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Individual religious affiliation, religiosity and entrepreneurial intentions among students in four countries

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Abstract

This article explores religion and religiosity in the field of entrepreneurship. Based on an original, international dataset of 740 students, we examine the impact of individual religious affiliation (Protestant, Catholic or Muslim) or non-affiliation (Agnostic/Atheist) on entrepreneurial intentions. We further examine the influence of individual religiosity (beyond mere religious affiliation) on entrepreneurial intentions, offering new insights as to the role religion and religiosity play in entrepreneurship. Findings support the notion that religion matters when entrepreneurial intentions are concerned. We show that having a religious affiliation – as compared to identifying as an Agnostic/Atheist – has a positive relationship with entrepreneurial intentions. More importantly, we show that religiosity – not just religious affiliation – affects intentions differently across different religions, thus pointing to the importance of taking religiosity into account, and not only religious affiliation. We also show that followers of a specific religion cannot be regarded as a uniform group when it comes to entrepreneurship and that it is important to differentiate between streams.

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Introduction

Individual values guide object evaluation and attitude formation, shaping individual behaviours and decision-making directed towards value attainment (Rokeach, 1973). Religion[1] creates a framework of implicit and explicit values that prescribe both desirable and undesirable actions. This extends into all areas of individual decision-making and action (Astrachan et al., 2020). Indeed, research findings indicate that religion influences individual economic behaviour (Di Pietro and Masciarelli, 2021; Gundolf and Filser, 2013; Tracey, 2012; Weber, 2012/1905). Clearly, religion is an important variable that plays a significant role in the lives of many to the extent that it promotes certain kinds of behaviour and proscribes others. This can have important repercussions on economic outcomes, as well as individual career choice. Thus, examining the interplay between religious affiliation, religiosity and entrepreneurial intentions offers a more holistic understanding of the ways in which entrepreneurs may integrate individual variables such as religious beliefs into career choice. As Di Pietro and Masciarelli (2021) note, religion is a macro-level social force that affects business and society, as well as individual behaviour. Similarly, Henley (2017) explains that religion can externally affect entrepreneurial intentions – because religion shapes cultural and social attitudes regarding entrepreneurship as a career choice – as well as internally – because it shapes individual attitudes and behaviours.

Secularisation has accelerated and most countries have become less religious in the late 20th century (Inglehart, 2021). However, the emotional appeal of religion remains important and declining attendance at formal places of worship does not necessarily reflect declining religiosity but rather that subjective forms of religion are simply replacing institutional approaches (Inglehart, 2021). Henley (2017) points to the pluralism in religious expression and the fact that individual religiosity remains important and continues to influence wider society, even when traditional formal religious institutions may be in decline. Moreover, 'religious revival in former communist countries, the prominence of fundamentalist movements in Muslim-majority countries, and the rise of fundamentalist politics in Western countries have demonstrated that religion is not disappearing– and have even brought claims of a "global resurgence of religion"' (Inglehart, 2021, 37). Neubert and Dougherty (2018) indicate that nearly 60% of adult Americans identify with a place of worship. Evidence from the Pew Research Center (2012) supports this trend, showing that, in 2010, approximately 84% of the world's population was affiliated with a religious group and projecting this number to grow to 87% by 2050 (Pew Research Center, 2015).

Research concerning religion and entrepreneurship has gained some momentum since 2007, but has remained a 'niche topic and…has only rarely entered highly ranked social science journals' (Block et al., 2020: 592). In this article, we explore the ways in which religious affiliation (i.e. the religious group to which one belongs) as well as degree of religiosity (i.e. the degree to which people engage in their religion, whether through personal devotion or institutional participation (Hackney and Sanders, 2003) affect a specific type of economic behaviour: entrepreneurial intentions – these are individual intentions to create a business that precede the actual start-up process (Liñan and Chen, 2009; Ratten et al., 2016).

By exploring this question, we bridge five gaps in the existing entrepreneurship literature. First, we examine the role religion plays in the field of entrepreneurship so as to offer a more holistic view of entrepreneurial activity given that, as proposed by Smith, McMullen and Cardon's (2021: 4) 'a theological turn may serve to uncover unique motivational processes'. Calls to examine the relationship between religion and entrepreneurship have already been made by several researchers (Block et al., 2020; Judge and Douglas, 2013; Zelekha et al., 2014). Second, we extend beyond the Western-centric focus of entrepreneurship research (Eze et al., 2020) and include Muslim respondents in our sample. Indeed, Judge and Douglas (2013) stress that entrepreneurship needs to be studied in countries other than those of Christian tradition. More geographic diversity in empirical settings (Gümüsay, 2017) and observing how religion influences entrepreneurial start-ups in economies where religions like Islam dominate (Judge and Douglas, 2013) are identified gaps in entrepreneurship research that we aim to bridge. Third, we examine the relationship between a person's religious affiliation or non-affiliation (Protestant, Catholic, Muslim vs. Agnostic/Atheist) and entrepreneurial intentions. By so doing, we address Block et al.'s (2020: 621) call to explore 'the effects of atheism in its different forms on entrepreneurship'. Fourth, we examine individual-level variables and extend existing macro-level knowledge given most studies are based on country-level data (Audretsch et al., 2013; Dougherty et al., 2013; Henley, 2017; Hoogendoorn et al., 2016; Smith et al., 2021; Zelekha et al., 2014). Obtaining individual data through a questionnaire remains challenging because, at least in some parts of the world, such as Western European countries, religion is seen as belonging to the personal realm and most individuals are reluctant to share their beliefs with researchers.[2] Fifth, and finally, we follow Rietveld and Hoogendoorn's (2022) recommendation and go beyond simply looking at one's religious affiliation and explore religiosity, and the impact it has on entrepreneurial intentions across different religious groups. Existing research, for the most part, measures religion in the form of a dummy variable (religious or not/ belonging to a certain religion or not). However, Rietveld and Hoogendoorn (2022) note that degree of religiosity, beyond simply belonging to one religion or another, matters when it comes to entrepreneurial activity: 'The distinction between belonging to a religion and active engagement is highly relevant, as the strength of the relationship between belonging to a religion and entrepreneurship depends on how actively one engages in religion' (Rietveld and Hoogendoorn, 2022: 20). We would expect that the more religious an individual is, the more likely he or she will be to behave in accordance with core religious beliefs and values.

Our study is based on an original database that measures religiosity at the individual level; the sample of 740 records is composed of Protestant, Catholic, Muslim and Agnostic/Atheist respondents. The results first offer empirical support for the notion that religion matters when entrepreneurial intentions are concerned and show that having a religious affiliation – as opposed to identifying as Agnostic/Atheist – has a positive relationship with entrepreneurial intentions. Second, we show that religiosity – not just religious affiliation – affects intentions differently across different religions pointing to the importance of measuring individual religiosity levels rather than mere affiliation. Third, given our different results for the Protestant and Catholic groups, we show that followers of Christianity cannot be regarded as a uniform group when it comes to entrepreneurship and that it is important to differentiate between Catholics and Protestants. This distinction may also apply to other religions (e.g. Sunni and Shiite Muslims).

Entrepreneurship and religious affiliation

Research suggests that an entrepreneur's religious beliefs intertwine with his or her business activities (Farouk, 2011; Pio, 2010). For example, in their longitudinal study of U.S.-based entrepreneurs, Judge and Douglas (2013: 52) found religious practices 'to be instrumental in assisting the founders [to] cope with limited resources, overcome seemingly insurmountable obstacles and identify new business opportunities'. Because 'religion produces hope and allows troubled people to face the trials of the world', (Seligman, 1991: 258) it may also help entrepreneurs to cope 'with the unknowns associated with the start-up process' (Judge and Douglas, 2013: 37). As a result, religious individuals may be better equipped to cope with the challenges represented by entrepreneurship. In addition, membership in religious organisations may act to shape a mindset that can lead to entrepreneurship (Neubert and Dougherty, 2018). For example, coping with challenges (such as the challenges and uncertainties associated with business start-up) and demonstrating courage is considered to be a social virtue in Catholicism (Naughton and Cornwall, 2006).

Some contemporary work also identifies the impact of religion on ethical behaviour and ethical decision-making in organisations (Van Buren, Syed & Mir, 2019). Furthermore, because some religions promote prosocial and altruistic behaviours, certain individuals, Christian entrepreneurs, for instance, could be more prone to pursue social or sustainable ventures (Khurana et al., 2021; Rietveld and Van Burg, 2014) and look for financial gains for others or for prosocial service (Smith et al., 2019) such as 'seeking to make life a little better for everyone whose path [the entrepreneur] crossed [and]…to fulfil the expectations of [the] community'. (Judge and Douglas, 2013: 558). An additional link between religious affiliation and entrepreneurship is the role played by religious affiliation in building social capital and facilitating social trust, 'because individuals may be more trusting or more trustworthy towards those who share their religious identity' (Seabright, 2016: 203). This can benefit entrepreneurs when they 'might be able to signal, through their (actual or claimed) religious conviction, a greater trustworthiness to customers, business partners' (Seabright, 2016: 214) and even investors as 'religiosity induces greater trust and this trust leads to increased…resource flows' (Di Pietro and Masciarelli, 2021: 2).

Whilst such studies offer some insight as to how an entrepreneur's religious affiliation may affect management practices, sector choice or type of entrepreneurship, the question regarding the ways in which religion affects entrepreneurial intentions remains largely unanswered and inconclusive. Some studies suggest that religious affiliation may be positively associated with entrepreneurial intentions, at least in some religions. For example, Hoogendoorn et al. (2016) suggest that religion may drive entrepreneurial intentions because, through the participation in religious networks, one may gain information regarding opportunities, access to potential customers and financial or human resources. In their study using data from 30 OECD countries, Hoogendoorn et al. (2016) show a positive link between religious beliefs and business ownership rates at the national level, concluding that value differences between religious and non-religious groups may influence business ownership rates across nations. Balog, Baker and Walker (2014) suggest that some entrepreneurs, depending on their cultural beliefs and religious values, see self-employment as a duty to their communities, their families and their God. This deeply engrained virtue serves to affect their attitudes and motivations towards entrepreneurship in a way that is significantly different from other entrepreneurs (Dougherty et al., 2013; Morris and Schindehutte, 2005). Judge and Douglas (2013: 47) add that the religious 'identity of the founder…is systematically related to the entrepreneur's motivation to engage in the start-up process'.

Evidence regarding the impact of religious affiliation on entrepreneurship is, however, not unidirectional, nor consistent. Indeed, other research suggests that there is no relationship, not even a negative one, between religion and entrepreneurship. For example, Drakopoulou-Dodd and Seaman's (1998) UK-based study did not find any relationship between religious beliefs and entrepreneurial behaviour. Audretsch, Obschonka, Gosling and Potter (2017: 693) studied different regions in the US and concluded that there was not any 'indication that religious values were an important shaper, or element, of a local entrepreneurship culture'. By drawing data from eight biennial survey waves of the European Social Survey, Rietveld and Hoogendorn (2022: 1) show that 'individuals who belong to a religion prioritise values related to *conservation* higher than values related to *openness to change*, when the opposite is true for entrepreneurs'. Similarly, because religious people give importance to values promoting the status quo of social and individual order – attributing high importance to values that promote stability and tradition – they may put less value on openness to change, independence, self-enhancement and hedonism (Saroglou et al., 2004). Others (Benjamin et al., 2016; Leon and Pfeifer, 2013; Zhang and Liu, 2021) associate religion with risk aversion and suggest that religious affiliation may be negatively linked to entrepreneurial intentions. In order to address some of the gaps and inconsistencies in existing research findings, we focus upon the nature of the relationship between religious affiliation and entrepreneurial intentions. We do so at the individual, rather than country, level and include Agnostic/Atheist individuals in our sample. We propose that:

H1. *Religious affiliation will positively influence entrepreneurial intentions.*

De Noble, Galbraith and Stiles (2007) show that an individual's specific religious affiliation can have a significant impact on perceptions of self-employment, illustrating the crucial relationship between values and entrepreneurship. Indeed, religions do not promote the same values and may influence occupational choices and entrepreneurial intentions differently (Rokeach, 1973; Schwartz and Huisman, 1995). Using the 'Faith at Work' national dataset, Ecklund et al. (2020: 14) second this notion and argue that 'the views of the sacred significance of work differ across religious traditions'. We discuss the variations across different religious groups in the following section.

Religious affiliation differences

In this section, we offer some insights from past research as to how different religions can promote or hinder entrepreneurial activity. Empirical evidence at the macro-level appears to suggest that differences in religious denominations influence self-employment (Audretsch et al., 2013; Carswell and Rolland, 2007). Using a national employment study, Audretsch et al. (2013) show that some religions are more conducive to self-employment. In the Indian context, the authors observe that Hinduism and Buddhism restrict self-employment, that Islam and Jainism encourage it, and that Christianity (the authors make no difference between Catholicism and Protestantism) does not have any influence upon entrepreneurial intentions. Parboteeah, Walter and Block (2015) also report that a country's religious profile has a different impact on individual entrepreneurial activity. Similarly, based on a cross-country database examining the effect of religion in 176 nations (collected through LinkedIn), Zelekha et al. (2014) also show that religions have different effects on the tendency to become an entrepreneur at the country level. They find that the highest tendency towards entrepreneurship exists among Jews, followed by Hindus, Protestants, Orthodox, Buddhists, Catholics and Muslims. They also show that it is a country's main religion, rather than the size of the different religious groups, that affects the level of entrepreneurship at the macro-level. This occurs because a nation's dominant values are 'influencing the desirability, the perceived risks and the returns of entrepreneurial activities' (Zelekha et al., 2014: 749). In a study using various cross-national sources and GEM data, Henley (2017) identifies a significant link between entrepreneurship and Evangelical or Pentecostal Christian affiliations.

At the individual level, religious affiliation may act to shape individual attitudes and behaviour, which can motivate or discourage entrepreneurial activity. Weber (2012/1905) identified Protestant values – the Protestant work ethic – as playing a critical role in developing a spirit of capitalism and promoting a moral code for striving towards profit and wealth accumulation. The protestant work ethic is argued to provide a favourable climate for entrepreneurial activity (Weber, 2012/1905) because it directs many people to work in the secular world and develop their own wealth. Vinod (2012) adds that the Protestant work ethic includes a high degree of trade morality, free competition and the pursuit of wealth without guilt. This is confirmed by Nunziata and Rocco (2016) who, using Swiss census data, compare Protestant and Catholic minorities and find that Protestantism is associated with higher propensity for entrepreneurship. The Catholic work ethic, on the other hand, does not emphasise wealth accumulation as an objective (Zelekha et al., 2014) but sees the common good as the priority of businesses fostering moral obligations for owners/managers towards their workers and society at large (Dunn, 2014; Naughton and Cornwall, 2006). The Catholic social tradition is not opposed to entrepreneurial economic activity. Rather, it stresses that an entrepreneur should not see the business 'as profits to be maximized, but wealth to be shared and communities to be developed…entrepreneurship holds significant promise in fostering the common good so long as entrepreneurs see their work not only in terms of material gain or technical skills, but also in terms of virtue [and] the common good' (Naughton and Cornwall, 2006: 71).

Thus far, there has been limited empirical work on the relationship between Islam and entrepreneurship. Whilst Zelekha, et al. (2014) found that the share of Jewish, Hindu,[3] Protestant and Orthodox religions in the population has a significant and positive effect on entrepreneurship, they did not find the same result in predominantly Muslim nations. Landes (1999) suggests that Islam has a limiting effect on economic development and entrepreneurship. This is supported by Zelekha, et al. (2014: 751) who cite 'lack of freedom and limited property rights suppressing business, competition and economic development' as key challenges. Other aspects of Islam such as the importance of the group (Landes, 1999), or traditionalism (Huntington, 1996), further discourages entrepreneurial initiative. Eze et al. (2020) point out that Islam does not encourage risk taking and that, as a result, this creates a mindset that 'outcomes are…predetermined' (Eze et al., 2020: 17). This submission to 'the will of God' can limit risk taking and restrict the extent to which entrepreneurial opportunities are exploited.

Whilst the literature seems to clearly suggest that religion matters, we go beyond simple religious affiliation and explore the degree to which one's religiosity (i.e. the degree to which the individual engages in religious practices and/or embraces religious beliefs) affects entrepreneurial intentions. Many people may self-identify as members of one religion or another; however, not all individuals practice their religion, or adhere to core religious values, with the same intensity. Audretsch et al. (2013) recognise this by acknowledging that, whilst their analysis implicitly assumed that individuals belonging to different religions practice those religions, how religious individual are (i.e. their religiosity), can be influential in shaping occupational choice. Similarly, in their study of family firms, Fathallah et al. (2020) recognise the importance of accounting for variations in religiosity levels when conducting research involving religion. Judge and Douglas (2013) also point to the importance of studying religiosity and the degree of religious commitment in understanding entrepreneurial behaviour. We, therefore, look beyond mere religious affiliation and explore how one's level of religiosity influences entrepreneurial intentions.

Religiosity

As hypothesised in H1, whether one has a specific religious affiliation or identifies as Agnostic/Atheist, may shape attitudes towards entrepreneurship and entrepreneurial intentions. However, the degree to which one adheres to religious values or beliefs may matter as well, if not more, in comparison to simple affiliation. Religiosity refers to how religious individuals are and their degree of active engagement in religious rituals or activities. The more religious an individual, the more likely he or she is to adhere to core religious values, beliefs and behaviours promoted by religion.

Indeed, Balog et al.'s (2014) literature review indicates that religiosity influences how an entrepreneur manages the business; for example, Bellu and Fiume (2004) suggest that, because religion inspires caring for others, it reduces focus on material rewards as the primary goal. They expect higher religiosity levels among entrepreneurs to increase their focus on 'the greater good' and reduce self-centred behaviours suggesting that 'religiosity, by infusing a sense of hopefulness in the perspective with which some individuals undertake entrepreneurial actions, may actually enhance the entrepreneur's expectations of success'.

Saroglou (2011) identified four basic dimensions to assess individual religiosity levels that are distinct although interconnected. These dimensions – Believing, Behaving, Belonging and Bonding – reflect distinct psychological processes (cognitive, moral, social and emotional), providing information on the dimensions along which individual religiosity levels may vary. The stronger one's religiosity, the more likely it is to influence individual decisions, beliefs and behaviours. As a whole, these four dimensions allow us to measure an individual's religiosity. (1) *Believing* addresses the cognitive dimension of religion, the belief in certain religious propositions. It is 'a universal dimension of religiosity…the belief in some kind of external transcendence' (Saroglou, 2011: 1323). (2) *Behaving* addresses the behavioural component through moral arguments defining right and wrong from a religious perspective, namely behaving in accordance with religious values. (3) *Belonging* addresses the sense of belonging that individuals derive from affiliating with a religious group or community. This dimension relates to the social processes and shared norms considered socially desirable among members of a religious group. (4) *Bonding* addresses the emotional dimension of religion, the sense of bonding through rituals and practices, or 'the emotional self-transcendence people experience through religious rituals' (Saroglou, 2011: 1326). Rituals may be public such as church attendance or midday prayer and/or private such as prayer or meditation.

Because each dimension represents a different psychological process, product, goal or outcome, Hoogendoorn et al. (2016) suggest that different dimensions will also have a different influence on decision-making processes such as occupational choices. In their country-level study, they examined the relationship between religiosity and a country's business ownership rate. The authors used the European Value Survey as a proxy to assess the four dimensions of religiosity and explore the relationship between these dimensions and business ownership rates in different nations. Their findings indicate that one's affiliation with a specific religious group versus another (Belonging) or engaging in religious rituals as a way to connect with one's beliefs or group (Bonding) did not have any significant impact on a nation's business ownership rate. Thus, the external manifestations of religion assessed in Belonging and Bonding (affiliation and frequency of practice) are not related with a country's business ownership rate. However, higher levels of Believing and Behaving were associated with higher levels of business ownership. These findings suggest that a positive relationship between religiosity and business ownership rates exists, at the country level, for those dimensions that reflect internal aspects of religiosity: Believing and Behaving. Hoogendoorn et al. (2016) explain this relationship in that believing in God or a higher power (Believing), and related norms or moral standards reflected in one's behaviour (Behaving), indicate what is socially desirable or undesirable and may, therefore, influence day-to-day behaviours including occupational choice such as the decision to pursue self-employment.

Religiosity and entrepreneurial intentions

Whilst the four basic dimensions of religiosity are 'presumably universally present across religions [and] across cultural and religious groups, these dimensions may differ in content, salience, and ways in which they are interconnected or emphasized' (Saroglou, 2011: 1320). Hoogendoorn et al. (2016) suggest that the different dimensions of religiosity will influence attitudes towards entrepreneurship differently. These could possibly shape entrepreneurial intentions as well. We, therefore, consider each religion separately: Protestants, Catholics and Muslims, because the four dimensions of religiosity are likely to differ between religions and because each religion prescribes different norms and values when it comes to business ownership and wealth creation.

Protestantism

Whilst Catholicism and Protestantism are both Christian religions, their perspective on business and its role in society differ. The Protestant Reformation changed beliefs about the pursuit of wealth from being not only for personal advantage but also an individual responsibility (Weber, 2012/1905), giving legitimacy to the pursuit of individual prosperity (Di Pietro and Masciarelli, 2021). The protestant work ethic dictates a high degree of trade morality, free competition and the pursuit of wealth without guilt (Vinod, 2012). Protestantism is argued to provide a favourable climate for entrepreneurial activity because it encourages individuals to engage with the secular world so as to develop their own wealth (Landes, 1999; Weber, 2012/1905). Indeed, Protestant values see individuals as directly accountable to God for the way they live thus, leading to an insistence on hard work, careful use of time, money and innovation (Jones et al., 2010). Neubert and Dougherty (2018) also cite evidence that membership in religious congregations can serve to shape the entrepreneurial orientation of congregants, potentially contributing to entrepreneurial activity. 'Congregational leaders have a profound influence on their members through what is emphasised from the pulpit… this influence extends to shaping work attitudes and behaviours' (Neubert and Dougherty, 2018: 173). When looking at the impact of religiosity among the Protestant respondents on their entrepreneurial intentions, we would expect the internal dimensions of religiosity (Believing and Behaving) to be positively related to entrepreneurial intentions, given the belief that hard work and its rewards are endorsed by a higher power and therefore desirable. We would also expect the social dimension of religiosity (Belonging) to be positively related to entrepreneurial intentions given that the pursuit of economic activity is socially accepted in the Protestant value system. Dodd and Gotsis (2007) support this notion suggesting that social desirability of entrepreneurship is enhanced when institutions (such as religious institutions) surrounding the entrepreneur provide positive legitimation for entrepreneurship. Finally, the participation in religious rituals (Bonding) is not expected to influence entrepreneurial intentions. The 'emotional self-transcendence people experience through religious rituals' (Saroglou, 2011: 1326) is not expected to influence entrepreneurial intentions among Protestants in the same way as the beliefs in the very morality of entrepreneurial ventures (Behaving), the belief in a higher power that endorses entrepreneurial activity (Believing), or the positive perceptions of entrepreneurship and entrepreneurs rooted in Protestant social norms (Belonging). We, therefore, propose that, for the Protestant sample,

H2a. *'Believing' will positively influence entrepreneurial intentions.*

H2b. *'Behaving' will positively influence entrepreneurial intentions.*

H2c. *'Belonging' will positively influence entrepreneurial intentions.*

H2d. *'Bonding' will not influence entrepreneurial intentions.*

Catholicism

The Catholic work ethic does not emphasise wealth accumulation as a goal in and of itself (Zelekha et al., 2014). Rather, Catholicism considers that business should be primarily aimed at serving the common good and focus on the moral obligations of business owners/managers towards the well-being of their workers and society (Dunn, 2014; O'Connor, 2004; Naughton and Cornwall, 2006). One of the principles of the 'Catholic Framework for Economic Life' states that 'all economic life should be shaped by moral principles. Economic choices and institutions must be judged by how they protect…the life and dignity of the human person, support the family and serve the common good' (O'Connor, 2004: 17). The common good that the entrepreneur is creating, stems from a focus on 'creating organisational conditions that foster human development…[and] a life of shared goods that are not only economic but also social in nature' (Cornwall and Naughton, 2003: 72). Catholicism considers courage to be a virtue, 'the virtue that allows one to endure difficulty and pain' (Naughton and Cornwall, 2006: 73) which are frequently part of starting and sustaining a business and encountering major obstacles that threaten the economic survival of the business. However, whilst courage is a moral virtue, in the context of entrepreneurship it requires the entrepreneur to not only be courageous but also work towards desirable ends – the common good (Naughton and Cornwall, 2006). When analysing the impact of religiosity on entrepreneurial intentions among Catholics, we would expect that the belief in a higher power (Believing) would be positively related to entrepreneurial intentions. Given that Catholic values endorse business activities that are supportive of social good, Catholic individuals would consider such activities to be aligned with their religious beliefs. In terms of religious moral arguments distinguishing right and wrong (Behaving), we would not expect those values to be related to entrepreneurial intentions because Catholicism does not promote entrepreneurship as a moral activity to the same extent as Protestantism. Whilst Protestantism views entrepreneurship as a morally desirable career choice, Catholicism only considers it as such when the business also serves the common good. For the same reason, we would not expect the social dimension of religiosity (Belonging) to be related to entrepreneurial intentions because this dimension addresses socially desirable norms and values. In terms of Bonding, we expect the degree to which someone participates in religious rituals (Bonding) to be negatively related to entrepreneurial intentions because engaging in religious rituals and prayer can act to reinforce the collective focus among Catholic individuals, calling for fewer individual behaviours like entrepreneurship (Ghorpade et al., 2006). Based on these factors, we propose that, for the Catholic sample,

H3a. *'Believing' will positively influence entrepreneurial intentions.*

H3b. *'Behaving' will not influence entrepreneurial intentions.*

H3c. *'Belonging' will not influence entrepreneurial intentions.*

H3d. *'Bonding' will negatively influence entrepreneurial intentions.*

Islam

The third religion we examine in our study is Islam. The Qur'an 'underscores that trade and business are allowed whereas usury and interest are forbidden' (Saleem et al., 2018: 328). Whilst Islam disallows certain economic activities such as charging interest (Gümüsay, 2017), it demands honest business transactions such as treating customers fairly and honestly (Graafland et al., 2006). Arslan (2000) confirms that honesty may in fact be one of the most important elements of a successful business in part because Islamic values play an important role in conducting business. The Muslim men and women interviewed in Sloane-White's (2011) study indicated that Islamic business must avoid all forms of injustice and harm, such as bribery, and support ethical behaviours and moral values to 'promote social solidarity and welfare' (Sloane-White, 2011: 307). In his study of Muslim entrepreneurs in Turkey, Adas (2006) similarly argues that Islam is not incompatible with capitalism, but rather that Muslim entrepreneurs integrate Islamic values in entrepreneurship. Whilst adhering to Qur'anic laws regarding forbidden activities (e.g. selling forbidden products like alcohol), Muslim entrepreneurs find ways to secure financing despite prohibition of charging interest by taking advantage of government incentive programmes (Kavas et al., 2020), 'obtaining credits and loans from state and non-Islamic banks' (Adas, 2006: 122), borrowing from friends and family or insisting that 'a predetermined fixed rate on money loans equal to or below the inflation rate should not be considered as interest' (Adas, 2006: 121).

Unlike the supportive message that Christian religious values communicate regarding economic activities for economic growth (Protestantism) or for community and social welfare (Catholicism), Islam does not prescribe such activities for their inherent value. Islamic values mandate the way in which business activities must be executed if one chooses to pursue them, but do not directly encourage or discourage them. We, therefore, expect that for the Muslim sample, the internal dimensions of religiosity (Believing or Behaving) will not be related to entrepreneurial intentions because the internal dimensions of religiosity determine what individuals perceive to be a socially desirable behaviour and may, therefore, influence behaviours like career choice. Unlike Christian religions that see economic activity as desirable Islam does not value economic activity in and of itself. However, we would expect that the social dimension of religiosity (Belonging), which applies to norms and values regarding social interactions, would have a positive impact on entrepreneurial intentions compared to the internal dimensions of religion (Believing and Behaving). Indeed, whilst Islam does not prescribe business ownership per se, it clearly prescribes what constitutes appropriate social interactions with customers and/or business associates. Islam is grounded in a moral or ethical code that promotes a balanced satisfaction of both the material and the spiritual aspirations of individuals (Kavas et al., 2020). Whilst Muslim values do not endorse entrepreneurship to the same extent as Christian ones, Muslims who do decide to pursue an entrepreneurial career are expected to adhere to specific behavioural norms.

Finally, we expect the extent of one's participation in religious rituals (Bonding) to be negatively related to entrepreneurial intentions because bonding with the community through rituals reinforces the collective perspective of the actors and thus limits individual actions, (i.e. entrepreneurship). Muslim values have a collectivist orientation, for example, the Islamic concept of *Ummah* expresses the essential unity and equality among Muslims from diverse cultural and geographical settings (Esposito, 2020). Accordingly, we suggest that:

H4a. *'Believing' will not influence entrepreneurial intentions.*

H4b. *'Behaving' will not influence entrepreneurial intentions.*

H4c. *'Belonging' will positively influence entrepreneurial intentions.*

H4d. *'Bonding' will negatively influence entrepreneurial intentions.*

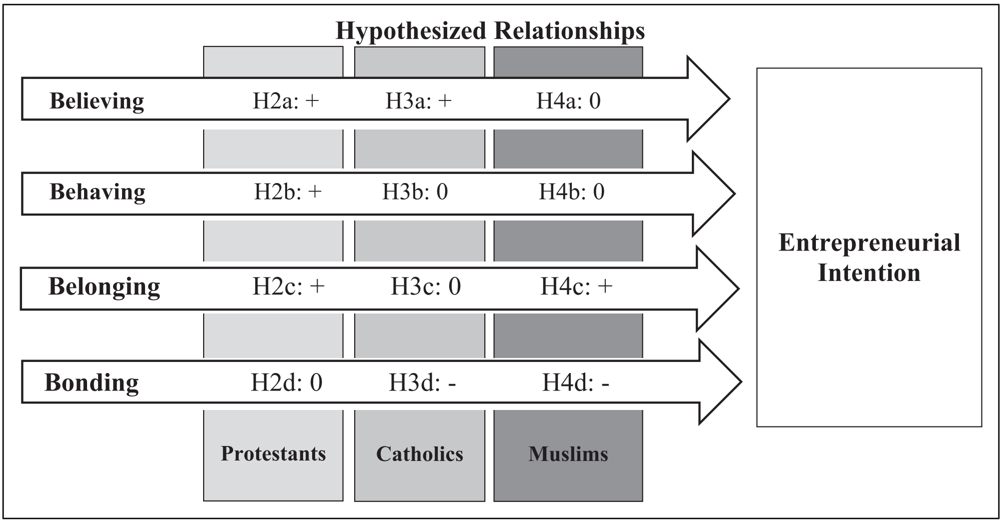

Figure 1. Hypothesised relationships.

Conceptual model

Figure 1 represents our conceptual model, depicting the hypothesised influence of the four dimensions of religiosity on entrepreneurial intentions, for each religion.

Methodology

Sample

Study participants – university students in Belgium, France, Iran and the US – received electronic questionnaires (using Qualtrics) and were invited to participate via electronic mail. Data collection took place in 2018. The use of student samples to examine entrepreneurial intentions has received some support because 'students face an immediate career choice [and] …starting a business may be a realistic option for them' (Krueger et al., 2000: 425). Similarly, Hmieleski and Corbett (2006: 59) advocate 'the importance of studying the intentions of students, who, through university…programs and the increased infusion of entrepreneurship across educational curriculums, experience increasingly lower barriers in starting their own businesses'. In addition, student samples are very common in entrepreneurship research (Liñán and Chen, 2009), especially given evidence that 25- to 34-year-old university graduates show the highest propensity toward new venture creation (Reynolds et al., 2004). A total of 1337 students responded to our questionnaire, 597 individuals were omitted due to missing values resulting in a final sample of 740 students (223 Belgians, 112 French, 145 Iranians, 88 Americans and 172 of another nationality). Among the respondents, 55.7% are studying management or economics, 80.1% are under 25 years of age, 35.9% say they have had at least one course in entrepreneurship during their studies and 8.5% have already started a business.

Survey instrument

Our questionnaire was administrated in French (for the students in France and Belgium), in English for the students in the US and in Farsi for the students in Iran. The questionnaires in French and Farsi were back translated into the language of origin to assure no loss of meaning. We measured religious affiliation on a nominal scale and, using Likert scales, we measured the level of religiosity and entrepreneurial intention as well as some demographic data. Our survey instrument employed constructs from prior studies on religiosity, individual economic behaviour and entrepreneurial intentions. The individual scales are discussed below.

Variables

Religious affiliation was assessed by asking respondents to select among the following choices: (1) Catholic, (2) Protestant, (3) Christian-other, (4) Muslim, (5) Agnostic, (6) Atheist, (7) Jewish and (8) Other. The final analysis, however, included only four groups (Protestant, Catholic, Muslim and Atheist/Agnostic) given the low response rate among members of other religious affiliations. For the purposes of our analysis related to H1, we created a dummy variable 'Religious affiliation' with a value of '1' if the respondent had chosen Protestant, Catholic or Muslim for religious affiliation and '0' for Agnostic/Atheist. The four dimensions of Religiosity (Believing, Behaving, Belonging and Bonding) were constructed based on their theoretical definition by Saroglou (2011). The four dimensions were assessed using seven-point Likert scales, based on constructs from prior studies on religiosity (Huber and Huber, 2012; Saroglou, 2009; Sethi and Seligman, 1993).[4]

Three items[5] assessed the Believing dimension: (1) 'I believe in heaven', (2) 'I believe in miracles' and (3) 'I believe that we will be rewarded for our suffering'. Four items[6] assessed the Behaving dimension: 'What influence do your religious beliefs have on (1) the clothes you wear? (2) what you eat and drink? (3) the people you choose to associate with? and (4) the social activities you take part in?' Three items[7] assessed the Belonging dimension: (1) 'Belonging to a religious group/community is important to me', (2) 'Being part of a religious tradition and having a religious identity is important for me' and (3) 'Being part of a religious tradition is important for my cultural/ethnical identity'. Finally, three items[8] assessed the Bonding dimension: (1) 'Do you ever pray?' (2) 'How often do you read sacred texts?' and (3) 'How often do you take part in religious services or activities?'

Entrepreneurial intention was measured using Liñan and Chen's (2009) well established six-item scale. The seven-point Likert scale ranged from '1' being 'completely disagree' to '7' being 'completely agree'. The items were (1) 'I am ready to do anything to become an entrepreneur'; (2) 'My professional goal is to become an entrepreneur'; (3) 'I will do whatever it takes to set up and run my own company'; (4) 'I am determined to set up my own company in the future'; (5) 'I have thought seriously about setting up a company' and (6) 'I have the firm intention to set up my own company one day'.

Control variables

Sex was included as a control variable because research indicates that men have stronger entrepreneurial intentions than women (Díaz-García and Jiménez-Moreno, 2010; Gupta et al., 2009). Empirical evidence also indicates that, in spite of the growth in female entrepreneurship, there are still almost twice as many male entrepreneurs (Bosma and Levie, 2009). We would, therefore, expect men to have stronger entrepreneurial intentions across the different religious groups. Sex was

Table 1. Sample characteristics.

Variables	N (%)	Mean
Gender (male)	304 (55.5)	
Education level (university degree)	255 (46.6)	
Entrepreneurial Intention (yes)[a]	359 (65.6)	
Protestant	89 (12)	
Catholic	287 (38.8)	
Muslim	171 (23.1)	
Atheist/Agnostic	193 (26.1)	
Believing		5.45
Behaving		3.17
Belonging		5.36
Bonding		3.45

[a](Entrepreneurial Intention) was recoded as a binary variable with a value of '1' if the respondent had, on average, an entrepreneurial intention higher than 4 and '0' otherwise.

coded as '1' for 'male' and '0' for 'female'. While a category of 'Other' was also included in this variable, no respondent selected it.

Education was a second control variable given that educational attainment has been linked to entrepreneurial intentions. Knight's (1933) career theory, for example, argues that special abilities gained through education and past work experience would act as motivators to enter self-employment. Educational attainment was measured by asking: 'What is your highest educational qualification?' Response options included: (1) 'Some high school', (2) 'High school graduate', (3) 'Some university', (4) 'undergraduate degree', (5) 'Some graduate school' (6) 'Master's Degree' and (7) 'PhD'. For the purposes of our analysis, the education level variable was recoded from a categorical variable into a dummy variable as follows: '1' for those who were university educated (having earned a Bachelor's degree or higher) and '0' for the other choices (indicating university students who have not yet obtained a bachelor's degree).

Data analysis

As proposed in our research hypotheses, we examined (1) the effect of having or not having a religious affiliation on entrepreneurial intention (H1) and (2) whether religiosity (beyond mere affiliation with one religion or another) would affect individual entrepreneurial intentions across different religious groups (H2a–d, H3a–d and H4a–d). In order to test H1, we used a logistic regression approach, whereas to test our three sets of subsequent hypotheses (H2–H4), we used the partial least squares (PLS) approach to structural equation modelling. We present the results of the logistic regression (H1) and the results of the PLS analysis (H2a to H4d) in the following section.

Results

Descriptive statistics

Table 1 shows the distribution (frequency and percentage) of variables in our sample. Concerning the four dimensions of religiosity, we have indicated the mean value for each of the four dimensions.

Table 2. Logistic regression: Religious affiliation and entrepreneurial intention (H1).

	Entrepreneurial intention	
	Coefficients	*p*-value
Sex (being male)	0.648	0***
Education level	−0.094	.547
Religious affiliation	0.668	.000***
Constant	0.322	.039**
N	740	
−2Log	−944,902	
χ2	37.479***	
R^2 (Nagelkerke)	0.067	

** $p < .05$; *** $p < .01$.

Religious affiliation and entrepreneurial intention

We test hypothesis H1 examining the effect of having or not having a religious affiliation on one's entrepreneurial intention, including sex and education level as control variables. The dependent variable (Entrepreneurial Intention) was recoded as a binary variable with a value of '1' if the respondent had, on average, an entrepreneurial intention higher than 4 and '0' otherwise. To obtain these mean values, we calculated the mean for each respondent by adding up the 6 items related to the entrepreneurial intention. The discriminant value of '4' was chosen because, on the Likert scale used to measure entrepreneurial intentions, the value '4' represents the midpoint. Table 2 reports the logistic regression coefficients and the *t*-test values.

We find that having a religious affiliation (in our case identifying as Protestant, Catholic or Muslim), compared to not having a religious affiliation (i.e. identifying as Atheist or Agnostic), significantly and positively ($\beta = 0.668$) influences one's entrepreneurial intention, supporting H1. Results also show that sex (being male) has a significant and positive influence ($\beta = 0.648$) on entrepreneurial intention. However, Education level does not significantly influence entrepreneurial intention in our sample.

Religiosity and entrepreneurial intention

As proposed in our research hypotheses H2a through H4d, we analysed the influence of the four dimensions of religiosity (Believing, Behaving, Belonging and Bonding) on the entrepreneurial intention of Protestant, Catholic and Muslim respondents. In order to do so, we used the partial least squares SEM (PLS-SEM) approach. PLS-SEM comprises a measurement model and a structural model (do Paço et al., 2011). The first determines the relations between observed items and the latent variables. The second determines the relations between the latent variables (Barclay et al., 1995). Therefore, the PLS-SEM model is interpreted in two stages: In the first stage, reliability and validity of the measurement and the model are assessed and, in the second stage, the structural model is assessed by evaluating the explanatory power and the significance of the path coefficients (Chin, 1998). As Fornell and Bookstein (1982) emphasised, the PLS-SEM approach is more appropriate than maximum likelihood approaches when the goal of the research is prediction rather than model fit. PLS-SEM is also particularly appropriate for exploratory research because it makes minimal demands with respect to measurement scales, sample size and residual redistributions (Chin, 1998;

Wold, 1985). Since the aim of our study is to predict the direct effect of the four religiosity dimensions on entrepreneurial intention, the PLS-SEM approach is well suited. In this study, we used the Smart PLS software (v3.2.9).

In order to test the reliability and validity (see Table 3) of the latent variables (Believing, Behaving, Belonging, Bonding and Entrepreneurial Intention), we performed a principal component analysis (PCA) and used the statistic from the PLS measurement model for each religious affiliation. The PCA results show that five factors with eigenvalue larger than one emerged for each religious affiliation. We identify these factors as Believing, Behaving, Belonging, Bonding and Entrepreneurial Intention constructs. The reliability of these variables was assessed using Fornell and Larcker's (1981) composite reliability and Cronbach's alpha. The composite reliability and Cronbach's alpha values for the variables are above 0.7 (see Table 3), demonstrating acceptable reliability (Nunnally, 1978). The convergent validity is evaluated by analysing the value of the average variance extracted (AVE) statistic. The AVE for the variables is higher than 0.5 (see Table 3), again demonstrating adequate convergent validity (Chin, 1998). Finally, in order to evaluate the discriminant validity, we applied the Heterotrait–Monotrait (HTMT) ratio of correlations criterion to detect a potential lack of discriminant validity. The HTMT is the correlation of indicators across constructs measuring different phenomena, relative to the correlations of indicators within the same construct. As the HTMT estimates the correlation between two constructs, the discriminant validity can be established when the two constructs have an HTMT criterion value inferior to 0.85 (more conservative approach) or inferior to 0.90 (more liberal approach). We find that the HTMT values range from 0.085 to 0.810. These results allow us to conclude that the discriminant validity is not a concern in this research. Overall, the results presented in Table 3, and the HTMT values, indicate that the reliability and the validity for the Believing, Behaving, Belonging, Bonding and Entrepreneurial Intention constructs are satisfactory for each religious group.

Religiosity and entrepreneurial intention by religious affiliation

The aim of our conceptual model is to test the direct effect of the four dimensions of religiosity on individual entrepreneurial intentions (set of H2–H4) for each of the religions explored in this study. Table 4 reports the structural model coefficients and the *p*-value related to our hypotheses H2a through H4d. In this model, we also integrated sex and education level as control variables.

For the Protestant respondents, as expected, the Believing ($\beta = 0.337$) and Belonging ($\beta = 0.112$) dimensions have a positive and significant influence on entrepreneurial intentions. While we did not expect the Bonding dimension to influence entrepreneurial intentions, it had a negative and significant influence ($\beta = -0.233$). Finally, our expectation that the Behaving dimension would have a positive influence on entrepreneurial intentions did not materialise. Overall, for those identifying as Protestant, we find support for H2a and H2c, failing to support H2b nor H2d.

For the Catholic respondents, two dimensions show a significant influence on entrepreneurial intentions. As we expected, the Believing dimension has a positive and significant influence ($\beta = 0.249$). While we hypothesised that the Belonging dimension would not influence entrepreneurial intentions, results show that this dimension has a negative and significant influence ($\beta = -0.103$). The Behaving dimension did not have a statistically significant influence on entrepreneurial intentions, which was what had been hypothesised. For the Bonding dimension, however, whilst we expected a negative influence, we did not find any statistically significant influence on entrepreneurial intention for the respondents who identify as Catholic. These results support H3a and H3b, but not H3c nor H3d.

Table 3. Exploratory factor analysis (Varimax), reliability, and average variance extracted (AVE) statistics by religious affiliation.

	Protestant					Catholic					Muslim				
Factor analysis indicators	Int.	Beha.	Belie.	Belon.	Bond.	Int.	Beha.	Belie.	Belon.	Bond.	Int.	Beha.	Belie.	Belon.	Bond.
Do you ever pray?	.020	.261	.413	.193	***.753***	.012	.354	.457	−.054	***.675***	.052	.353	460	.284	***.572***
How often do you read sacred texts?	.042	.554	.065	.100	***.693***	.088	.598	.237	.030	***.597***	.097	.352	.176	.132	***.717***
How often do you take part in religious services or activities?	.098	.543	.077	.094	***.641***	.094	.385	.278	−.038	***.756***	−.022	.287	.209	.092	***.750***
What influence do your religious beliefs have on the clothes you wear	.086	***.847***	.064	.033	.226	.147	***.805***	.160	−.026	.222	.013	***.797***	.227	.152	.230
What influence do your religious beliefs have on what you eat and drink?	.184	***.820***	.101	.063	.109	.100	***.781***	.167	−.044	.076	−.016	***.714***	.346	.218	.151
What influence do your religious beliefs have on the people you choose to associate with?	−.055	***.807***	.211	.260	.067	−.035	***.815***	.177	.006	.119	−.012	***.739***	.165	.128	.230
What influence do your religious beliefs have on the social activities you take part in?	.002	***.793***	255	.056	.337	.035	***.817***	.195	.064	.178	.053	***.774***	.233	.204	.250
I believe in heaven	.120	.278	***.589***	.015	.426	.118	.198	***.801***	.084	.278	.058	.339	***.694***	.396	.292
I believe in miracles	.242	.104	***.699***	.111	.444	.124	.221	***.819***	.044	.218	−.045	.084	***.724***	.164	.290
I believe that we will be rewarded for our suffering	.136	.227	***.847***	−.065	−.026	.133	.317	***.773***	.083	.043	−.044	.114	***.776***	.297	.264
Belonging to a religious group/ community is important to me	−.029	.162	−.056	***.710***	.275	−.012	.017	.144	***.711***	−.204	.184	.188	.278	***.599***	.425
Being part of a religious tradition and having a religious identity is important for me	.107	.099	.005	***.869***	.078	−.040	.009	.032	***.865***	−.016	.142	.353	.156	***.833***	.069

(continued)

Table 3. (continued)

Factor analysis indicators	Protestant Int.	Beha.	Belie.	Belon.	Bond.	Catholic Int.	Beha.	Belie.	Belon.	Bond.	Muslim Int.	Beha.	Belie.	Belon.	Bond.
Being part of a religious tradition is important for my cultural/ ethnical identity	.142	.060	.076	***.902***	−.075	−.033	−.024	−.021	***.792***	.170	.091	.306	.039	***.843***	−.070
I am ready to do anything to become an entrepreneur	***.803***	.044	.340	.020	−.006	***.777***	.152	.165	−.046	.052	***.798***	.130	.029	.134	.130
My professional goal is to become an entrepreneur	***.929***	.017	.054	.036	.009	***.920***	.019	.070	−.012	.104	***.698***	.199	.003	.363	.101
I will do whatever it takes to set up and run my own company	***.934***	.046	.076	.070	−.111	***.819***	.081	.143	−.020	−.156	***.747***	−.085	.146	.344	.085
I am determined to set up my own company in the future	***.953***	.058	.024	−.006	.061	***.955***	.076	.042	.078	.055	***.901***	.030	.098	.070	−.009
I have thought seriously about setting up a company	***.890***	−.006	.021	−.026	.049	***.920***	.050	.055	.085	.151	***.903***	−.029	−.065	−.143	.045
I have the form intention to set up my own company I day	***.927***	.029	.035	−.012	.074	***.953***	.094	.037	.030	144	***.930***	−.011	.038	.013	−.026
Composite Reliability	Protestant					Catholic					Muslim				
Intention	0.973					0.957					0.897				
Behaving	0.912					0.899					0.895				
Believing	0.857					0.903					0.889				
Belonging	0.868					0.824					0.893				
Bonding	0.913					0.917					0.869				
Cronbach's alpha															
Intention	0.967					0.946					0.896				
Behaving	0.889					0.864					0.851				
Believing	0.752					0.840					0.815				
Belonging	0.801					*0.711*					0.819				
Bonding	0.858					*0.866*					0.782				

(continued)

Table 3. (continued)

	Protestant					Catholic					Muslim				
Factor analysis indicators	Int.	Beha.	Belie.	Belon.	Bond.	Int.	Beha.	Belie.	Belon.	Bond.	Int.	Beha.	Belie.	Belon.	Bond.
AVE															
Intention	0.859					0.787					0.694				
Behaving	0.723					0.692					0.692				
Believing	0.667					0.757					0.727				
Belonging	0.694					0.616					0.739				
Bonding	0.778					0.786					0.690				

The Boldface values represent the principal items for each component.
Int.: Entrepreneurial Intention; Beha.: Behaving; Belie.: Believing; Belon.: Belonging; Bond.: Bonding.
For Catholic: 'KMO = 0.876' and Bartlett's test '$p < .001$'; For Protestant: 'KMO = 0.816' and Bartlett's test '$p < .001$'; For Muslim: 'KMO = 0.862' and Bartlett's test '$p < .001$'. PCA performed with SPSS 25.0.

Table 4. PLS path model analysis for conceptual model (set of H2, H3 and H4).

	Protestant	Catholic	Muslim
	Path	Path	Path
Sex (being male) → Intention	.164	.102**	.085
Education level → Intention	.318***	−.029	−.072
Believing → Intention	.337***	.249***	−.166
Behaving → Intention	.097	.098	.095
Belonging → Intention	.112*	−.103*	.123
Bonding → Intention	−.233**	−.044	.171*

For Catholic, Protestant and Muslim, each cell reports the path coefficients. 500 bootstrap samples. * $p < .1$; ** $p < .05$; *** $p < .01$ (one-tailed).

In the Muslim sample, only one dimension has a significant influence on entrepreneurial intentions. Contrary to what we expected, the Bonding's dimension (*$\beta = 0.171$)* has a positive and significant influence on entrepreneurial intention, whereas the other three dimensions do not show any statistically significant influence on entrepreneurial intentions. Thus, for the Muslim respondents, our results support H4a and H4b in which we hypothesised that there would not be any influence of the Believing and Behaving dimensions of religiosity on entrepreneurial intentions. We fail to support H4c that predicted Belonging to positively influence entrepreneurial intentions and H4d that predicted Bonding to negatively influence entrepreneurial intentions.

In summary, based on our results, it seems that the different dimensions of religiosity, with the exception of Behaving, play a role in shaping entrepreneurial intentions. Moreover, whilst some dimensions of religiosity do influence entrepreneurial intentions, our results also show that the influence of the different dimensions of religiosity must be analysed and discussed separately for each religion. In fact, depending on the religious affiliation, our results show that the same dimension can influence entrepreneurial intentions negatively, positively or have no influence at all. The same observation can be made about sex and education level that influence entrepreneurial intentions differently depending on religious affiliation. Whilst extensive research has explored the impact of educational attainment and sex on entrepreneurial intentions, this influence could also vary across religious affiliations and/or religiosity, and could present a rich avenue for future research.

Discussion

Our results offer some insights into the relationship between religious affiliation, religiosity and entrepreneurial intentions. In the first part of our study, we show that having a religious affiliation (i.e. identifying as Protestant, Catholic or Muslim), compared to not having any religious affiliation (i.e. identifying as Atheist/Agnostic), significantly and positively influences entrepreneurial intentions. This result reflects that of other studies (Bellu and Fiume, 2004; Hoogendoorn et al., 2016; Seligman, 1991) and confirms Schwartz and Huisman's (1995) and Rokeach's (1973) work, showing that religious people differ from non-religious individuals in terms of occupational choices. Our findings differ from prior work suggesting that higher risk aversion, preference for promoting stability and status quo make religious people less inclined to choose self-employment or cause them to perceive entrepreneurial opportunities differently (Boone et al., 2013; Drakapoulou-Dodd and Seaman, 1998; Saroglou et al., 2004). Our findings align with those of Seligman's (1991), showing that religious individuals might be better equipped to cope with the risk and uncertainty inherent in entrepreneurship given their religion as it offers a 'rationality that guides business actions and outcomes…a reasoning through which actions and their consequences are predicated on certain beliefs, aims and ideas' (Kavas et al., 2020: 687). Thus, religious individuals may find it easier to manage a business and cope with conflict because religious values provide guidelines on how to address organisational issues such as disagreements about organisational decisions, decision-making and personnel management. Those who affiliate with a religious group might be more resilient when faced with the uncertainties and difficulties or setbacks encountered in self-employment because their religious beliefs enable greater persistence towards goal pursuit (Smith et al., 2021).

Religious individuals may also have more confidence in their ability to rely on members of their religious group for emotional, financial, professional or other forms of support. This could possibly be driven by the fact that religious affiliation, even with low levels of religiosity, promotes the creation of social capital (Mitra and Basit, 2021). Membership and participation in religious networks can help entrepreneurs establish social capital. Sharing the same religion 'can be considered a form of social proximity…which helps create embedded relationships that enhance trust, information and resource exchange' (Di Pietro and Masciarelli, 2021: 12). In the US, for example, religious groups are a very important source of social capital (Putnam, 2000; Putnam and Campbell, 2010). Social capital, in turn, can have a positive relationship with entrepreneurship and entrepreneurial intentions; Dougherty et al. (2013) add that entrepreneurs tend to join pro-business congregations. Finally, there are 'numerous business associations related to the pursuit of religious values in the goals, strategies and management of business organisations. Such associations include: the Christian Business Council, Jewish Business Network, Islamic Business Association, Confucian Merchants Conference, Sikh Entrepreneur Network, Buddhist Business Network and the World Hindu Economic Forum' (Astrachan et al., 2020: 642). Other examples of entrepreneurship-related religious networks include a religious-based entrepreneurial ecosystem in Cincinnati, Ohio, a mega-church (Crossroads) that promotes entrepreneurship or a religion-based entrepreneurial accelerator (Ocean Accelerator) (Smith et al., 2021).

The second part of our study goes beyond simple religious affiliation and explores religiosity; this is important to consider because, whilst many people identify as members of one religion or another, not all individuals practice their religion with the same intensity. We assess religiosity through four dimensions: Believing, Behaving, Belonging and Bonding (Saroglou, 2011; Saroglou et al., 2004) and explore the influence that religiosity has on entrepreneurial intentions for each of the three religions represented in our study. Before discussing each of the three religions covered in our study, we note that we did not find any relationship between the Behaving dimension and entrepreneurial intentions for any of the three religions. As described in the methods section, the Behaving dimension is defined as the influence religion has on individual behaviour such as form of dress, choice of food, friendships and entertainment rather than vocational behaviour. This may explain why we found that this dimension appears to be unrelated to entrepreneurial intentions, whatever the religion.

Protestantism

For the individuals who identify as Protestant, our results are somewhat different from what we hypothesised. We find Believing and Belonging to have a positive influence and Bonding a negative one on entrepreneurial intentions. Among Protestants, Believing and Belonging have a positive influence on entrepreneurial intentions, which is in accordance with Protestant values and work ethic, propagating capital accumulation and economic development as a calling (Weber, 2012/1905). Similarly, in their study of Dutch Protestant entrepreneurs, Rietveld and Van Burg (2014) also show that two core protestant values, vocation and societal service, seem to better fit entrepreneurship, compared to work as an employee, thus, favouring entrepreneurial careers. The negative influence of Bonding on entrepreneurial intentions was inconsistent with our hypothesised results. It also contradicts the suggestion made by Hoogendoorn et al. (2016) that the external manifestations of religiosity such as church attendance, prayer and/or meditation will not influence entrepreneurship. Bonding refers to the emotional dimension of religiosity demonstrated through participation in religious rituals and prayer. It is possible that, for religious Protestants, frequent participation in religious rituals fosters more collective behaviours, causing entrepreneurship to be perceived as something more individualistic. Still, this result is quite surprising.

Catholicism

For the individuals who identify as Catholic, we find that Believing has a positive influence and Belonging has a negative influence on entrepreneurial intentions. Believing corresponds to the cognitive component of religiosity – the belief in a form of external divine power. It is possible that this belief in divine guidance and intervention encourages individuals to pursue even challenging tasks such as starting a business because their religious beliefs help them cope with the uncertainty associated with, or setbacks encountered in, entrepreneurial ventures. Belonging, on the other hand, represents the social aspect of religiosity, and is likely to drive individuals to adhere to shared norms considered socially desirable among members of a religious group. The negative influence of Belonging on entrepreneurial intentions is therefore not surprising as Catholicism does not promote capital accumulation and economic development to the same extent as Protestantism does. Social pressure might prevent individuals from being overly individualistic or from pursuing personal gain when this is incongruent with what is valued by their religious community. This reflects other studies (Huntington, 1996; Landes, 1999; Zelekha et al., 2014) suggesting that Protestantism favours entrepreneurship and wealth accumulation, while Catholicism does not. In terms of the Bonding dimension, whilst we hypothesised a negative influence, our results do not show any significant influence of Bonding on entrepreneurial intentions. For religious Catholics, whilst frequent participation in religious rituals could feed a strong sense of belonging to their religious group and also foster more collective behaviours (Ghorpade et al., 2006); however, this may not shape individual attitudes when it comes to an entrepreneurial career.

Islam

For the Muslim group, we find a significant and positive influence only for the Bonding dimension of religiosity, which represents the emotional component of religiosity. This is contrary to the expected direction of the relationship. Because Bonding suggests frequent participation in religious rituals, Muslims who attend their Mosque regularly to participate in religious rituals may thus be building stronger social networks, which have been linked to stronger entrepreneurial intentions (Hoogendoorn, et al., 2016; Putnam, 2000). In terms of the other dimensions (Believing and Behaving), we did not find any significant relationship, which was expected because Islam does not emphasise business ownership as a calling. Qur'anic writings, when it comes to business ownership, focus on *how* one should manage a business according to values such as honesty and fairness but do not necessarily endorse entrepreneurial activity as a value in and of itself.

Internal and external manifestations of religiosity

Contrary to Hoogendoorn et al. (2016), we do not find support for the distinction between the external and internal manifestations of religion. Hoogendoorn et al. (2016) suggest that, at the country level, the external manifestations of religion (Belonging and Bonding) do not influence a country's business ownership rates, but that the internal manifestations of religion (Believing and Behaving) are associated with higher levels of business ownership. We find no such uniform influence of the internal or external dimensions of religiosity on entrepreneurial intentions across the different religious groups. In fact, we find that the different dimensions of religiosity (except for Behaving) influence entrepreneurial intentions differently according to the religious affiliation and that a distinction between internal and external dimensions is not clear cut. We even show that one of the internal manifestations (Behaving) does not have any impact, whatever the religion, on entrepreneurial intentions. The most surprising findings emerged in the Bonding dimension where results were contrary to those we hypothesised for all three religions.

Limitations

A first limitation of our study is our use of a student sample from different nations that offer very different environments in terms of support available for entrepreneurship, as well as the degree to which entrepreneurship is considered to be a desirable career path. The way religion is treated in a given country may also play a role in shaping perceptions of entrepreneurship. For example, secularisation levels may differ significantly between Iran and the other three nations in our sample. This may have affected our findings. Our results should also be verified among university students in other nations beyond the ones covered in our sample. Also, in most countries, younger people are less likely than those over 40 years of age to say that religion is central in their lives (Pew Research Center, 2008). Having relied on a sample of relatively young individuals may therefore have influenced our findings to the extent that a sample of older individuals may have yielded stronger relationships. Finally, the fact that our sample consists of university educated individuals may also limit generalisability to the population as a whole, given the relationship between education and entrepreneurial intentions.

A second concern is due to the fact that we did not use all of Saroglou's items to assess the impact of the four dimensions of religiosity. At that time of our data collection (2018), the four dimensions of religiosity had a theoretical validity (Saroglou, 2011), but empirical validity of the four dimensions was not confirmed by Saroglou et al. (2020). Because 'no published integrated measure of the big four religious dimensions' (Saroglou, 2011: 1334) was available, the questions we used to measure religiosity in our research differ from those of Saroglou et al. (2020) and are based on items from various prior studies on religiosity.

A third limitation lies in the fact that religion may indirectly influence entrepreneurial intentions via other variables such as social capital. Religious affiliation can be a source of social capital because, by being part of a religious group or through participation in religious networks, one builds social ties (Bhagavatula et al., 2010; Smith et al., 2021), and these embedded relationships are essential to transfer information and exchange resources (Di Pietro and Masciarelli, 2021). 'Social capital is positively associated with entrepreneurship, as it provides access to information regarding opportunities and stakeholders such as customers and competitors, eases access to financial and human resources, creates admission to markets, and potentially creates legitimacy' (Hoogendoorn, et al., 2016: 527). Whilst we consider the social aspect in the Belonging dimension, a direct measure of social capital would have been beneficial. It would certainly be interesting to further explore the role religious affiliation and religiosity play in building individual social capital, given the impact social capital has on entrepreneurial intentions.

A fourth limitation lies in the fact that – whilst we controlled for sex – we did not explore the interaction between gender, religious affiliation or religiosity and their impact on entrepreneurial intentions. An extensive literature on entrepreneurship and gender clearly identifies the important role that this variable plays in shaping entrepreneurial intentions (Pritchard et al., 2019; Shinnar et al., 2018). Future research could explore how religious affiliation or religiosity interacts with gender to influence entrepreneurial intentions. One would expect that higher religiosity would shape the degree to which, despite their sex, a person adheres to traditional values regarding gender roles. It is, therefore, possible that religiosity affects men's and women's entrepreneurial intentions differently. Finally, the same religion may differ substantially across regions, for example, Islam in Iran is different from Islam in Pakistan or Saudi Arabia (Block et al., 2020). Our findings may, thus, not be directly generalisable to other regions.

Conclusions and future research avenues

This article adds to the literature on the intersection between religious affiliation, religiosity and entrepreneurship, responding to the 'growing consensus on the need to understand how religion affects business and society' (Di Pietro and Masciarelli, 2021: 12). Religions influence economic outcomes, as they transmit a system of implicit or explicit values that provides a framework to the economic actor, by giving sense to specific actions (Gundolf and Filser, 2013). Our findings offer empirical support for the notion that religion matters when entrepreneurial intentions are concerned. We show that having a religious affiliation – as compared to identifying as Agnostic/Atheist – has a positive relationship with entrepreneurial intentions. Thus, a first contribution of our study is the identification of religious affiliation, as well as of atheism and/or agnosticism, as a relevant variable in entrepreneurship in general and entrepreneurial intentions in particular. To develop a more holistic understanding of entrepreneurial intentions, future studies would be advised to consider religion as a macro-level variable that can shape individual intentions.

Our second contribution applies to religiosity levels, beyond mere religious affiliation. We show that religiosity influences intentions differently across different religions, which is to be expected given that religions often differ in the value systems they promote. We also show that the distinction between the internal and external dimensions of religiosity (Hoogendoorn et al., 2016) is not as clear cut as previously suggested. Our findings challenge those by Hoogendoorn et al. (2016) by suggesting that different dimensions of religiosity, or at least three of these, influence entrepreneurial intentions differently according to religious affiliation. The most surprising results concern the Bonding dimension and were contrary to what we hypothesised for all three religions (negative for Protestants, not significant for Catholics, positive for Muslims). This area could benefit from additional study so as to develop a deeper understanding of the ways in which the emotional component of religiosity may influence career choice, more specifically, entrepreneurship.

Given the different results for the Protestant and Catholic groups, we show that followers of Christianity cannot be regarded as a uniform group when it comes to entrepreneurship and that it is important to differentiate between Catholics and Protestants or other streams of Christianity. The importance of differentiating among streams within a religious group was also stressed by Fathallah et al. (2020). Within religions, different streams may have different perspectives on entrepreneurship as is seen between Catholic and Protestant Christians. The fact that we do not differentiate among various streams of Islam (Sunni, Shia, etc.) could possibly explain some of our unexpected results for the Muslim sub-sample. Whereas Catholicism is more homogeneous, there may also be differences within the Protestant religion between Adventists, Anabaptists, Anglicans, Baptists, Calvinists, Lutherans, Methodists, Pentecostals, Evangelicals, etc. This certainly offers interesting avenues for future research.

Our focus was on the impact of religious affiliation as well as of religiosity on entrepreneurial intentions. Future studies could explore the role of religious affiliation and religiosity on business outcomes among practicing entrepreneurs. For example, whilst past studies offer evidence that religion may shape an entrepreneur's choice of sector or type of business, would an entrepreneur's religious beliefs also influence the way in which the business is operated? Rietveld and Hoogendoorn (2022) find that individuals who belong to a religion emphasise values related to conservation more than values related to openness to change. This may have an impact upon the degree to which a business owner efficiently adapts the business to external demands and could ultimately affect business success, growth or survival. Whilst we have discussed the potential impact of religious affiliation and religiosity in shaping entrepreneurial intentions, we would be remiss if we did not acknowledge the possible detrimental outcomes for business success and survival rooted in religious affiliation and/or religiosity. For example, Zhang and Liu (2021: 2) find that religious entrepreneurs 'allocate more of their resources, both in terms of money and time, to unproductive activities such as building social relationships' compared to their non-religious peers. Such potentially undesirable outcomes could be further explored in future studies.

Authors' contribution

OG, FJ and RS (appearing in alphabetical order) designed study, collected data, conducted analyses and wrote the paper. KG designed study, collected data and assisted in writing the paper. NS collected data.

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Notes

1. Iannaccone (1998) defines religion as 'any shared set of beliefs, activities, and institutions premised upon [belief] in supernatural forces'. According to Hill et al. (2000, p. 66), religion deals with 'the feelings, thoughts, experiences, and behaviors that arise from the search for the sacred' and the 'means and methods (e.g. rituals or prescribed behaviors) of the search that receive validation and support from within an identifiable group of people'.
2. Some European universities or schools do even prevent their researchers from sending questions related to religion to students.
3. Unfortunately, due to a too small number of respondents, we have not been able to integrate Jewish, Hindu and Orthodox religions in our study.
4. For the belonging dimension, since there existed no empirically verified full scale available at the time of our data collection, we completed Huber and Huber's (2012) measure with items from Saroglou (2009).
5. From '1' being 'Strongly disagree' to '7' being 'Strongly agree'.
6. From '1' being 'Absolutely no influence' to '7' being 'Enormous influence'.
7. From '1' being 'Not at all' to '7' being 'Absolutely'.
8. From '1' being 'Never' from '7' being 'Once a day or more often'.

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