The allocation of entrepreneurial talent towards these different types is influenced by the ‘rules of the game’ – the political, legal, and economic institutions (Baumol 1990; Bjørnskov and Foss 2016; Ribeiro-Soriano and Galindo-Martín 2012). Our study, through the lens of UET, focuses on a more proximal cause: the entrepreneur’s internalized values and orientations that guide their strategic

choices within a given institutional context, specifically focusing on the drivers of the positive, productive outcome.

2.3. Entrepreneurial entry mode as a situational factor

The context in which an entrepreneurial journey begins is a critical situational factor that shapes the initial conditions for strategic decision-making. Entrepreneurship inherently entails risk, requiring commitments of time and resources (Kuratko and Hodgetts 2004), and entrepreneurial judgement rests on a tolerance for these perceived risks (N. Foss and Klein 2012). A key factor influencing this calculus is whether the venture is launched out of necessity (e.g. due to unemployment or limited options) or to pursue an opportunity (e.g. to gain wealth or independence) (Cullen, Johnson, and Parboteeah 2014; Giacomini et al. 2011; Reynolds et al. 2005; Williams, Round, and Rodgers 2006, 2009).

This entry mode has macro-level patterns – necessity entrepreneurship is more prevalent in less-developed economies with fewer job opportunities, while opportunity entrepreneurship dominates in higher-income economies (McMullen, Bagby, and Palich 2008; Reynolds et al. 2005). However, as Lent (2022) argues, the conceptualization of ‘necessity entrepreneurship’ itself is often underdeveloped, and there is a critical need to understand the actions and processes that can empower entrepreneurs within these constrained contexts. From a UET perspective, this entry mode represents a fundamental situational constraint or enabler that can interact with the entrepreneur’s pre-existing values. A necessity-driven context, often characterized by resource scarcity and survival pressures, may challenge an entrepreneur’s ability to act on broader social concerns. In contrast, an opportunity-driven context may provide the cognitive and material slack to more readily align venture strategies with personal values like social responsibility.

2.4. Personal social responsibility as a strategic orientation

Applying UET, we position personal social responsibility (PSR) as a key strategic orientation through which deep-level values are translated into action. Social responsibility is a moral imperative compelling actors to work towards societal well-being (Leung 2019). While CSR has been the focus in management, entrepreneurship is primarily an individual-level phenomenon (Packard 2017), making PSR – an individual’s felt obligation to society – highly relevant (Leung 2019; Păceșilă 2018).

PSR manifests as a sensitivity to the impact of one’s actions on others and can involve active problem-solving for local issues, civic participation, and supporting charities (Benabou and Tirole 2010; Păceșilă 2018). Driven by ethical, philanthropic, environmental, and social concerns (Davis, Rives, and de Maya 2017, 2021; Uhlig, Mainardes, and Nossa 2020), PSR indicates social embeddedness and a personal interest in social welfare (Benabou and Tirole 2010; Leung 2019; Păceșilă 2018). This strategic orientation that can direct entrepreneurial effort towards ventures that create social wealth, as seen in social entrepreneurship (Gupta et al. 2020; Zahra et al. 2009).

2.5. Religious beliefs as a deep-level characteristic

Finally, we conceptualize religious beliefs as the core deep-level characteristic underpinning our model. Religion is a ‘system of meaning embodied in a pattern of life, a community of faith, and a worldview of the sacred’ (Schmidt et al. 1999, 10). It is a depository of a society’s most sacred values (Dana 2009; Smith et al. 2019), involving faith in a God or extrasensory order (Fontaine, Luyten, and Corveleyn 2000) and encompassing ‘feelings, thoughts, experiences, and behaviors that arise from the search for the sacred’ (Hill et al. 2000, 66). These beliefs profoundly influence individual attitudes and behaviours (Argyris and Schon 1974).

In line with UET, religious beliefs are relevant in two primary ways. First, they play a crucial role in shaping a PSR strategic orientation (Du 2017; Peterson and Jun 2009; Schwartz 2006). Religious

doctrines often generate a social ethic that frames individuals as part of a divine plan, fostering a view of others as spiritual siblings and motivating mutual aid and burden-sharing (Gursoy, Altınay, and Kenebayeva 2017). This is exemplified by the 'Golden Rule', a principle found in major world religions that strongly influences business culture (Chan-Serafin, Brief, and George 2013; Gümüşay 2019).

Second, religious values influence whether and how entrepreneurship itself is pursued (Byrne, Morton, and Dahling 2011; Griebel, Park, and Neubert 2014; Miller and Ewest 2010). Prosperity through business is often justified and encouraged in religious traditions (Busenitz and Lichtenstein 2019; Kaukab and Aksamawanti 2020), and entrepreneurial success can enable philanthropy (Driscoll, McIsaac, and Wiebe 2019). Consequently, religious belief often increases entrepreneurial intent (Furnham and Koritsas 1990; Ratten et al. 2017; Weber 1922/1978) and can steer entrepreneurs towards productive, ethical business conduct (Audretsch, Bönte, and Tamvada 2013; Dana and Anderson 2007), even as it may sometimes hinder intent due to perceptions of entrepreneurship as selfish or feelings of guilt (Carswell and Rolland 2007; Dana 2009; Farmaki et al. 2020; Wiseman and Young 2014). Through the lens of UET, we integrate these two paths, arguing that the primary influence of religious beliefs on productive entrepreneurship is channelled through the cultivation of a socially responsible strategic orientation.

3. Conceptual framework development

While entrepreneurship is a socio-economic process through which individuals achieve self-interested benefits by satisfying others' interests (Mises 1951; Zhao, Qin, and Zhao 2020), and while productive entrepreneurship is recognized for creating new societal value and enhancing social welfare (Kirzner 1973; Schumpeter 1934), the allocation of entrepreneurial effort is not automatic. The politico-economic structure has been widely studied as a key determinant in unleashing productive entrepreneurship while constraining unproductive and destructive forms (Baumol 1990; North 1990). However, other social institutions, particularly religion, have received far less attention as macro-level determinants. Building on UET's argument that an entrepreneur's deep-seated characteristics shape strategic orientations and outcomes, we argue that religious beliefs and entrepreneurial entry mode affect the productive entrepreneurial activities through their effects on the entrepreneur's strategic orientation towards personal social responsibility (PSR).

3.1. Personal social responsibility and productive entrepreneurship

Per UET, PSR can be understood as a strategic orientation that directs entrepreneurial effort and priorities. Entrepreneurs with high PSR are intrinsically motivated by ethical, philanthropic, environmental, and social concerns (Davis, Rives, and de Maya 2017, 2021; Uhlig, Mainardes, and Nossa 2020), which manifests as a felt obligation to contribute to collective outcomes and societal well-being (Leung 2019; Mathur 2013). This strategic orientation makes them more likely to identify and pursue opportunities that solve societal problems, create new markets, and operate within legal and ethical frameworks – the hallmarks of productive entrepreneurship (Baumol 1990).

For instance, PSR enacted as philanthropy can foster self-improvement among disadvantaged groups, creating social value by assisting community development, often through entrepreneurial means (Acs, Boardman, and McNeely 2013). Whereas unproductive entrepreneurship generates private wealth at the expense of others (Acs, Boardman, and McNeely 2013; Desai, Acs, and Weitzel 2013), profitable productive entrepreneurship inherently creates both economic and social value (Acs, Boardman, and McNeely 2013; Chell 2007). The empathic concern inherent in high PSR enables entrepreneurs to better recognize and act upon opportunities to alleviate the dissatisfactions of others (Frost et al. 2006; Packard and Burnham 2021), thereby engendering greater venture success and profitability (Packard and Burnham 2021). Thus, a strong orientation towards social

responsibility is expected to direct entrepreneurial intentions and resources away from unproductive or destructive avenues and towards productive value creation.

While it is plausible that engaging in productive entrepreneurship could, in turn, reinforce an entrepreneur's PSR by fostering empathic consideration for others' needs (Bylund and Packard 2022; Packard and Burnham 2021) and aligning their actions with social ethical norms (Baumol 1990; Murphy, Shleifer, and Vishny 1991), our theoretical model and empirical focus are on its role as an antecedent of PSR, and so as a driver of productive behaviour. This perspective is consistent with UET's logic that psychological orientations precede and shape strategic choice. We therefore hypothesize a direct relationship from a PSR strategic orientation to productive entrepreneurship.

H1. An entrepreneur's personal social responsibility is positively related to productive entrepreneurship.

3.2. Religious beliefs and productive entrepreneurship

UET further argues that deep-level characteristics shape strategic behaviours. We thus now elaborate on the relationship between entrepreneurs' (i.e. founder or founding team) religious beliefs and the choice of productive versus unproductive entrepreneurship. While prior literature has established a link between religion and general entrepreneurial intentions (Audretsch, Bönte, and Tamvada 2013; Henley 2017), we are interested in how one's deep-seated religious convictions steer the *type* of entrepreneurship pursued. Religious beliefs function as a comprehensive cognitive filter, regulating behavioural norms and helping to internalize specific social and ethical values (Audretsch, Bönte, and Tamvada 2013). This filter provides moral guidance for complex decisions (Audretsch, Bönte, and Tamvada 2013), including fundamental strategic choices about the nature of the entrepreneurial venture to be launched (Baumol 1990; Weaver and Agle 2002).

Religious belief performs a dual function in engendering productive entrepreneurship. First, it fosters an entrepreneurial spirit, with religious communities often providing a robust foundation of social and moral support for sustainable ventures (Smith, McMullen, and Cardon 2021). Second, and more critically for Baumol's typology, it ensures ethical conduct. While any entrepreneur might be tempted by unproductive or destructive rent-seeking for personal profit, those with strong religious beliefs are impelled by their faith towards productive activities that are perceived as morally sound and pleasing to God (Hamid and Sa'ari 2011). Religions inherently advocate and instil moral values—e.g. honesty, fairness, and stewardship – that explicitly exclude unethical, unproductive, or destructive business practices (Ashforth and Vaidyanath 2002; Audretsch, Bönte, and Tamvada 2013).

Consequently, religious beliefs act as a strong motivational stimulus, channelling entrepreneurial effort towards productive and philanthropic activities that contribute to economic growth (Galbraith and Galbraith 2007; Parboteeah, Walter, and Block 2015) and enhance social welfare (Kaukab and Aksamawanti 2020; Roundy, Taylor, and Evans 2016). From our UET perspective, we therefore expect this deep-level characteristic to directly influence strategic behaviour towards productive entrepreneurship, as it shapes the entrepreneur's fundamental perception of what constitutes a legitimate and valuable venture.

H2. Religious beliefs are positively related to productive entrepreneurship.

3.3. Personal social responsibility and entrepreneurial entry mode

Entrepreneurial *entry mode*—whether driven primarily by opportunity or necessity – represents a critical situational factor that can shape an entrepreneur's strategic orientation. A well-established connection exists between this entry mode and Baumol's (1990) typology of productive

entrepreneurship. Generally, opportunity entrepreneurship is understood to align with productive, value-creating activities (Acs, Boardman, and McNeely 2013; Desai, Acs, and Weitzel 2013; Sobel 2008), whereas necessity entrepreneurship – born from survivalism rather than visionary pursuit – demonstrates a greater disposition towards unproductive or destructive ventures (Amorós et al. 2017; Angulo-Guerrero, Pérez-Moreno, and Abad-Guerrero 2017; Banerjee and Duflo 2007; Fairlie and Fossen 2020). However, the underlying individual-level mechanisms that transmit this effect are not fully understood. Macro-institutional explanations, such as the strength of regulatory and legal systems, are typically invoked. In environments with strong property rights, productive opportunities that create social value are safer and more profitable to exploit than predatory or fraudulent ones (Acs and Phillips 2002; Baumol 1990; Murphy, Shleifer, and Vishny 1991). Conversely, in contexts with weaker institutions, the risks associated with unproductive entrepreneurship are lower (Bowen and De Clercq 2008; Williams, Round, and Rodgers 2009).

UET's concept of 'managerial discretion' (Hambrick 2007) can be adapted here to understand this process. When survival is on the line, *entrepreneurial discretion* towards productive entrepreneurship is high as all options are on the table, no matter how unscrupulous. Consequently, PSR is negatively affected by necessity – for necessity entrepreneurs, constrained by immediate survival needs, the 'luxury' of prioritizing broader social concerns is often absent; their focus is necessarily on economic subsistence, and external pressures for legitimacy or ethical behaviours are often ignored. Consequently, necessity diminishes one's sense of connection or obligation to society, thereby weakening PSR. In some cases, necessity entrepreneurs may even attribute their predicament to societal failures, further weakening PSR.

Conversely, where necessity is low and opportunity is the primary entry mode, entrepreneurial discretion towards productive entrepreneurship is overall *lower* because reputational and social conformity incentives become more salient. Operating in more competitive and visible markets (Williams, Round, and Rodgers 2006), opportunity entrepreneurs' venture performance and longevity are tied to maintaining social legitimacy and a positive reputation, which are bolstered by demonstrating high social responsibility. Moreover, the act of pursuing a novel opportunity to create socio-economic value is intrinsically rewarding (Hemingway and Maclagan 2004) and can promote profound satisfaction and self-esteem through the act of 'well-doing' (Frey and Stutzer 2002). This positive psychological reinforcement can, over time, cultivate and strengthen an entrepreneur's sense of PSR (Davis, Rives, and Ruiz-de-Maya 2021). Consequently, we hypothesize that situational entry mode systematically influences the strategic orientation of PSR.

H3. Opportunity-driven entrepreneurs, compared to necessity-driven entrepreneurs, have an increased sense of personal social responsibility, *ceteris paribus*.

3.4. PSR as a mediator of religion and productive entrepreneurship

Per UET, deep-seated personal characteristics influence strategic choice via cognitive and interpretive mediating mechanisms. We thus posit that the influence of religious beliefs on productive entrepreneurship occurs through its effects on individual entrepreneurs' 'strategic orientation', namely their PSR. This mediation argument is grounded in the unique capacity of religious belief to provide a firm foundation for ethical conduct (Astrachan et al. 2020). Moral philosophers have long argued that secular ethics alone can be morally ambiguous at a foundational level, allowing for divergent interpretations and conclusions (Kant 1996; Kelsen 1973). Religious doctrine resolves these ambiguities by providing a transcendent framework that grounds a commitment to a specific ethical interpretation. While specific tenets vary, religions universally promote social harmony and a sense of moral duty towards others (Furqani, Adnan, and Mulyany 2020), often fostered through a sense of shared spiritual identity (e.g. as creations of a divine entity). Thus, religious beliefs engender a robust sense of PSR.

Several near-universal religious doctrines underpin this process. The widespread religious concept of free will, for instance, assigns personal responsibility to agents for their actions, obliging them to act in productive and morally upright ways or else face consequences, here or in the afterlife (Tabatabaei 1971). Furthermore, core tenets like self-sacrifice and the prioritization of others' needs above one's own are common creeds that directly cultivate a strong PSR. Conversely, vices such as 'greed' – interpreted in religious contexts as an excessive love of material wealth over the well-being of others – are explicitly condemned across religious dogmas.

In essence, religious beliefs motivate entrepreneurs to pursue productive entrepreneurship specifically *through* the inculcation of social and ethical values (Dougherty, Neubert, and Park 2019). This effect is particularly potent when entrepreneurs perceive their venture as a divine calling or mission (Griebel, Park, and Neubert 2014; Gümüşay 2015; Possumah, Ismail, and Shahimi 2013; Uygur 2009). Therefore, we hypothesize that PSR serves as the pivotal mediating mechanism that translates deeply held religious beliefs into a heightened strategic preference for productive entrepreneurship.

H4. The relationship between religious beliefs and productive entrepreneurship is positively mediated by personal social responsibility.

3.5. Religion as a moderator of entry mode and PSR

We further argue that the strength of an entrepreneur's religious beliefs fundamentally alters how entry mode influences their sense of PSR. While religious belief is known to promote a strong work ethic (Furnham and Koritsas 1990; Ratten et al. 2017; Weber 1922/1978) and entrepreneurial intent (Audretsch, Bönte, and Tamvada 2013; Parker 2009), and serves as a key motivational stimulus for socially responsible action (Parboteeah, Walter, and Block 2015), its role is not uniform across all entrepreneurial contexts.

For opportunity-driven entrepreneurs, for whom social status and reputation in competitive markets are paramount (Williams, Round, and Rodgers 2006), religious adherence provides a robust, value-based framework for managing their reputation. It guides them to act in ways that are consistent with prevailing social values, thereby building trust with customers and stakeholders and securing long-term legitimacy (McMullen, Bagby, and Palich 2008). In this context, religious belief can reinforce the positive effect of opportunity-driven entry on PSR.

On the other hand, religious belief may act as a powerful counterweight for necessity-driven entrepreneurs. Facing survival pressures that can diminish the focus on social responsibility, these individuals may find in their religious beliefs a non-economic motive for ethical conduct. Religious faith can provide a profound source of comfort, resilience, and purpose during hardship (Cavalcanti Junqueira, Discua Cruz, and Gratton 2023), fostering a connection to community that transcends immediate economic circumstances. This, in turn, can cultivate more resilient PSR and steer entrepreneurial effort towards productive, rather than destructive, avenues even under duress (Johnmark et al. 2016). In short, strong religious beliefs weaken the negative relationship between necessity-driven entrepreneurial entry and PSR. Therefore, we hypothesize that deep-seated religious beliefs moderate the relationship between situational entry mode and a PSR strategic orientation.

H5. Religious beliefs moderate the relationship between entrepreneurial entry mode and personal social responsibility such that the positive effect of opportunity-driven entry on PSR is strengthened, and the negative effect of necessity-driven entry on PSR is weakened, for entrepreneurs with strong religious beliefs.

Figure 1 illustrates the complete conceptual framework of the study.

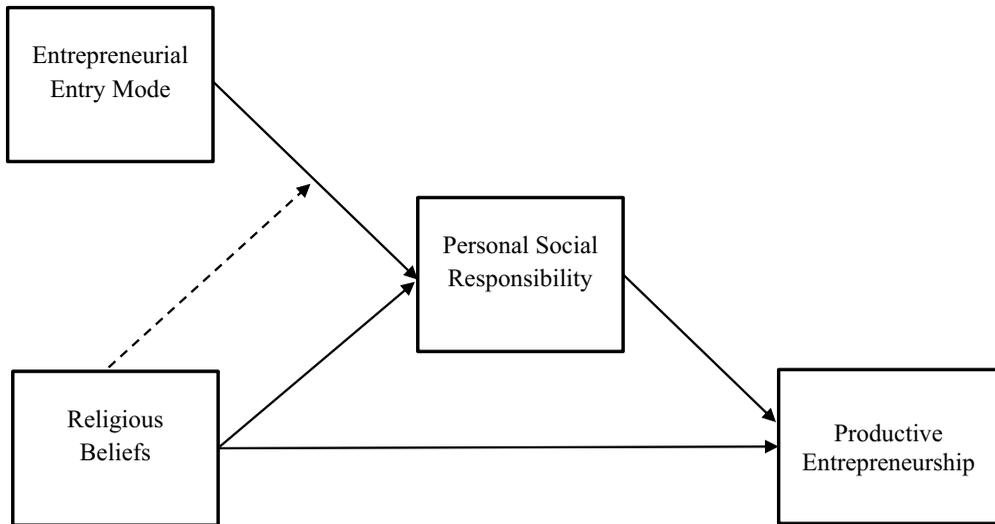


Figure 1. Conceptual model.

4. Method

4.1. Research context: Iran as a non-WEIRD socio-institutional setting

Iran presents a distinctive, non-WEIRD context where religion, state, and economy are deeply fused. Following the 1979 Islamic Revolution, Shia principles were codified into the constitution, commercial law, and the banking system. The 1984 Law for Usury-Free Banking institutionalized the prohibition of *Riba* (interest, Law for Usury-Free Banking, 1984), establishing a moral-legal framework that prioritizes fairness, risk-sharing, and wealth redistribution through instruments like *zakat*, *khums*, and *waqf*. This context frames entrepreneurship as both a commercial and an ethical endeavour.

The Iranian economy is dominated by state-linked conglomerates and religious foundations (*bonyads*), which control major sectors. In response, small firms and entrepreneurs often rely on relational and informal networks to navigate the system. Traditional bazaar networks remain vital for building trust, securing credit, and resolving disputes. Entrepreneurs frequently blend formal Islamic financial instruments with informal family financing. Meanwhile, international sanctions have limited foreign investment and encouraged the rise of localized innovations, exemplified by ride-hailing platform Snapp and e-commerce giant Digikala.

Facing high entry barriers and economic volatility, many Iranians, particularly women and rural populations, turn to informal entrepreneurship – they leverage family ties and digital channels to create informal micro-ventures. Thus, within this constrained environment, productive entrepreneurship emerges through adaptive strategies that artfully blend Islamic ethics, relational trust, and pragmatic market behaviour.

4.2. Sampling and data collection

To access a relevant population of entrepreneurs operating within this context, the authors targeted members of the Agriculture Jihad Organization (AJO) and the Ministry of Industry, Mine, and Trade (MIMT) in Iran. A stratified sampling method was employed to select participants from the Small Business Development Center¹ database.

The inclusion criteria for participants were: (1) having an entrepreneurial status within the AJO or MIMT, (2) at least one year of business experience, and (3) a willingness to participate in

the study. The questionnaires were self-administered and distributed electronically via email. The development of the questionnaire was based on a comprehensive review of the relevant literature and refined through consultations with expert opinions (Churchill 1979; Podsakoff et al. 2003). A pilot study was conducted to validate the instrument and ensure item clarity, involving a group of five expert entrepreneurs and a psychometrician to assess face validity (Podsakoff et al. 2003), which led to minor modifications. The final questionnaire comprised closed-ended questions, and participants were given a two-week period to complete and return it. All participants were informed of the study's purpose and assured of the confidentiality and anonymity of their responses, with data to be used solely for research purposes. Out of 1500 questionnaires distributed, 390 valid responses were received, yielding a response rate of 26%.

The demographics of the sample showed that 67% of the participants were male versus 33% female. The majority of the participants (90%) had a university degree, and the average age of the participants was 34 years old. The average size of the business (number of employees) was 5.8 people ($SD = 22.83$) and the average age of the company was 30.35 months ($SD = 70.71$). Respondents' average professional and work experience was 9.4 years ($SD = 106.51$) and seven years ($SD = 153.96$), respectively.

4.3. Measures

The aim of this article is to examine the association between religion beliefs and a range of economic and psychological constructs pertinent to the entrepreneurial journey, encompassing productive entrepreneurship, personal social responsibility, and entrepreneurial entry mode among nascent entrepreneurs. To achieve this aim, we developed the construct measures as follows:

4.3.1. Entrepreneurial entry mode (EEM)

To determine the EEM for each participant, we followed the conceptual foundations of Wong, Ho, and Autio (2005) and Reynolds et al. (2005). Respondents were asked to indicate their primary reason for pursuing entrepreneurship on a spectrum between two endpoints: (1) identifying an opportunity and being motivated to pursue it (e.g. to gain wealth, achieve independence, or introduce an innovation), despite having other options; or (2) being forced to pursue it due to necessity (e.g. needing a livelihood, lacking skills, or having limited employment options).

Rather than a binary classification, our measure of EEM is a one-dimensional, 8-point Likert scale ranging from 1 (*fully necessity-driven*) to 8 (*fully opportunity-driven*). This continuous scale was selected to more sensitively capture the nuanced and often hybrid nature of entrepreneurial motivation, acknowledging that individuals may not be purely necessity- or opportunity-driven but often somewhere between these poles (Dencker et al. 2021).

4.3.2. Religious beliefs (RB)

Religious beliefs (RB) were measured using a three-item scale adapted from Lynn, Naughton, and VanderVeen (2009) and M. King, Speck, and Thomas (2001). The items were selected to align with an Islamic worldview (Gümüşay 2015; Krauss et al. 2005; Possumah, Ismail, and Shahimi 2013) and to ensure discriminant validity from personal social responsibility, while also being applicable to capture the unique context of entrepreneurship, whereas the original scale focused on the organizational workplace.

The scale captures the core dimensions of internal spiritual belief: (1) 'I feel God's presence² in my workplace' (spiritual consciousness), (2) 'I see my work as an act of worship³ (sanctification of work), and (3) 'My religious beliefs are a central part of who I am' (strength of conviction). The third item was excluded from final analysis to ensure construct reliability, due to a low factor loading (< 0.40).

Items related to social outcomes or world affairs were excluded to maintain a focus on personal conviction. Respondents rated their agreement on a 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree).

4.3.3. Personal social responsibility (PSR)

We defined and measured PSR according to Davis et al.'s (2021) scale. We asked respondents to estimate their level of perceived personal responsibility in relation to environmental impact, ethical conduct, philanthropy, and social collaboration.

4.3.4. Productive entrepreneurship (PE)

We measured PE using the definitions outlined by Collins, McMullen, and Reutzel (2016). Drawing from prior research in the entrepreneurship field, we identified two underlying concepts related to the legality and value of entrepreneurial activities. Entrepreneurs were asked to respond to questions related to these concepts based on their own understanding. The activities covered by these concepts included launching new products, expanding into new markets, improving production processes to benefit society, creating value, and complying with legal requirements.

4.4. Analysis

The study utilized the structural equation modelling (SEM) technique to test the proposed hypotheses. SEM analysis is particularly suitable for early-stage theory development and testing, allowing researchers to explore complex constructs and relationships (Hair et al. 2019), facilitating a deeper understanding of emerging phenomena, various factors and their interrelationships, enabling them to test and refine hypotheses that may have implications for entrepreneurship. PLS-SEM does not require a large sample size and efficiently manages complex models without assuming data distributions (Hair et al. 2022). Our sample size of 390 exceeds the required size as there are ten arrows pointing at the constructs (Hair et al. 2019), making PLS-SEM suitable for the study.

5. Results

5.1. Biases: common method variance, multicollinearity, and social desirability

First, we assess common method bias (CMB) by conducting Harman's single-factor test using exploratory and unrotated factor analysis techniques (Harman 1976). This method is particularly useful, among other similar methods, in reducing the risk of spurious results and potential reverse causality in self-administered surveys (M. F. King and Bruner 2000). No single factor explained more than 33.9% of the variance, which falls below the commonly accepted cut-off of 50% (Podsakoff et al. 2003). Therefore, our results suggest that common method bias was not a significant concern in our study. We also checked for full collinearity using Smart-PLS, a reliable method suggested by Kock (2015). The variance inflation factor (VIF) values were all found to be below the threshold value of 3.3, indicating that our model was not affected by common method bias issues. Social desirability bias (SDB) can compromise the accuracy of survey results if participants provide answers that they think are socially acceptable rather than truthful (M. F. King and Bruner 2000; Nederhof 1985). To minimize SDB, we assured participants of the confidentiality and anonymity of their responses to encourage honest and accurate answers (Homan 2001; Vinten 1997). We also randomized the survey items to inhibit construct guessing and used a self-administered survey approach, which can reduce SDB (Nederhof 1985).

Table 1. Measurement model assessment: reliability and convergent validity.

Construct	Indicator	loadings	Cronbach's α	CR	AVE
Entrepreneurial Entry Mode (EEM)	EEM_01	1.000	N/A	N/A	N/A
Religious Beliefs (RB)	RB_01	0.877	0.713	0.874	0.777
	RB_02	0.886			
Ethical (ETH)	ETH_01	0.918	0.811	0.888	0.727
	ETH_02	0.777			
	ETH_03	0.857			
Social Collaboration (SC)	SC_01	0.793	0.788	0.876	0.702
	SC_02	0.846			
	SC_03	0.873			
Environmental (ENV)	ENV_01	0.900	0.711	0.873	0.775
	ENV_02	0.860			
Philanthropic (PHI)	PHI_01	0.885	0.824	0.896	0.742
	PHI_02	0.907			
	PHI_03	0.787			
Value (VAL)	VAL_01	0.924	0.836	0.924	0.859
	VAL_02	0.929			
lawfulness (LAW)	LAW_01	0.901	0.954	0.964	0.845
	LAW_02	0.899			
	LAW_03	0.916			
	LAW_04	0.937			
	LAW_05	0.941			

Abbreviations: AVE, Average Variance Extracted; CR, Composite Reliability; N/A, Not Applicable.

5.2. Reliability and validity analysis

In order to assess the degree of accuracy and legitimacy of the constructs utilized in our research, we conducted an analysis of the measurement model (Table 1). Following established methodological guidelines (Hair et al. 2019), we applied conservative criteria throughout the validation process to ensure robust construct measurement. During initial measurement model assessment, items with factor loadings below the 0.50 threshold were excluded from subsequent analysis to enhance construct reliability and discriminant validity, as per best practices in structural equation modelling to prioritize measurement quality over item retention (Kline 2023).

First, the factor loadings of all pertinent items that comprise the final model surpassed the minimum acceptable threshold of 0.50 (Hair et al. 2022). Moreover, several of the loadings exceeded 0.7 (Vinzi et al. 2010). These results signify that the items reliably and accurately measured their corresponding constructs.

In order to ensure that the measures used in this study are reliable, we employed rigorous statistical methods, including Cronbach's alpha, rho c, and composite reliability measures (Wasko and Faraj 2005). All of these methods returned values surpassing the recommended threshold of 0.7, indicating that the measures are reliable (Hair et al. 2019). Moreover, our measures demonstrated acceptable convergent validity, as evidenced by an average variance extracted (AVE) value greater than 0.5. To ensure that our measures were truly measuring distinct constructs, we tested

Table 2. Discriminant validity assessment: Fornell – Larcker and HTMT criteria.

Construct	1	2	3	4	5	6	7	8
1. Ethical	0.853	0.488	0.663	0.583	0.166	0.422	0.625	0.427
2. Social Collaboration	0.409	0.838	0.421	0.451	0.095	0.239	0.316	0.384
3. Environmental	0.509	0.320	0.880	0.679	0.126	0.341	0.649	0.520
4. Philanthropic	0.485	0.365	0.526	0.861	0.119	0.453	0.544	0.496
5. Entrepreneurial Entry Mode	0.152	0.081	0.101	0.108	1.000	0.083	0.262	0.136
6. Religious Beliefs	0.324	0.179	0.245	0.349	0.070	0.881	0.429	0.225
7. Value	0.523	0.257	0.504	0.455	0.239	0.331	0.927	0.370
8. lawfulness	0.385	0.335	0.434	0.443	0.134	0.188	0.331	0.919

Notes: Diagonal and bold italicized are the square roots of the AVE. Below the diagonal elements are the correlations between the construct's values. Above the diagonal elements are the heterotrait – monotrait ratio of correlations values.

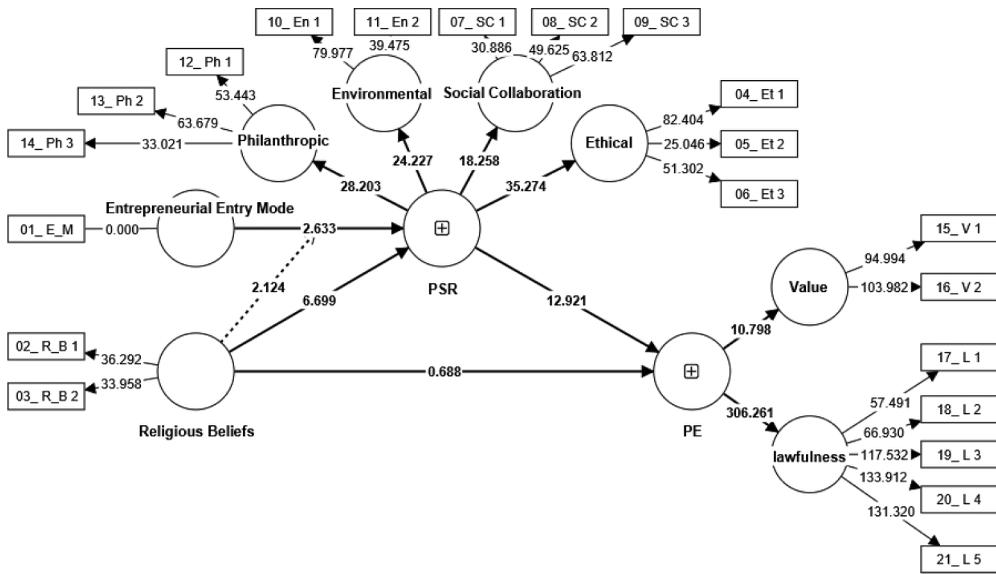


Figure 2. Structural model with standardized path coefficients (β values).

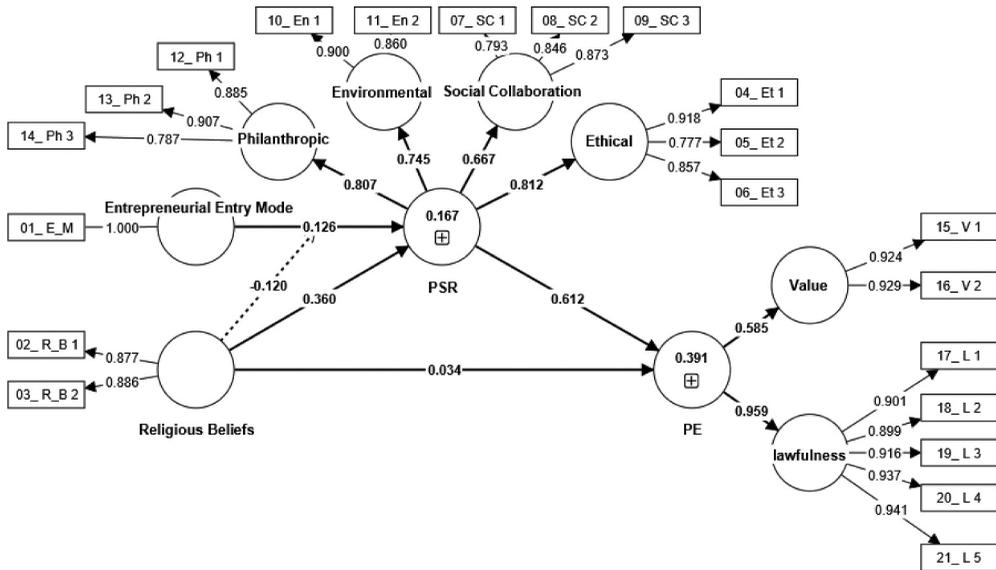


Figure 3. Statistical significance of structural paths (t-values).

discriminant validity by comparing the correlations among latent variables with the square root of AVE and the heterotrait – monotrait ratio of correlations (Fornell and Larcker 1981; Henseler, Ringle, and Sarstedt 2015). All of these values were below the conservative threshold of 0.85, demonstrating that our measures are indeed differentiating distinct constructs (see Table 2). Taken together, these findings provide strong evidence of the reliability and validity of our measures, offering a solid foundation for our subsequent analyses. Visual representations of the structural model – with path coefficients presented in Figure 2 and statistical significance in Figure 3—along with consolidated statistical results in Table 3, further support the robustness of our measurement model.

Table 3. Structural model results: hypothesis testing with mediation, moderation, and effect sizes.

Hypothesis	Path coefficient	SD	t-value	p-value	f ²	Effect Size
<i>Direct effects</i>						
H1: PSR → PE	0.624	0.045	13.91	0.000	0.45	Large
H2: RB → PE	0.265	0.060	4.38	0.000	0.12	Medium
H3: EEM → PSR	0.149	0.052	2.86	0.004	0.03	Small
<i>Indirect effect</i>						
H4: RB → PSR → PE*	0.371 → 0.612	–	6.62 → 12.92	0.000	0.16	Medium
RB → PE**	0.034	0.050	0.68	<i>Not .Sig (0.492)</i>		
<i>Moderation effect</i>						
H5: RB × EEM → PSR	–0.114	0.055	2.063	0.039	0.02	Small
Endogenous Constructs						
	R ²		Q ²			
Ethical	0.659		0.467			
Social Collaboration	0.445		0.306			
Environmental	0.555		0.421			
Philanthropic	0.651		0.470			
PSR	0.153		0.062			
PE	0.391		0.232			
Value	0.342		0.285			
Lawfulness	0.920		0.771			

Notes: f² = (R² _included – R² _excluded)/(1 – R² _included).

Effect size interpretation: Small (f² ≥ 0.02), Medium (f² ≥ 0.15), Large (f² ≥ 0.35) (Cohen, 1988).

*Indirect effect shown as two-stage path; f² calculated for the mediated effect.

**With presence of mediator.

Table 4. Regression equation specification error test (RESET) for model robustness.

	R	R ²	Adjusted R ²	Std. Error	Change Statistics				
					ΔR ²	ΔF	df1	df2	Sig. ΔF
Model 1 ^a	.637 ^b	.406	.402	.774	.015	9.991	1	386	.002
Model 2 ^c	.394 ^d	.155	.148	.923	.003	1.157	1	384	.283

Notes: a. Dependent Variable: PE; b. Predictors: (Constant), PSR, RB, PE², PE³; c. Dependent Variable: PSR; d. Predictors: (Constant), RB, EEM, PSR², PSR³.

5.3. Structural model and robustness test

The structural model reflects the hypothesized paths in the research framework and is evaluated based on R², Q², and path significance. The goodness of the model is indicated by high R² values for dependent variables, which should be at least 0.1 to establish predictive capability (Falk and Miller 1992). As shown in Table 3, all R² values in our study exceeded this threshold, indicating strong predictive capability. We further assessed the predictive relevance of the endogenous constructs using Q², with a value above 0 indicating predictive relevance. Our results (see Table 3) showed significant prediction of the constructs, further supporting the validity of our model. We also evaluated the model fit using the standardized root mean square residual, which was a value of 0.130. While this value is slightly above the commonly used threshold of 0.10, this may not be an appropriate threshold for PLS-SEM, as the discrepancy between observed and model-implied correlations plays different roles in covariance-based SEM and PLS-SEM (Hair et al. 2019).

Finally, to check for the robustness of the hypothetical model, we ran a nonlinearity assessment test among predictor and response variables (Table 4). Using the RESET⁴ (Ramsey 1969) function in SPSS, results reject the presence of non-linear relationships among the predictors and the primary response variables (ΔR² = .003; p = .283). Therefore, we conclude that the model is free of errors affecting the regression analyses of the research hypotheses.

5.4. Hypothesis tests

5.4.1. Direct effects

Supporting H1, an entrepreneur's personal social responsibility demonstrated a significant, substantial positive relationship with productive entrepreneurship ($\beta = .624, t = 13.912, p < .001$). H2 was also supported, as religious beliefs exhibited a significant direct impact on productive entrepreneurship ($\beta = .265, t = 4.383, p < .001$). Finally, the results support H3, as entrepreneurial entry mode was found to significantly influence PSR ($\beta = .149, t = 2.867, p = .004$). Given that the scale was anchored with necessity-driven motives at the lower end and opportunity-driven at the upper end, this positive coefficient indicates that opportunity-driven entrepreneurs exhibit a stronger inclination towards personal social responsibility.

5.4.2. Mediation analysis

Results of mediation analysis of the role of PSR between RB and PE (H4), shown in Table 3, reveal that inclusion of PSR as a mediator exhibited a positive impact of RB on PSR ($\beta = .371, t = 6.623, p = .000$) and PSR, in turn, positively influences PE ($\beta = .612, t = 12.924, p = .000$). However, the initial significant direct effect relationship between RB and PE became non-significant ($\beta = .034, t = .688, p = .492$) with PSR as a mediator. This results supports H4, indicating that PSR fully mediates the relationship between religious beliefs and productive entrepreneurship (James, Mulaik, and Brett 2006). The significant indirect effect (via PSR), coupled with the non-significant direct effect when the mediator is present, provides strong evidence for this complete mediation model.

5.4.3. Moderation analysis

H5 endeavours to explore the moderating impact of RB on the relationship between EEM and PSR. Our results (see Table 3) suggest a statistically meaningful negative moderation effect ($\beta = -0.114, p < .039$). However, this analysis alone is insufficient to support H5, as it is unclear whether RB weakens the negative effects of necessity entrepreneurship on PSR (as we have surmised) or the positive effects of opportunity entrepreneurship on PSR (against our theorizing), or both. To evaluate these interactions, we employed simple slope analysis as outlined by Aiken and West (1993), which involves analysing the interaction effect across three conditional values of the moderator variable: the mean and one standard deviation below and above the mean,

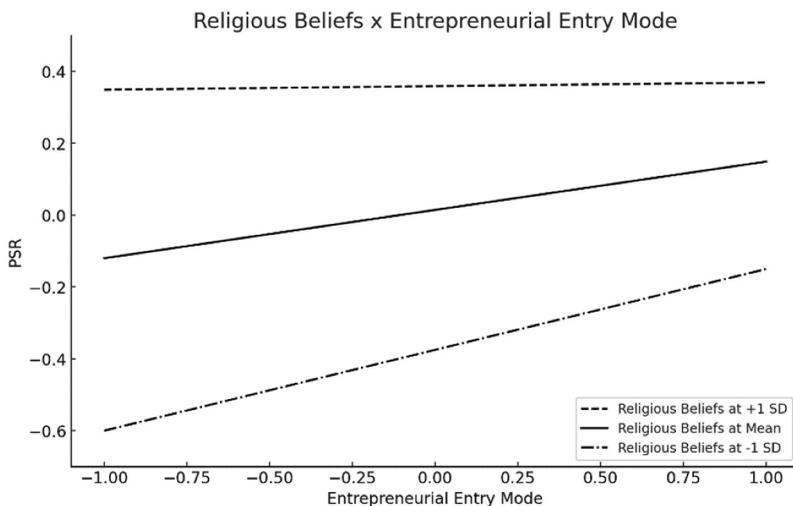


Figure 4. Plots of the moderating effect of religion beliefs.

illustrated in Figure 4. Our findings indicate that strong religious beliefs have little effect on opportunity-driven entrepreneurs and their (already high) propensity towards PSR and productive entrepreneurship. However, RB has a strong effect on necessity-driven entrepreneurs, neutralizing its negative effect on PSR ($\beta = -0.114$; $p < 0.039$), which still manifests when religious belief is low. These results provide strong support for H5.

5.4.4. Effect size analysis

Beyond statistical significance, we evaluated the substantive effect sizes of each significant path to assess their practical relevance. Following guidelines for partial least squares structural equation modelling (Hair et al. 2019), we report f^2 effect sizes, which indicate the change in R^2 when a predictor is removed from the model.

As shown in Table 3, the effect of personal social responsibility (PSR) on productive entrepreneurship (PE) was large ($f^2 = 0.45$), indicating a strong substantive impact. The direct effect of religious beliefs (RB) on PE was medium ($f^2 = 0.12$), while its effect on PSR was also medium ($f^2 = 0.16$). The influence of entrepreneurial entry mode (EEM) on PSR was small ($f^2 = 0.03$), as was the moderating effect of RB on the EEM – PSR relationship ($f^2 = 0.02$) (Cohen 1988).

These results suggest that PSR is not only a statistically significant mediator but also a substantively powerful driver of productive entrepreneurship. In contrast, entry mode and its interaction with religious beliefs, while statistically significant, exert more modest practical effects within our model.

5.4.5. Predictive power assessment

To evaluate the practical utility and generalizability of our theoretical framework, we conducted a predictive power assessment (PLS-Predict) analysis following established methodological guidelines (Shmueli et al. 2019). This approach assesses the model's out-of-sample predictive power by comparing prediction errors from the PLS-SEM model against a naive linear model (LM) benchmark using k-fold cross-validation. The key metric, Q^2_{predict} , indicates superior predictive capability when values exceed zero, with higher values denoting stronger predictive power. Results, summarized in Table 5 and visualized in Figure 5, demonstrate meaningful predictive power for both endogenous constructs. For Productive Entrepreneurship, Q^2_{predict} values range from 0.022 to 0.121, indicating small to medium predictive effects. The value creation dimension (VAL_01: Q^2

Table 5. PLS-Predict results: assessment of out-of-sample predictive power.

Construct	Indicator	PLS-RMSE	LM-RMSE	Q^2_{predict}	Predictive Power
Productive Entrepreneurship	VAL_01	0.712	0.810	0.121	Small
	VAL_02	0.705	0.721	0.022	Small
	LAW_01	0.645	0.698	0.076	Small
	LAW_02	0.632	0.701	0.098	Small
	LAW_03	0.698	0.745	0.063	Small
	LAW_04	0.654	0.712	0.083	Small
	LAW_05	0.621	0.689	0.099	Small
Personal Social Responsibility	ETH_01	0.801	0.950	0.157	Medium
	ETH_02	0.823	0.934	0.119	Small
	ETH_03	0.845	0.968	0.127	Small
	SC_01	0.745	0.748	0.004	Negligible
	SC_02	0.768	0.801	0.041	Small
	SC_03	0.792	0.823	0.038	Small
	ENV_01	0.712	0.801	0.111	Small
	ENV_02	0.698	0.789	0.115	Small
	PHI_01	0.834	0.945	0.117	Small
	PHI_02	0.819	0.923	0.113	Small
PHI_03	0.801	0.912	0.122	Small	

Notes: $Q^2_{\text{predict}} = 1 - (\text{PLS_RMSE}/\text{LM_RMSE})$. $Q^2_{\text{predict}} > 0$ indicates the PLS model has superior predictive power over the linear model (LM) benchmark. Predictive power interpretation: Negligible (< 0.02), Small (0.02–0.149), Medium (0.15–0.35), Large (> 0.35).

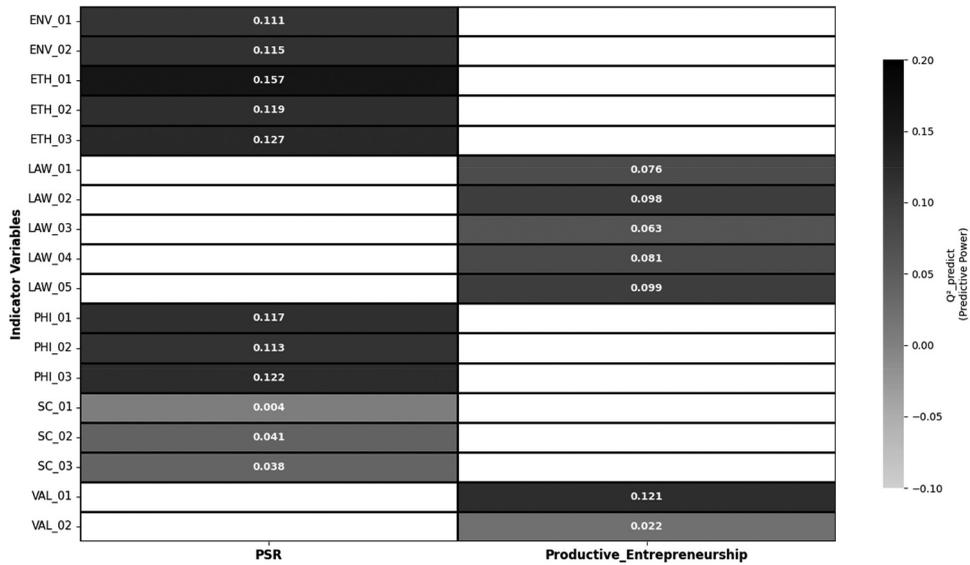


Figure 5. PLS-Predict heatmap: assessment of out-of-sample predictive power.

$Q^2_{\text{predict}} = 0.121$; VAL_02: $Q^2_{\text{predict}} = 0.022$) and lawfulness indicators (LAW_02: $Q^2_{\text{predict}} = 0.098$; LAW_05: $Q^2_{\text{predict}} = 0.099$) show robust predictive capability.

The Personal Social Responsibility construct exhibits even stronger predictive power, with Q^2_{predict} values reaching 0.157 for ethical orientation (ETH_01) and consistently positive values across environmental (ENV_01: 0.111; ENV_02: 0.115) and philanthropic dimensions (PHI_01: 0.117; PHI_03: 0.122). These results suggest that our theoretical framework not only explains relationships captured in our sample but likely also possesses substantial predictive power and generalizability.

6. Discussion

Our findings, viewed through the lens of UET, provide a coherent micro-foundational model for how an entrepreneur's deep-level characteristics and situational context shape their strategic choices and venture outcomes. The central revelation is that the relationship between religious beliefs and productive entrepreneurship is not direct but is fully mediated by the entrepreneur's PSR. This mediation result provides a crucial explanation for how religion shapes their strategic choice of productive entrepreneurship by cultivating a deep-seated sense of social and ethical duty that guides their strategic orientation (Davis, Rives, and de Maya 2017, 2021; Smith, Gümüşay, and Townsend 2023). This aligns with prior work highlighting religion's role in fostering ethical decision-making and a productive work ethic (Weaver and Agle 2002), but moves beyond it by specifying its mediating psychological mechanisms. Furthermore, our findings contribute to the burgeoning conversation on religious entrepreneurship (Smith, Lawson, and Jones 2023) by delineating how religious beliefs translate into productive entrepreneurial action through the cultivation of personal social responsibility. This aligns with the special issue's focus on the bi-directional and recursive relationship between religion and entrepreneurship.

Our results clarify the interplay between an entrepreneur's context and their values. We confirm that an opportunity-driven entry mode enhances PSR (Williams, Round, and Rodgers 2009), which in turn increases productive entrepreneurship. More importantly, we find that the deep-level characteristic of religious belief acts as a critical buffer against the potential ethical limitations of a necessity-driven context. While necessity entrepreneurs, facing survival pressures, may be predisposed to lower PSR and a higher risk of unproductive behaviours (Amorós et al. 2017; Angulo-

Guerrero, Pérez-Moreno, and Abad-Guerrero 2017), strong religious beliefs can neutralize this effect. This underscores that motivated pursuits are never disconnected from the actor's beliefs, values, and moral principles (Dana 2009; Tajfel and Turner 1979). For some, entrepreneurship is a mission aligned with personal values (Hatten 2015); for others, it is a divine calling (Miller, Ewest, and Neubert 2019). Our study shows that when a necessity entrepreneur has a strong religious commitment, it can displace purely economic motives towards unscrupulousness, effectively striking rent-seeking from the entrepreneur's set of perceived opportunities.

This finding offers a potential resolution to contradictory findings in the literature (e.g. Anglin, Milanov, and Short 2022; Wiseman and Young 2014). While studies like Audretsch, Bönte, and Tamvada (2013) found necessity-driven entrepreneurship to be less influenced by religious beliefs in certain contexts, our results from Iran suggest that in socio-institutional environments where religion is deeply embedded, religious beliefs can play a significant moderating role even under economic duress. This discrepancy highlights the critical importance of context. The challenges in this research stream – such as differing analytical levels (e.g. firm-level CSR versus individual-level), measurement difficulties (Farmaki et al. 2020; Smith et al. 2019), and the sensitive nature of the topic – may explain sporadic and inconclusive past findings. By providing a cogent individual-level analysis within a distinct religious context, our study helps to clarify these complex dynamics.

6.1. Theoretical contributions

This study offers several key theoretical contributions. First, it advances the literature on religion and entrepreneurship by moving beyond establishing a direct correlation and unveiling the mediating mechanism of PSR. We demonstrate that religious beliefs (a deep-level characteristic) do not automatically lead to productive ventures; rather, they must be translated into a strategic orientation focused on social responsibility, which then directs effort towards productive outcomes. This answers calls to explore the 'Black box' of micro-level processes in entrepreneurship (Baker and Welter 2017; Khurana, Ghura, and Dutta 2021; Smith, McMullen, and Cardon 2021).

Second, we contribute to UET (Hambrick and Mason 1984) by applying it to a non-WEIRD context and demonstrating its utility in explaining not just entrepreneurship, but the fundamental type of entrepreneurship pursued, i.e. productive entrepreneurship. We show how a specific deep-level characteristic (religiosity) shapes a specific strategic orientation (PSR) to drive an ethically-significant strategic choice (productive versus unproductive entrepreneurship).

Third, we provide a more nuanced understanding of entrepreneurial entry modes. While the distinction between necessity and opportunity remains theoretically intriguing, especially in early venture stages (GEM 2019–20), we empirically depict entry mode as a spectrum (Dencker et al. 2021). Furthermore, we find that the negative influence of a necessity-driven context on PSR is not deterministic. Strong religious beliefs can act as a resilience factor, mitigating the limitations faced by necessity-driven entrepreneurs and bolstering the ethical dimensions of their ventures. This positions religiosity as a key boundary condition that mitigates the potential ethical pitfalls often associated with necessity entrepreneurship, thereby enriching the debate on the opportunity-necessity spectrum.

6.2. Implications for practitioners and policymakers

For practitioners, fostering a strong sense of personal social responsibility within their ventures is not merely an ethical stance but a strategic orientation that can significantly enhance entrepreneurial success and productiveness. For policymakers, this study demonstrates how religious beliefs can enhance the ethical dimensions of entrepreneurship. In contexts like Iran, where religious principles are formally integrated into governance, policymakers have a unique opportunity to align national economic and social welfare goals by explicitly framing productive, socially responsible entrepreneurship as a form of religious and civic duty.

The findings suggest that initiatives developed in partnership with religious institutions could be highly effective. Collaborating closely with mosques, seminaries, and other religious bodies to establish training and support programmes can be mutually beneficial. Prospective entrepreneurs would gain skills and access to the community's social network, while religious institutions could engage them in community-building initiatives, leveraging these often-untapped resources.

Expanding upon Max Weber's classical thesis, we emphasize that religious beliefs can ignite unique opportunities for productive venturing. Our intention is not to advocate for religion, but to acknowledge its role in shaping PSR and economic activity. While the economics of religion suggests an inverse relationship between government pervasiveness and religiosity (Iannaccone 1992, 1998), our study implies that policymakers can promote social utility and economic growth by creating enabling environments that harness the positive, prosocial aspects of religiosity, while proactively addressing potential misinterpretations or abuses

6.3. Limitations and opportunities for future research

This study has limitations that warrant consideration. First, the sample, while valuable for its context, is restricted to entrepreneurs in Iran, which may affect the generalizability of the findings. Future research should replicate this study in diverse cultural and religious contexts. Second, the cross-sectional design limits causal inference; longitudinal studies are needed to capture the temporal dynamics of how religious beliefs and PSR influence entrepreneurial trajectories over time.

Third, our use of PLS-SEM, while appropriate for exploratory model testing and smaller sample sizes, has been subject to methodological critiques (Rönkkö et al. 2016, 2023). Specifically, PLS-SEM does not minimize covariance-based discrepancies and may produce inflated path coefficients under certain conditions. While we followed rigorous reporting standards (Hair et al. 2019, 2022) and complemented our analysis with robustness checks, we acknowledge that future replications using covariance-based SEM or alternative estimation methods would strengthen confidence in the structural relationships observed here.

Beyond these limitations, future research should explore other socio-cultural factors and mediating mechanisms. Investigating different religious beliefs and practices, and employing more objective measures of productive entrepreneurship, could provide deeper insights. Finally, recognizing the potentially recursive nature of these relationships, where entrepreneurial success may, in turn, reinforce religious faith and social responsibility, offers a promising avenue for future inquiry. This direction directly responds to the special issue's call to explore the bi-directional influences between religion and entrepreneurship, further elucidating how these domains mutually shape each other.

7. Conclusion

This study began with a fundamental question about the allocation of entrepreneurial talent: what steers it towards productive ends? Our investigation concludes that the answer lies not in a single factor, but in the dynamic interplay between an entrepreneur's internal compass and their external circumstances. We have moved beyond the question of whether religion matters to delineate how it matters: by forging an internal moral identity, expressed as personal social responsibility, that orients the entrepreneur towards value creation. This PSR-driven orientation proves to be a more powerful predictor of productive outcomes than religious belief alone.

The most profound insight from this research is that the often-cited tension between necessity and opportunity may be less about the objective situation and more about the meaning the entrepreneur derives from it. Religious belief, as a deep-seated worldview, can act as a transformative lens, reframing a situation of constraint into one of purpose and communal obligation. It can, therefore, function as a source of institutional resilience from within the individual, compensating for external institutional weaknesses that might otherwise channel effort into unproductive pursuits. In this light, productive entrepreneurship emerges not just from favourable policies

or market conditions, but from the cultivation of a specific entrepreneurial character—one where economic activity is intrinsically linked to a sense of sacred duty and social covenant.

In conclusion, this study advances the subfield of religious entrepreneurship by uncovering PSR as a critical mediating mechanism and demonstrating how religious commitment can buffer against the ethical compromises often associated with necessity-driven entrepreneurship. By situating our study in Iran – a non-Western, religiously-saturated setting – we address the editorial call to broaden the geographical and cultural horizons of entrepreneurship research. We hope this work inspires further inquiry into how varied religious traditions shape, and are shaped by entrepreneurial action across different regions and communities. By illuminating this moral microfoundation of the economy, our study invites a broader conversation on how the deepest values of human culture shape the creation of wealth and welfare.

Notes

1. The Small Business Development Center – a partnership between government organizations, private sectors, and universities' innovation nucleus – aims to promote economic development among early stage small business owners and aspiring entrepreneurs.
2. Taqwa.
3. Ibadah.
4. Regression Equation Specification Error test.

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