Gordon Institute of Business Science
University of Pretoria

Title:

The Critical Learning Experiences that Shape Youth Entrepreneurial Success: Evidence from African Prize Winners

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Journal Article Submission

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A research article submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration.

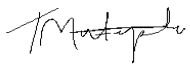
Date: 1 December 2020

Gordon Institute of Business Science
University of Pretoria

DECLARATION:

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

Name and Surname: Tanyaradzwa Mutepfa



Signature: _____

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COVER LETTER

Miss Tanyaradzwa Mutepfa

Gordon Institute of Business Science

164 Arkansas Avenue

Berario, Randburg, Johannesburg

South Africa

1 December 2020

Dear Professor Zoltan Acs and Professor David Audrestsch

I wish to submit an original research article entitled "*The Critical Learning Experiences that shape Youth Entrepreneurial Success"* for consideration by the Journal of Small Business Economics.

I confirm that this work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere.

In this paper, we report on the Critical Learning experiences that shape Youth *Entrepreneurial* Success. The findings in our research show that the individual learning experiences that motive youth into entrepreneurship are also able to shape the success and development of an entrepreneurial venture. The is significant as through understanding the different experiences that pull young people towards entrepreneurship, policy makers might create great support and incentives for entry into entrepreneurship by young people.

In addition we have found that your current publication has done a number of quantitative studies on youth and young entrepreneurs, however very little have used a qualitative approach to gain greater insights of the lived experience of young entrepreneurs.

We have no conflicts of interest to disclose.

Please address all correspondence concerning this manuscript to me at tanya.mutepfa89@gmail.com .

Thank you for your consideration of this manuscript.

Sincerely,

Tanyaradzwa Mutepfa

Authors: Tanyaradzwa Mutepfa and Anthony Wilson- Praghley

ACRONYMS

GEM	Global Entrepreneurship Monitor
GIBS	Gordon Institute of Business Science
HCT	Human Capital Theory
NGO	Non-governmental organisations
NYDA	National Youth Development Agency
OECD	Organisation for Economic Co-operation and Development
SDG	Sustainable Development Goal
UN	United Nations

CHOICE OF JOURNAL

The Journal that was selected was the Journal of Small Business Economics, which is currently ranked as a 3 Star journal in the Journal of Economic Literature (JEL) classifications.

The journal was selected as the topic would make a significant contribution to the field of entrepreneurship, particularly in understanding youth and young entrepreneurs within the selected journal.

2. LITERATURE REVIEW

The literature review begins by examining entrepreneurship as a domain, followed by a review of youth entrepreneurship. This will be followed by an examination of motivation, youth entrepreneurial education, training and skills. The literature review also reviews entrepreneurial learning in order to identify the gaps found in the literature surrounding adult entrepreneurs and youth entrepreneurs. The section concludes with a discussion of the study's theoretical framework that is a discussion of the HCT and its suitability in the current study.

2.1 Entrepreneurship

Entrepreneurship is a well-known phenomenon lacking a single precise definition (Kobia & Sikalieh 2010; Nafukho & Muyia, 2010). However, Gibb (2007) concluded that universally there is an understanding that entrepreneurship refers to how people make and create new ideas and how they respond proactively to the environment. GEM (2018) defined entrepreneurship as "any attempt at new business or new venture creation, such as self-employment, a new business organisation, or the expansion of an existing business, by an individual, a team of individuals, or an established business" (p. 11). This definition is consistent with definitions by Shane and Venkataraman (2002); Todd and Lumpkin (2009), and Zahra et al. (2009). To varying degrees, three traits have recurred in the various theoretical definitions of entrepreneurship: finding and exploiting opportunities; bearing uncertainty and risk; and competent management (Bosma et al., 2016).

Various recent studies (e.g., Fairlie and Fossen, 2018; Amorós et al. 2019; Martínez-Rodriguez et al., 2020) on entrepreneurial behaviour in multiple contexts across different countries highlighted that reasons for an individual starting an entrepreneurial venture are primarily a result of existing societal norms or economic restrictions. Given this, for any person regardless of age, the conditions under different contexts can result in several push factors towards entrepreneurship. In the same light, Barbra-Sanchez and Antienza-Sahuquillo (2017) argued that many governments globally have begun to realise that the state alone is unable to provide adequate levels of employment for everyone, causing high unemployment levels, which lead individuals to pursue self-employment or entrepreneurship. As such, academic research (for example, Audrestch & Thurik, 2002; Baptista & Thurik 2007; Dennis De, 2011; Simon-Moya & Revuelto-Taboada, 2014) has found that there is often a strong correlation between the level of unemployment that exists

in a country and the number of individuals who pursue entrepreneurship. Shapiro (2014) also found that faster economic recovery could be seen by countries that encourage both entrepreneurship and the creation of new businesses. While governments have continued to focus on implementing policies that promote entrepreneurship and venture creation (Martínez-Rodriguez et al., 2020), it has also been found that often many entrepreneurs similarly abandon their businesses or their ventures fail, meaning that the policies do not achieve their desired outcomes (Larsson & Thulin, 2019).

2.2 Youth Entrepreneurship

Youth and young people are viewed as the interface between adulthood and childhood. The UN defines youth as young people between the ages of 15 to 24 years (United Nations, 2018). For the purpose of this study, the researcher followed clearly defined age criteria inclined to the UN definition of youth, where youth include individuals in the ages from 18 to 24. Thus, a young entrepreneur for this study was viewed as any young person between the ages of 18 and 24 who had the ability to seize an opportunity and used it to create value by creating a new business in any sector.

For youth in the developing world, entrepreneurship is a budding catalyst of economic advancement and employment (Pompa, 2016). Youth entrepreneurship has received great consideration across the world since the 1990s (Nieman & Nieuwenhuizen, 2014). Likewise, it has become a vital focus in the development of economies. Azoulay et al. (2020) noted that “there is a widespread willingness in young people to be involved in entrepreneurship to different degrees” (p.66). Notwithstanding this, an opportunity exists, for young people, between intent and engagement (Azoulay et al., 2020). Moreover, there has been evidence of very few young successful entrepreneurs, and only a few are able to develop enterprises that add to the economic expansion of their respective countries (Azoulay et al., 2020; Minola et al., 2014). In addition, entrepreneurship helps youth develop skills and proficiencies that are transferable to other areas or challenges in their lives. Youth often possess qualities such as zeal, impetus, initiative, bold, flexibility, liveliness, ingenuity and willingness to try new approaches. Subsequently, Bennell (2018) challenged administrations, non-governmental organisations and international bodies to improve youth livelihoods by tapping into the enterprising and daring nature of young people.

2.2.1 Youth vs adult entrepreneurs

Liu et al. (2019) and Minola et al. (2014) argued that numerous studies have been conducted to understand how young people behave in the workplace; however, research on young entrepreneurs is lacking. In their study, Liu et al. (2019) found that the vast majority of the studies undertaken on entrepreneurs focused on individuals born between the 1950s and 1980s, with the typical mean age ranging between 35 and 45 years, in which it can be assumed that during this time in an individual's life, the entrepreneur would have amassed enough, resources, networks, energy and enthusiasm to start and sustain an entrepreneurial venture. This reality is the very opposite of what young entrepreneurs often face, as most have limited, resources, networks, knowledge and experience. Similarly, research and findings by Minola et al. (2014) suggested that "young entrepreneurs should be treated specifically and differently compared with their older counterparts because of their idiosyncratic characteristics" (p.235). Liu et al. (2019) suggested that future research should focus on "understanding how the fundamental characteristics of the millennial entrepreneurs influence their entrepreneurial motivation and hinder or shape their entrepreneurial success" (p. 2).

Minola et al. (2014) further stated that it is widely accepted and known that generally, older entrepreneurs have more significant resource endowment, which creates advantages in both discovering and pursuing entrepreneurship. However, research has shown that access to resources does not always result in better entrepreneurial engagement, performance or exploitation, as environmental and situational factors may influence the above. Thus, future research needs to understand and investigate the impact of entrepreneurial age on actual venture performance and legitimacy (Lévesque & Minniti, 2011). Minola (2014) advised that future research agendas should firstly understand the contextual factors that influence youth entrepreneurship and secondly aim to know how contingencies such as operating contexts and institutional support affect enterprise performance and legitimacy.

Interestingly, Liu et al.'s (2019) study also highlighted the uneven distribution of entrepreneurial research and the growing shift of economic growth from the global north to the global south. As such, the increased entrepreneurial development narrative in emerging and developing nations requires academic focus. Liu et al. (2019) stated that the bottom-up entrepreneurial movement reflected in the economic innovations that are

taking place in emerging and developing economies is an occurrence that should not be missed. Accordingly, Minola (2014) and Liu et al. (2019) recommended that research should be undertaken in different contextual environments to understand the diverse characteristics and experiences of young entrepreneurs, as it relates to "the institutional, cultural and social environments in which they reside" (p. 9).

Liu et al. (2019) asserted that youth entrepreneurship is not only an exciting phenomenon for academics but also plays a role in public policy plans that aim to spur economic growth and innovation. Equally, entrepreneurial action is meticulously connected to other important indicators of growing and benefitting society such as efficiency, equity in income distribution, innovation and productivity. Similarly, Minola et al. (2014) encourage academics to grow and progress the current body of work on young entrepreneurs as the evidence and knowledge gained can be used to guide several entrepreneurial initiatives and programmes globally. This study aimed to address the gap in literature identified in youths building successful enterprises.

2.2.2 Motivation into entrepreneurship

Youth entrepreneurship research has predominantly focused on aspects influencing youth entrepreneurial activity such as the individual attributes associated with entrepreneurship (social capital, societal attitudes and individual demographic characteristics) (Holienka, et al., 2016). In addition, a vast range of research has been undertaken to understand the reasons why people, in general, start businesses, either for necessity reasons or in order to seize opportunities (GEM, 2016).

Minola et al. (2016) defined entrepreneurial motivation as to "what activates a person, what makes the individual choose one behaviour over another and why do people respond differently to the same motivational stimuli in an entrepreneurial setting" (p. 189). As such, the field of entrepreneurial motivation has developed in line with the general motivational theories in organisational development. The term 'entrepreneurial motivation' has progressed from initially focusing on the personality traits of an entrepreneur to including models that focus on contextual factors and now using cognitive models, which relate to the attitudes and beliefs of entrepreneurs (Pilkova et al., 2014). Barbra-Sanchez and Antienza-Sahuquillo (2017) claimed that extensive research validates that entrepreneurial motivation and ability are widely linked to the Expectancy Theory. The proponents of this theory state that individuals will behave and act in which way they deem necessary to

attain a particular reward as they expect to see the results of the chosen behaviour and role. The motivation for selecting or wanting to be an entrepreneur is determined by the attractiveness of the outcomes that come from being an entrepreneur (Pilkova et al., 2014).

Lukeš et al. (2013) put forward that they are several different motives behind individuals starting a business. Within the GEM perspective, they are two main categories of entrepreneurial motives that is opportunity and necessity motives (Alam, 2019). According to GEM (2019), necessity-driven entrepreneurs are those who get into entrepreneurship because they have no better options for work. The GEM (2019) further claimed that about 35% of early-stage entrepreneurs in developing countries have necessity motives, while 28% in middle-income economies also have necessity motives. On the other hand, the GEM (2019) stated that opportunity-driven entrepreneurs include those individuals that are driven by opportunity, whose primary motivation for engaging in the opportunity is being independent or increasing their income. GEM (2019) estimated that 37% of early-stage entrepreneurs in low-income countries had opportunity motives compared to 42% in the middle-income economies.

A study by Holienka et al. (2016) established that having self-confidence in one's entrepreneurial skills, an awareness of business opportunities, knowing roles models within the entrepreneurship space will result in higher chances of youths and young adults undertaking early-stage opportunity-driven entrepreneurship. Ceptureanu (2015) also found that young entrepreneurs self-evaluation of their ability to identify gaps and opportunities leads to entrepreneurial activity. On the contrary, fear of failure is does not result in opportunity-based entrepreneurship for youths (Liu et al., 2019). Holienka et al. (2016) observed that in young adults, the perception of the high social status associated with successful entrepreneurship leads them to start an opportunity-based entrepreneurial activity.

Understanding all of the facets of entrepreneurial motivation, particularly for youth, has critical implications for all actors in the entrepreneurial ecosystem such as educators, governments, investors and even parents. Giacomin et al. (2011) claimed that entrepreneurship research on motivation and age has generally generated mixed findings. Thus, research has been unable to conclude whether young people are driven by

opportunity or necessity motives into entrepreneurship. The current research aims to provide answers to whether youth entrepreneurship is opportunistic, or necessity-driven.

2.2.3 Entrepreneurial education and training

According to Pompa (2016), in order to make entrepreneurship more viable, youths should be provided with entrepreneurship education, information, and training, as this also has a positive impact on the economic development of a country. Entrepreneurship training can also enhance soft skills which in turn creates more entrepreneurially ready individuals (Olugbola, 2017). Similarly, Technical and Vocational Institutions (TVETs) have been helpful in promoting entrepreneurship as a viable employment alternative (UNESCO, 2016). TVET institutions also encourage cross-sector collaboration, which includes working with public and private sector players to assist in preparing young people for the dynamic world of work (Bomani, 2017). According to GEM (2018), entrepreneurship education for secondary and tertiary students positively affects entrepreneurial skills and intentions.

GEM (2018) questioned if entrepreneurial education translates into entrepreneurial activity in the long-run. The ILO (2018) suggested that training and education can result in higher levels of entrepreneurial success. Few rigorous evaluations done across Africa suggest that entrepreneurship education offered at secondary/tertiary level influences entrepreneurial intentions, mind-set and skills (ILO, 2017; Premand et al., 2012). For instance, in Zimbabwe, South Africa and Tunisia, entrepreneurship programmes in universities increased entrepreneurial intention, mind-set, self-employment rates and skills (Premand et al., 2012; Rambe & Ndofirepi, 2016). However, all these positive impacts of entrepreneurship education faded four years later due to limited funding (Jumana et al., 2019).

In 2015, the Sustainable Development Goals (SDGs) were adopted by all United Nation member states as a universal call to action to “end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030” (UNDP, 2019). In particular, SDG 4 was written in response to ensuring all individuals have access to quality education. The resultant indicator of success is found in indicator 4.4 which aims “by 2030 [to] substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship”.

Crump et al. (2015) put forward that research showed that increase in education resulted in increases in business ownership. Entrepreneurship education should include two methods: business opportunity training and entrepreneurship training, directed at keeping people out of poverty (GEM, 2018). In Kenya, Kimando (2012) observed that training was necessary for the success of start-ups while Ncube et al. (2014) reported that entrepreneurship training in Swaziland enabled young people to start their own small businesses. In Africa, entrepreneurship education has recently emerged among donor agencies, non-governmental organisations and governments as one mechanism for addressing the interrelated growth problems of unemployment and poverty (UNESCO, 2019). Entrepreneurship education and training stresses the value of developing the capabilities of young people living in poverty to accept entrepreneurship as a prized option (GEM, 2019).

2.2.4 Youth entrepreneurial skills

Olugbola (2017) observed that "many youths of nowadays possess business ideas but only few have the capacity and ability to turn it into viable businesses" (p. 157). Shane et al. (2012) found that skills are critical in creating successful new businesses which are able to turn ideas into solutions. Skills are defined as efficiency in achievement of a task, as a result of human capital investments (formal and education, entrepreneurial education, work, industry, and entrepreneurship experiences) and can be improved by training, practice and development (Hempel & Fiala, 2012) while competencies are defined as a person's knowledge and skills that allow them to perform well in a task. As a result, entrepreneurial skills include a vast range of skills including leadership, technical skills, creative thinking, and business management skills (Olugbola, 2017). Burchell et al. (2015) noted that these proficiencies in performing tasks can be enhanced through entrepreneurial training, practice, and development. GEM (2018) reports that in developing countries, including Africa, the acquisition of skills by youth does not increase entrepreneurial activity in the same manner it does in the developed countries because of unsupportive environment for entrepreneurship.

Markman (2007) asserted that recognising and exploiting opportunities is a core entrepreneurial skill. Often entrepreneurial tasks are aligned to what an entrepreneur does, and the key activities needed in running when running a business. Table 2.1 shows some of the skills identified from the Mamabolo (2017). In addition to lack of empirical

evidence, the categories of skills noted were found to be inconsistent; therefore this study's objective was to identify which key skills can be applied by youth entrepreneurs which assist in business success.

Table 1.1: Entrepreneurial skills

Category of skills	Operation definition	Subset of skills
Technical skills	Performing key operations of the business	Managing operations, managing supplies and supply chains, production space skills, managing plant and equipment, technology and production processes, management styles, written and oral communication, and knowledge of manufacturing technology
Business management skills	Organising and effectively managing the operations of the business	Planning, organising, supervising, marketing skills, financial management skills, legal skills, administrative skills, high-order skills related to learning and problem solving, marketing, human resource management, marketing, networking, operational skills, business planning skills and negotiation skills
Personal skills	Skills needed to attain self-awareness, emotional maturity, ability, and willingness to accept responsibility	Self-awareness, accountability, emotional coping, creativity, change orientation, motivation, negotiating skills, learning skills, communication skills and self-efficacy
Behavioural and motivational skills	Skills associated with a behaviour and desire to achieve	Self-discipline, intuition and vision, creativity, perseverance, rigorousness, meticulousness, commitment, stamina, energy, effort, motivation, achievement motivation and passion

Social and Interpersonal skills	Learnable behaviours used by individuals in their interactions with others	Persuasiveness, social skill, self-confidence, trust, overconfidence, leadership, networking skills, self-efficacy, impression management, social adaptability, social perception, self-promotion, expressiveness, perception, and social influence

Source: Mamabolo (2016)

Young entrepreneurs require all of the above entrepreneurial skills to perform entrepreneurial activities. However, a gap exists in literature regarding which specific skills and competencies are needed the most by young entrepreneurs, especially in the African context. However, Brixiová and Kangoye (2013) claimed that young African entrepreneurs are unable to fully actualise their entrepreneurial intentions because they lack the correct skills. Chell (2013) encouraged youth to focus on learning and learning from experience to enhance entrepreneurial skills

2.3 YOUTH ENTREPRENEURIAL MIND-SET

The development of an entrepreneurial mind-set is important in youth entrepreneurship. The entrepreneurial mind-set simply refers to the art of entrepreneurship (Barringer & Ireland, 2015). The study hypothesises that building a strong entrepreneurial mind-set is an important aspect of entrepreneurial learning through education and training. Thus, TVET institutions help develop creativity, cognition, and socio-emotional skills for entrepreneurship (GEM, 2018). GEM (2018) further claimed that entrepreneurship education programmes at both junior and tertiary levels is beneficial in shaping entrepreneurial intentions, mind-sets, and skills by going beyond technical aspects to emphasise entrepreneurial psychology, experiential and peer learning, and positive role models.

Schumpeter (1965) noted that “the entrepreneur is an actor with an ability and drive to carry out innovative activities” (p. 12). In support of Schumpeter (1965), Wang and Chung (2014) suggested that the entrepreneurial mind-set may be viewed as a personality that seeks opportunities, uses great discipline, and pursues the best opportunities. The researcher accepts the views of Wang and Chung (2014) that the development of an entrepreneurial mind-set can make a substantial contribution towards the current African

youths who are seeking employment. Hence, the current study finds it necessary to determine how entrepreneurship education, learning and experience can enhance the entrepreneurial mind-set.

Literature shows that the key constructs for the development of an entrepreneurial mind-set include the need for achievement, self-efficacy, need for autonomy, locus of control, and risk-taking (Bruwer, 2012; Urban, 2010). However, Bruwer (2012) submitted that having a strong inner drive, being opportunistic, and being goal-driven directly influence the entrepreneurial mind-set. On the other hand, Tilana (2015) suggested that the entrepreneur's mind-set requires him/her to be willing and active in exploiting opportunities, to be innovative, and very sensitive and responsive.

The examination of literature shows that there are many constructs for entrepreneurial mind-set. The researcher believes that entrepreneurial mind-set constructs such as self-efficacy, the need for achievement, and an internal locus of control are critical to the success of youth entrepreneurship in Africa. These constructs are important in helping to transform Africa from being a low-income continent to a high-income continent through youth entrepreneurship. Hence the study attempts to understand the influence of the different entrepreneurial learning experiences on young people's entrepreneurial mind-sets in Africa. There seems to be consensus that entrepreneurship education positively contributes to the development of an entrepreneurial mind-set in youth entrepreneurs across Africa.

In South Africa, Morris et al. (2012) concluded that the implementation of entrepreneurship education is a key driver to the development of an entrepreneurship culture, while in Swaziland, Ncube et al. (2014) observed that entrepreneurship education provided a pathway to promote entrepreneurship as the country fails to provide employment to the youth. Sambo (2016), in Kenya, found that youth exposure to entrepreneurship education helped promote entrepreneurial intent and instil an entrepreneurial mind-set as it raises behaviour towards entrepreneurial intent. In Zimbabwe, Bomani et al. (2019) acknowledged the role played by higher education institutions in creating and developing an entrepreneurial mind-set as the country laments the huge youth unemployment rate.

The review of literature has shown that the majority of African leaders are faced with youth unemployment challenges (Ncube et al., 2014). These government leaders have agreed

that entrepreneurship education is a solution to the challenge (Bomani et al., 2019). However, Bux (2016) claimed that young entrepreneurs have a distinctive mind-set and can learn entrepreneurship through entrepreneurial learning and experience. Extrapolating from that, the current study hypothesises that entrepreneurial learning creates an entrepreneurial mind-set. The following section presents a discussion on youth entrepreneurial learning.

2.4 ENTREPRENURIAL LEARNING AND EXPERIENCE

Entrepreneurial learning has gained significant traction in the area of understanding entrepreneurship over the recent years (Wang & Chung 2014; Zozimo et al., 2017). As such, entrepreneurial learning is broadly positioned between the nexus of entrepreneurship and organisational learning, particularly experiential learning, is critical (Wang & Chung, 2014). Entrepreneurial learning is defined as an ongoing process that encourages the creation of requisite knowledge to launch and operate new projects effectively (Rae, 2014). Wang and Chung (2014) state the domain of entrepreneurial learning not only relies on understanding the “know-what” and “know-how” but also includes the “know-who” in learning. As such Wang and Chung (2014) propose the “know-what” and “know-how” includes knowledge, information, and experience, while the “know-who” refers to the formal and informal learning contacts and networks that individuals have access to.

Zozimo et al. (2017) stated that while literature in entrepreneurial learning strongly focuses on the individual experiences, an overall societal understanding of entrepreneurial learning is only now emerging. As such, literature in entrepreneurial learning is lacking in fully understanding the complexities of social learning and learning in entrepreneurship. Studies in entrepreneurial learning have focused on specific areas such as how entrepreneurs learn from others, like family members or work colleagues (Konopaski et al., 2015).

Nevertheless, while substantial attempts have been made to explore the likely learning results of the experiences of entrepreneurs, relatively little effort has been made to consider the role of entrepreneurial learning on entrepreneurial mind-set. Konopaski et al. (2015) noted the starting point for researching the method of entrepreneurial learning is positioned as to be able to make a distinction between an entrepreneur's experience and the skills gained therein. One way to differentiate between these two principles is to

interpret the experiences of entrepreneurs as a direct examination of new company creation-related activities or involvement in them, whereas the realistic insight arising from what an entrepreneur has experienced reflects the knowledge gained from this specific experience (Boldureanu, 2013). The sum of previous experience appears to be closely correlated with the success of an entrepreneur in identifying and acting on entrepreneurship opportunities (Martínez-Rodriguez et al., 2020). Entrepreneurial learning helps to develop the cognitive properties of an entrepreneur (Fairlie & Fossen, 2018). Gielnik and Zacher (2018) claimed that improved productivity in the identification of opportunities means that the entrepreneur has acquired more and relevant entrepreneurial knowledge needed to recognise entrepreneurial opportunities.

Prior learning and experience give rise to business growth. This statement also suits the claim that the entrepreneurial learning and experience contribute to entrepreneurial success. Prior knowledge gives an opportunity to understand, absorb, and adapt the importance of new learning to new business uses (Cohen & Levinthal, 1990). Seasoned entrepreneurs are more likely to look for knowledge within a narrower area of business ideas based on their past experiences in terms of rituals and data sources that have performed well in the past (Fairlie & Fossen, 2018), while aspiring entrepreneurs with no prior experience could have fewer benchmarks to access. The sum of previous experience appears to be closely correlated with the success of an entrepreneur in identifying and acting on entrepreneurship opportunities (Ekpe et al., 2015).

The review of literature shows that prior experience explains why certain entrepreneurs are more successful than others (Maryam & Thomas, 2015). Several scholars also pointed out that even though some of the skills and experience can be gained by education, it is only possible to learn all of the required information about leveraging resources and dealing with the obligations of newness in practice (Ekpe et al., 2015).

2.5 ENTREPRENUERIAL SUCCESS

Entrepreneurial success has many faces and can be assessed used various approaches (Piperopoulos & Dimov, 2015). Entrepreneurship research shows that there are two main approaches for measuring entrepreneurial success: psychological and economic approaches to entrepreneurship (Orser & Dyke, 2009). Other scholars claim that organisational and personal approaches are the two main aspects of assessing entrepreneurial success (Gorgievski et al., 2010). Entrepreneurial conduct is often

associated with innovation (Lumpkin & Dess, 2006); economic growth (Bomani et al., 2019); and raising country's welfare (Tinarwo, 2016). In respect to this economic approach, the measurement of entrepreneurial success is based on organisational performance indicators such as market share, profitability, and organisational survival. However, this does not capture the whole spectrum of possible criteria that shape venture success (Okunbo & Oghuvwu, 2019).

On the contrary, the psychological approach to entrepreneurship success emphasises the role of entrepreneurial motives, aspirations, and goals (Subrahmanya, 2018). The advocates of this approach underscore the critical role of intangible success criteria when measuring and operationalising entrepreneurial success (Holienka et al., 2016). For instance, entrepreneurs value independence, high achievement, and autonomy instead of profit generation and/or maximisation (Barbra-Sanchez & Antienza-Sahuquillo, 2017). More so, entrepreneurs strive towards social recognition, firm continuity, and positive relationship with their employees and customers. A study conducted by Ncube et al. (2014) showed that African youth entrepreneurs value work-enjoyment and personal fulfilment more than financial rewards.

The assessment of entrepreneurial success into organisational and personal approaches offers a comprehensive framework against which to measure success of ventures. The organisational performance approach includes related aspects such as firm survival, profit, cash-flow, annual sales, employee growth which can be collected by gathering objective financial accounting data (Holienka et al., 2016). Financial accounting data has been criticised for being historical (Mageto, 2018), and not futuristic (Wanjiru & Kalika, 2017). On the other hand, personal criteria for assessing entrepreneurial success refer to the entrepreneur's non-organisational goals such as self-actualisation, work-related social relationships, social recognition (Wanjiru & Kalika, 2017). Personal success criteria data can easily be collected with the exception of personal income (Schenk, 1998, cited in Mageto, 2018). The achievement of personal success criteria depends on the aspirations and goals of the entrepreneur (Subrahmanya, 2018).

The diversity of aspects that entrepreneurs value and seek to accomplish shows that there is need for the use of a more comprehensive definition of success that is inclusive in nature (Oghuvwu & Omoye, 2016). This calls for entrepreneurs to include multiple criteria of financial and non-financial measures (Xiahui et al., 2013). Apart from describing and

measuring youth entrepreneurial success, the current study aimed at acknowledging the critical entrepreneurial learning experiences that shape youth entrepreneurial success. The study combines both personal and organisational entrepreneurial success criteria.

2.6 THEORETICAL FRAMEWORK

The HCT is the theoretical framework underpinning this study. According to Ucbasaran et al. (2008), human capital describes a hierarchy of skills and knowledge. HCT is one of the most commonly adopted theories in explaining entrepreneurial success. The HCT claims entrepreneurs with advanced levels of input should yield greater output (Rauch & Hulsink, 2015). It goes to say that if young entrepreneurs are trained and equipped with the necessary required skills, they are likely to be successful. Thus, entrepreneurial skills when used well in a new business can influence a country's economic growth and development (Olugbola, 2017).

Mulongo (2012) proposed that HCT can be applied at both micro- and macro-levels. From a macro-level point of view entrepreneurship training and the formation of businesses can be attributed to the different productivity levels in a country and the advancement of technology today, while at a micro-level point of view individuals take part and meet the expenses associated with training with the hope of gaining greater education and learning that can be applied to grow their future venture (Roberts, 1988). It can be seen that developed economies such as Singapore, Korea, and USA have invested significantly in education and training, which has resulted in great economic growth (Unger et al., 2011). Similarly, the HCT illustrates that both education levels, work experiences, and skills of an individual can affect business growth and entrepreneurial success (Unger et al., 2011).

Roberts (2008) asserted that HCT is not just the accrual of wealth, resources and labour but is concerned with the overall wellbeing of an individual but is more a function of a person's knowledge and skills. As such, HCT expects improved economic progress can be expected for people and the communities if individuals have knowledge and skills. The movement towards a knowledge economy has seen that knowledge and skills development have a greater impact on society compared to previous years, and is viewed as a welcome development for the advance of entrepreneurship knowledge (Ucbasaran et al., 2008). The above implies that through the knowledge and skills development of people and society, businesses can have great impact on the overall society of people (Olugbola, 2017).

The suitability of HCT to this study lies in the fact that the focus of this research was on entrepreneurial learning experiences including skills and knowledge that were learnt and influenced, rather than inflexible inherent individual characteristics. Hence, HCT was most suited to explaining how human capital investments and learning experiences of youth produce abilities that can be used in entrepreneurship. HCT also assumes various experiences such as on-the-job training improves existing skills and proficiencies (Becker, 1964). Consequently, this study is positioned to argue that youth entrepreneurs' different entrepreneurial experiences can result in young entrepreneurs learning and accumulating skills that can assist in the growth and development of their business. The information acquired from learning and experience is a resource that is heterogeneously spread across people and, in addition, fundamental to recognising gaps in the availability of opportunities (Gartner et al, 2005).

3. RESEARCH METHODOLOGY

This next section of the paper discusses the research methodology and methods used to gather and analyse data in order to answer the research questions. The research process followed chronological steps to ensure that the study was conducted in an orderly manner (Cooper & Schindler, 2014). The research approach leads to the selection of the research strategy (Saunders & Lewis, 2018). Saunders et al. (2016) noted that the preceding step influences the next step. Sampling issues and data collection instruments and procedures are presented, including the methodologies used to enhance data quality.

3.1 PHILOSOPHY

This study followed an interpretivist philosophy. Saunders et al. (2009) put forward that "interpretivism advocates that research must understand the difference between humans in our role as social actors" (p. 116). The interpretivist philosophy maintains that the researcher has to enter the social world of research subjects and understand the world from their point of view (Saunders et al., 2012). The current study primarily focused on understanding how different entrepreneurial learning experiences shape business growth and success for young people. Consequently, this study was guided by the interpretivist research philosophy, which assumes that reality is a social construction and therefore, subjective. The aim of the study indicates that the researcher was interested in understanding the lived experiences of young entrepreneurs.

3.2 APPROACH

The research approach adopted was both an inductive and deductive approach, as it was found to be the most appropriate to the research purpose and the interpretivist philosophy. In order to understand the critical learning experiences that shape youth entrepreneurial success and development across Africa, a qualitative approach was appropriate. To begin, a deductive approach was used as the current research available in the field of entrepreneurship is vast and quite well understood. The study, therefore, used literature that is currently available in the field of entrepreneurship to test if the findings stand true of young entrepreneurs (Saunders et al., 2009). Inductive reasoning was also applied to answer questions about the multifaceted nature of entrepreneurship with the intent of explaining and understanding the critical learning experiences among youth entrepreneurs. Marshall and Rossman (2014) claimed that the inductive approach allows researchers to gain an in-depth understanding, grounded in the life experiences of people.

Thus, the very nature of the research objectives positions the study within the realm of the interpretivism, where the world is viewed as constructed by people and "the aim of the inquiry is understanding and reconstruction" (Guba & Lincoln, 1994, cited in Saunders & Lewis, 2018, p.16). This perspective is appropriate when the research question is open-ended and tries to capture complexity in social situations (Creswell, 2014).

3.3 RESEARCH STRATEGY

Cooper and Schindler (2014) put forward that a research strategy is used to demonstrate the methods used in the collection and analysis of data when answering research questions. According to Saunders and Lewis (2018), there are five major qualitative research strategies: the case study, ethnography, narrative, phenomenology, and action research. This study adopted phenomenology. The interpretivist philosophy was underpinned by a qualitative phenomenological design, which aimed to understand the lived experiences of these young entrepreneurs (Morse & Field, 2005). The researcher conducted an in-depth study of young and successful entrepreneurs across Africa. In this study, the focus was on young entrepreneurs who were prize winners. Any other successful entrepreneur was not part of the study. Creswell et al. (2007) claimed that phenomenology is generally used in fields of management and entrepreneurship; therefore, the phenomenological research strategy was appropriate.

3.4 METHODOLOGICAL CHOICE

A mono methodological choice was used for this study. As the study used a single data collection technique, qualitative interviews and corresponding analysis procedures, this study is considered to be a mono method study (Saunders et al., 2008). The typical methods associated with interpretivism are qualitative in nature, while the positivist quantitative methods are seen as limited in their ability to provide depth and detail in contextual situations. As this study is attempting to contribute to a greater understanding of how critical learning experiences influences the entrepreneurial development of youth entrepreneurs, the qualitative research choice must afford the generation of profound insights. Consequently, the qualitative in-depth interview was the most suitable choice for this study, as the investigation aimed for richness and depth.

3.5 TIME HORIZON

Time horizon refers to whether data collection was conducted at a specific point in time (a cross-sectional study) or over a long period (a longitudinal study) (Saunders et al., 2016).

This study was cross-sectional in nature, given the imposed time restrictions; as such, the study represents data at a point in time (Saunders & Lewis, 2012). In this study, interviews were conducted over a period of one month. A longitudinal study could not be used due to time constraints. Saunders et al. (2016) noted that cross-sectional studies generally employ phenomenology in the collection of data, while longitudinal studies use experiments, action research, grounded theory, and archival research. In the current study, qualitative data collection techniques were used. An interview schedule was used to gather qualitative data.

3.6 SAMPLING STRATEGY

3.6.1 Population

This research study targeted very young entrepreneurs in Africa who were selected to be Anzisha Prize winners when they were between the ages of 17 and 22 years old for their entrepreneurial endeavours. The entrepreneurs within this population are sector agnostic and actively run both for-profit and non-for-profit businesses. The population in this research was identified on the Anisha Prize website (Anzisha Prize, 2020).The entrepreneurs within this population are sector agnostic and actively running both for-profit and non-for-profit businesses. From a geographical point of view, the population was drawn from 30 different countries across Africa. The population in this research was identified on the Anzisha prize website (Anzisha Prize, 2020).

3.6.2 Unit of Analysis

Entrepreneurship research has focused on the entrepreneur and his/her actions as the unit of analysis (Gliga, 2016). The unit of analysis in this research study is the individual that is the successful entrepreneur that was identified as an Anzisha prize winner. The individual young entrepreneurs who had managed to create successful ventures were taken as the unit of analysis. The study sought to gain an understanding of how different learning experiences and skills development were influential in the success of the enterprise through the lived experiences of young entrepreneurs. The entrepreneurship literature has placed more emphasis on the cognitive processes at an individual level with a focus on the entrepreneur (Gliga, 2016).

3.6.3 Sampling method

The researcher had the full list of the target population, namely, the sampling frame. Hence, the study employed a probability sampling technique, a simple random sampling

technique to be specific. This technique was useful due to its ability to reduce bias through ensuring everyone in the targeted population had an equal chance of being selected. According to Bryman and Bell (2015), the simple random sample means that every young entrepreneur had an equal chance of being included in the study. This sampling technique provided the following benefits: minimisation, elimination of selection bias, ease of use, and enhancing reliability levels.

3.6.4 Sampling size

Bryman and Bell (2015) found that the sample size in qualitative research should be sufficient to ensure that no new insights are gained and that all-important perceptions are uncovered. Saturation is one of the key principles that are used to determine sample size determination for qualitative studies (Boddy, 2016; Malterud et al., 2016; Saunders et al., 2016). Subsequently, the study sample size was determined by saturation level. The sample size for the in-depth interviews was 14 as determined by data saturation. The sample size is consistent with most of the sample size guidelines for qualitative studies. Given the limited time, the sample size was appropriate.

The sample included a mix of entrepreneurs from different sectors and countries, with different personal backgrounds and life experiences. Table 2.1 provides details of the participants and their business (for reasons of anonymity, their names, businesses, and specifics relating to the location of the participant are not included).

Table 2.1: Summary of Participants' characteristics

Participant CODE	Gender	Industry	Highest level of education	Selected age when finalist or prize winner	Number of jobs created	Age of business as at 2020
PM1	Male	Health Manufacturing	A Level	21	7	3
PF2	Female	Education	A Level	22	28	5
PM3	Male	Financial Services	University Degree	20	8	10
PM4	Male	Green Economy	A Level	21	25	2
PF5	Female	Health Manufacturing	A Level	21	10	5
PM6	Male	Green Economy	Diploma	17	121	4
PM7	Male	Agriculture	University Degree	21	10	4
PF8	Female	Textile Manufacturing	University Degree	21	10	7
PF9	Female	Business Services	A Level	21	107	2
PF10	Female	Education	Postgraduate Degree	21	5	2
PM11	Male	EduTech	University Degree	22	8	6
PM12	Male	Textile Manufacturing	University Degree	21	20	7
PM13	Male	Business Services_ IT	University Degree	21	6	3
PM14	Male	Green Economy & Agriculture	O Level	18	20	3

3.7 RESEARCH DATA COLLECTION INSTRUMENTS

3.7.1 Document analysis

To enhance data quality and obtain rich data, documents were analysed. Document review aims to examine the data to generate meaning and further understand a research topic (Bryman, 2016). The researcher conducted an intensive document review to understand the research problem. This review provided critical insights which were used in the development of the questions that were used to probe further questions in interviews (Creswell, 2014). Secondary data was also used through archival research; the data included analysing and reading information that was readily available from the company websites, business plans, management reports and pitch decks. This data was then compared with the evidence gained through the interviews and observations in order to triangulate the data.

3.7.2 Interview guide

A research data collection instrument is a tool that is used to collect data for a study (Bryman & Bell, 2015). The study made use of an interview guide as the primary research instrument. A sample interview guide is given in Appendix 1.3. The interview questions were guided by the research questions and also made use of the key constructs in the study. The first few questions were set to understand the participant's journey to entrepreneurship, and the socio-economic profile and context of the entrepreneur, including the level of education, while the majority of the questions asked related to the different learning experiences that entrepreneurs had had, including understanding the key skills and training undertaken in order to investigate the research questions fully. The study objectives guided the interview questions. The selection of the semi-structured interview guide was because of its ability in gathering descriptive data (Creswell, 2014). The review of literature helped in developing the interview guide. All themes under investigation were considered in the development of the interview guide. The interview questions were validated through soliciting expert opinion on the consistency of the interview questions. The original interview guide was pilot tested and had to be revised to enhance the reliability of data.

3.8 DATA GATHERING PROCESS

Upon receiving ethical clearance from the GIBS from the Master's Ethical Clearance Committee, the data collection and interview process began. The privacy of the research participants was ensured by applying two standards: confidentiality and anonymity (De Vos, 2002). All participants also signed a consent form and took part in the interviews voluntarily. As indicated in the sample size above, a total of 14 interviews with young entrepreneurs across Africa were conducted in October 2020. The interviews lasted between 40 and 60 minutes and were carried out solely by the researcher. The two shortest interviews (30 minutes long) were compressed due to time constraints imposed by the interviewees. The interviews were held through either zoom meetings or telephonically due to the travelling restrictions imposed by the COVID-19 pandemic.

The semi-structured nature of the interviews allowed for flexibility, which meant that often the interviews departed from the schedule, as new issues of interest emerged, or as respondents wanted to share aspects they felt were important or interesting. Probes accompanied the questions in the interview schedule. Probing techniques included phrases such as 'tell me more about...' or 'can you give me an example of...' (Eriksson & Kovalainen, 2008). The researcher also paraphrased respondent statements back as questions in order to probe (Saunders et al., 2016). Probing helped minimise the risk of the researcher that is interviewer bias in qualitative interviewing, by allowing the interviewees to add content or correct information as appropriate (Gioia et al., 2013).

Secondary data was also used through archival research; the data included analysing and reading information that was readily available from the company websites, business plans, management reports and pitch decks. This data was then compared with the evidence gained through the interviews and observations. The sampling strategy and data analysis methods aimed to provide insights regarding the phenomenon of young entrepreneurs and their applicability into other similar contexts and environments.

3.9 ANALYSIS APPROACH

The transcriptions were included with relevant notes and observations which were then coded and analysed using ATLAS.ti. Thematic content analysis was used for the data analysis. Thematic content analysis is a widely used qualitative research technique (Krippendorff, 2013). Hermeneutic content analysis is also a widely used qualitative research technique (Krippendorff, 2013). The codes for analysis were developed and used with the data in ATLAS.ti to generate categories and then themes with accompanying identified relationships. The classification of data was done by creating codes, highlighting key patterns and themes, and identifying trends and plausible relationships, similar to thematic analysis (Vaughn & Turner, 2016). Following from this, the themes and trends that emerged were grouped into categories, and these categories were used to inform and add to the current theory base (Saunders & Lewis, 2012). Corner and Ho (2010) suggested that when done well, data analysis uses well-established approaches that support the inductive theory building approach.

3.10 QUALITY CONTROL

Morse et al. (2002) note that a coherent methodology is essential in addressing the reliability and validity of the qualitative methodology. Qualitative research relies on rich, subjective data, and challenges to assess the reliability and validity of data (Bryman & Bell, 2015). Lincoln and Guba (1985) proposed four trustworthiness criteria (credibility, transferability, dependability, and confirmability), as an alternative way of evaluating qualitative research. The study employed these four criteria to enhance qualitative data quality.

Credibility parallels internal validity and refers to “the believability of the data” (Lincoln & Guba, 1985). Any good research must prove that what was found is indeed a response to the questions originally asked (Quinton & Smallbone, 2006). The empirical stage of this research was conducted based on the principles of theoretical saturation, implying that a required level of depth had been achieved before the empirical stage ceased. Data was

generated through different methods, namely semi-structured interviews and document analysis.

Transferability parallels external validity (Lincoln & Guba, 1985). External validity is about "analytical generalisation" (Creswell, 2014), while transferability in qualitative research refers to the extent to which findings can be transferred. Winter et al. (2015) argued that qualitative findings are generalisable to the development of theories and not wider populations. Based on the above and given the exploratory nature of this research, this study does not seek to generalise its findings beyond the specific context in which they have been generated. However, the insights gained through this study have relevance that can be transferred in the development of theory.

Dependability parallels reliability. Generally speaking, the test of reliability is concerned with how replicable a study is (Quinton & Smallbone, 2006). In the context of qualitative research, dependability refers to the stability of data over time, and it implies that for the research consumers, the results make sense (Lincoln & Guba, 1985). Dependability was addressed by a detailed description of the research process, and the purpose of the study presented in the first part of this chapter.

Confirmability parallels objectivity. Objectivity refers to the objectivity or neutrality of the data and is mostly associated with positivism. In contrast, in qualitative research, "there is no prospect of the social researcher achieving an entirely objective position from which to study the social world" because "a researcher can never stand outside the social world he or she is studying" (Denscombe, 2003, p. 300). An audit trail of the data collection and a reflective journal were kept, so that logical interpretations can make sense to someone else reading the study.

3.11 LIMITATIONS

The limitations of this study lie within the constraints and weaknesses of using a descriptive qualitative research methodology. The qualitative nature of the research made it difficult for

the research data to be quantifiable and verifiable, and consequently maintain or determine objectivity (Myers, 2018). Given the sample size and selection criteria, the findings from this study cannot be generalised to all young entrepreneurs in Africa. The cross-sectional nature of the study means that the findings are only valid for that current point in time and are based on the circumstances and meaning that the entrepreneurs find themselves in. Lastly, as the researcher is not an expert in research, some errors might have occurred during the interview process or the overall research process.

3.12 CHAPTER SUMMARY

This section gave an overview of the research methodology as guided by the concept of the 'research onion'. The research philosophy (interpretivism) that directed the study was discussed and linked to the aim of the study. The research used a qualitative phenomenology strategy, which was deemed appropriate for answering the research question. Semi-structured, in-depth interviews were used to obtain data, which were then transcribed and analysed using computer-assisted analysis (ATLAS.ti). Data quality was assessed using the four trustworthiness criteria (credibility, transferability, dependability, and confirmability) as propounded by Lincoln and Guba (1985, cited in Saunders et al., 2016).

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APPENDIX

1.1 Journal Submission Guidelines for Authors

Instructions for Authors

Manuscript Submission

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If available, the 16-digit ORCID of the author(s)

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For authors that are (temporarily) unaffiliated we will only capture their city and country of residence, not their e-mail address unless specifically requested.

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Please provide an abstract of 150 to 250 words. The abstract should not contain any undefined abbreviations or unspecified references.

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Trial registration number and date of registration

Trial registration number, date of registration followed by "retrospectively registered"

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Please provide 4 to 6 keywords which can be used for indexing purposes.

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Conflicts of interest/Competing interests (include appropriate disclosures)

Availability of data and material (data transparency)

Code availability (software application or custom code)

Authors' contributions (optional: please review the submission guidelines from the journal whether statements are mandatory)

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Funding (information that explains whether and by whom the research was supported)

Conflicts of interest/Competing interests (include appropriate disclosures)

Ethics approval (include appropriate approvals or waivers)

Consent to participate (include appropriate statements)

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Code availability (software application or custom code)

Authors' contributions (optional: please review the submission guidelines from the journal whether statements are mandatory)

Please see the relevant sections in the submission guidelines for further information as well as various examples of wording. Please revise/customize the sample statements according to your own needs.

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This should include, first, a Tweetable headline, comprising no more than 250 characters, including spaces. Ideally the main result, something surprising. Something that will get people to click.

Then, you should provide a simplified summary of your study and its conclusions. At the end of this "Plain English Summary" you should provide implications for at least one of the following five areas: (1) research, (2) education, (3) practice, (4) policy, or (5) society/environment.

While there is not a specific word count limit, ideally the entire Plain English Summary should be less than 150 words.

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Acknowledgments of people, grants, funds, etc. should be placed in a separate section on the title page. The names of funding organisations should be written in full.

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Texts should, normally, be no longer than 8,000 words, including references. Any materials that are relevant, but not essential, should be included as an online only appendix, also known as "Electronic Supplementary Material".

References

Citation

Cite references in the text by name and year in parentheses. Some examples:

Negotiation research spans many disciplines (Thompson 1990).

This result was later contradicted by Becker and Seligman (1996).

This effect has been widely studied (Abbott 1991; Barakat et al. 1995; Kelso and Smith 1998; Medvec et al. 1999).

Ideally, the names of six authors should be given before et al. (assuming there are six or more), but names will not be deleted if more than six have been provided.

Reference list

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Reference list entries should be alphabetized by the last names of the first author of each work.

Journal names and book titles should be *italicized*.

Journal article Harris, M., Karper, E., Stacks, G., Hoffman, D., DeNiro, R., Cruz, P., et al. (2001). Writing labs and the Hollywood connection. *Journal of Film Writing, 44*(3), 213–245.

Article by DOI Slifka, M. K., & Whitton, J. L. (2000) Clinical implications of dysregulated cytokine production. *Journal of Molecular Medicine*, https://doi.org/10.1007/s001090000086

Book Calfee, R. C., & Valencia, R. R. (1991). *APA guide to preparing manuscripts for journal publication.* Washington, DC: American Psychological Association.

Book chapter O'Neil, J. M., & Egan, J. (1992). Men's and women's gender role journeys: Metaphor for healing, transition, and transformation. In B. R. Wainrib (Ed.), *Gender issues across the life cycle* (pp. 107–123). New York: Springer.

Online document Abou-Allaban, Y., Dell, M. L., Greenberg, W., Lomax, J., Peteet, J., Torres, M., & Cowell, V. (2006). Religious/spiritual commitments and psychiatric practice. Resource document. American Psychiatric Association. http://www.psych.org/edu/other_res/lib_archives/archives/200604.pdf. Accessed 25 June 2007.

For authors using EndNote, Springer provides an output style that supports the formatting of in-text citations and reference list.

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Tables should always be cited in text in consecutive numerical order.

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Supply all figures electronically.

Indicate what graphics programme was used to create the artwork.

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Vector graphics containing fonts must have the fonts embedded in the files.

Name your figure files with "Fig" and the figure number, e.g., Fig1.eps.

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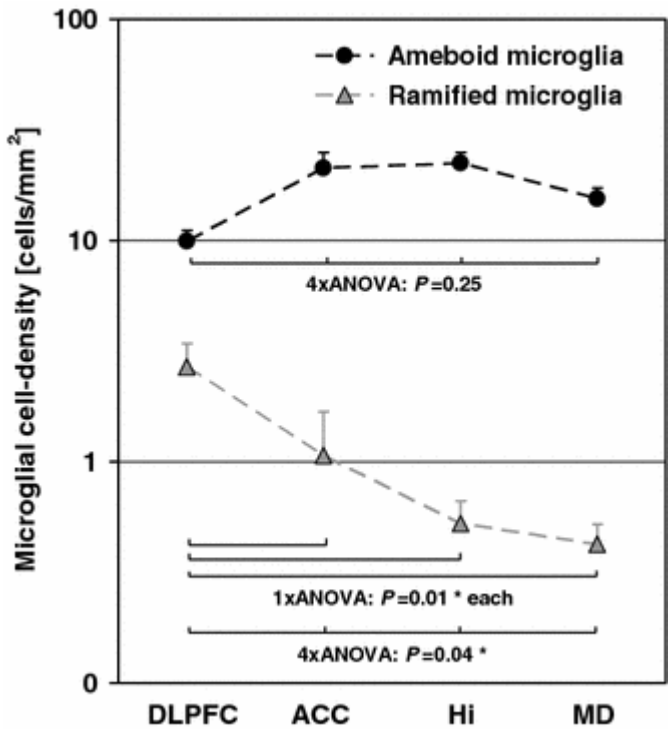

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Vector graphics containing fonts must have the fonts embedded in the files.

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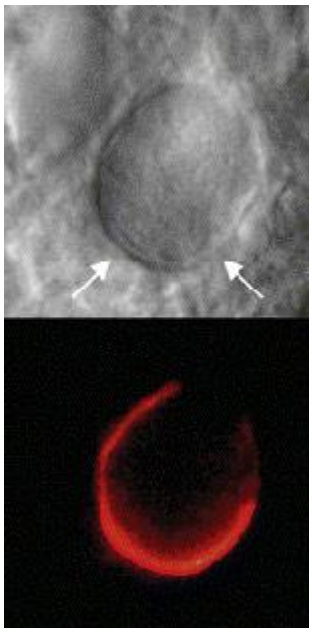

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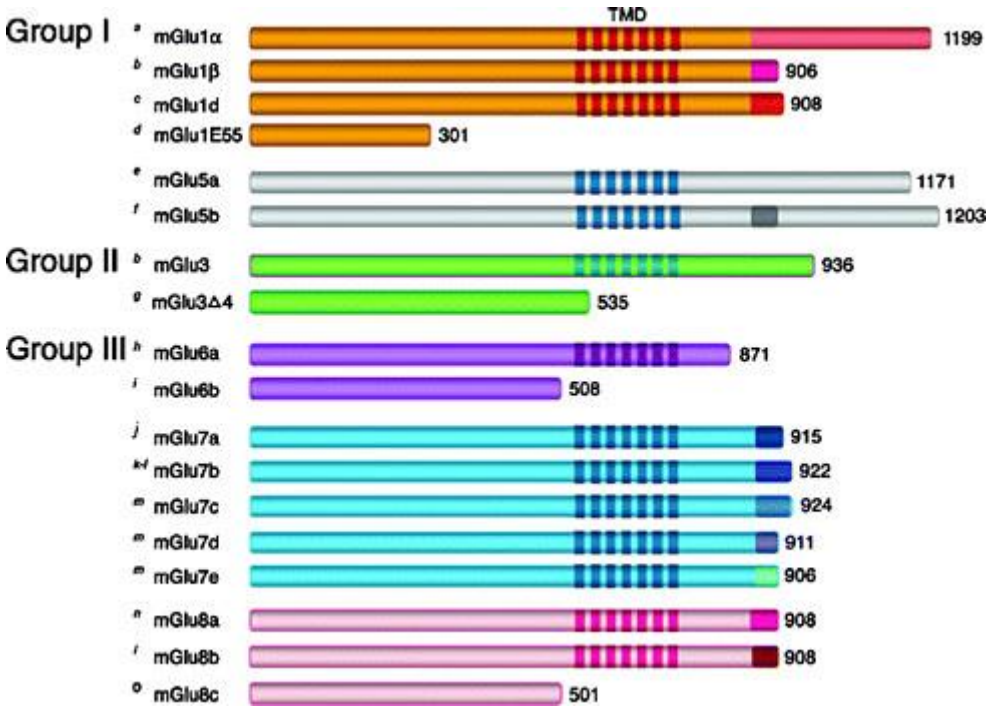

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Do not include titles or captions within your illustrations.

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Figures should always be cited in text in consecutive numerical order.

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Aspect ratio: 16:9 or 4:3

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Submit your material in PDF format;.doc or.ppt files are not suitable for long-term viability.

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Name the files consecutively, e.g. "ESM_3.mpg", "ESM_4.pdf".

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1.2 Article Example from Journal of Small Business Economics

Small Bus Econ (2016) 46:187–213
DOI 10.1007/s11187-015-9685-6

Age, culture, and self-employment motivation

Tommaso Minola · Giuseppe Criaco · Martin Obschonka

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Abstract To study the interplay between age and culture as driver of self-employment motivation, we examine cross-sectional age differences (young to late adulthood) in self-employment desirability and feasibility beliefs across different cultures. We utilize individual-level data from the 2012 Flash Eurobarometer survey collected in 21 countries (total $N = 13{,}963$ individuals) and culture-level data from the GLOBE project. Our results from multi-level regression analyses show similar curvilinear lifespan patterns in both desirability and feasibility beliefs, with a peak in young adulthood and a strong decline toward late adulthood. This general pattern of age differences in these motivational factors, however, differs significantly across cultural dimensions of uncertainty avoidance, institutional collectivism and performance orientation. Notwithstanding the limitations of cross-sectional data, the present results indicate that individual factors motivating self-employment are systematically intertwined with, and embedded in, *both* age and culture. Implications for theory and practice are discussed.

Keywords Age Entrepreneurship Culture Self-employment motivation Life-span

JEL Classifications M13 L26 J24

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1 Introduction

The study of individuals' age has gained momentum in the entrepreneurship scholarly debate. Age has been indicated as one of the most important determinants of entrepreneurship in individuals (Lévesque and Minniti 2006; Parker 2009), and existing research has developed a growing interest in studying age differences in individuals' career decisions (Kooij et al. 2011), including self-employed work (Lévesque and Minniti 2006; Parker 2009). Macro-changes in the environment suggest that self-employment as a possible career choice is now available to a broader spectrum of the adult population. On one hand, societies are exposed to massive demographic changes with a very prominent growth in the proportion of older people (e.g., 55 years and older) in the workforce (Kautonen et al. 2014; Heim 2015). As a consequence, the pool of

potential entrepreneurs among this group is constantly supposed to grow (Kautonen et al. 2010).[1] Experts stress that future societies will rely more heavily on the productivity and work motivation of older people (Kanfer and Ackerman 2004), including their entrepreneurial agency, and have called for the introduction of tailored policy intervention (Kibler et al. 2015; Curran and Blackburn 2001). On the other hand, several European countries such as Spain and Italy face high youth unemployment rates (Bruno et al. 2014). Policymakers deem the promotion of entrepreneurship and self-employment a useful tool to ''fight'' youth unemployment (Minola et al. 2014).

While research has mostly focused on the link between age and self-employment status (vs. employed work), mainly proposing and finding an inverted U-shaped relationship (Curran and Blackburn 2001; Lévesque and Minniti 2006; Bönte et al. 2009), two important shortcomings exist in the literature. First, prior studies have focused on self-employment actions, refraining from assessing age differences in self-employment motivational characteristics, i.e., the action's antecedents. Studying how age relates to self-employment motivation is informative because motivational aspects represent the central antecedents of intentions and actions (Krueger et al. 2000; Schjoedt et al. 2014; Kautonen et al. 2015). In fact, studies on individual and entrepreneurial cognition, including motivational factors (Shane et al. 2003), help in explaining how individuals evaluate opportunities (Mitchell and Shepherd 2010; Mitchell et al. 2000) and how they form intentions for developing and pursuing these ideas (Dimov 2007; Wood et al. 2012). In this sense, self-employment motivations are important predictors of a broad set of career decisions, including both entry and exit from self-employment, but also of further entrepreneurial outcomes, such as growth and success (Rauch and Frese 2007; Carsrud and Brännback 2014). Thus from a policy perspective, it may become easier (and more effective) to design interventions to tailor self-employment motivation, which would ultimately lead to action, rather than targeting directly actions and behaviors. Second, prior studies tend to overlook cultural heterogeneity in the age–entrepreneurship relationship. This is surprising given that entrepreneurship differs across macro-cultural conditions (e.g., Liñán and Chen 2009; Autio et al. 2013) and culture is an established contingency in psychological motivation research (e.g., McCrae et al. 1999).

The present study attempts to address the above-mentioned gaps in the literature by studying age patterns in self-employment motivation, with a special focus on cross-cultural differences. More specifically, we ask the following research questions. *First*, do central motivational factors behind self-employment show a similar, characteristic developmental trend across the lifespan? *Second*, does such a developmental trend differ across cultures in a systematic way? We propose a developmental-contextual lifespan perspective (Baltes et al. 1999) and rely on a sample of over 13,000 potential entrepreneurs from 21 countries to explore the interplay between age and culture in the lifespan patterns in self-employment motivation. Despite the exploratory nature of our research, our results deliver a picture widely consistent with existing theories and findings from lifespan and entrepreneurship research.

This study offers the following contributions. First, it proposes a novel approach for the study of self-employment motivations in individuals by focusing on lifespan psychology. On the one hand, by studying motivation we offer a rather ''foundational'' view that represents a springboard to better understand ''when and why'' people engage in a broad set of entrepreneurship decisions and behaviors. On the other hand, previous studies comparing self-employed and employed people in different age groups have mainly focused on aspects such as personality traits (Caliendo et al. 2014), gender (Verheul et al. 2012), labor market status, or entrepreneurship-related characteristics of different age cohorts, such as near-retirees (Heim 2015), third-age individuals (Kautonen et al. 2010), and young entrepreneurs (Minola et al. 2014). Our study instead proposes a lifespan psychology perspective that focuses on the actual self-employment motivation across the different age groups in adulthood. Another contribution of our

[1] While the pool of potential 'third-age' entrepreneurs is increasing, this, however, does not necessarily mean that the share of older individuals engaging in self-employment is increasing everywhere. A recent study of US near-retirees (55–64 years old) shows a declining trend in self-employment between 1994 and 2012 (Heim 2015). The decline is found to be driven by an increase in the exit rate to wage and salary employment, a decline in the rate of self-employment among new entrants into this age cohort, and an increase in the share of these new entrants. The author also finds that health insurance coverage and after-tax prices of health insurance are significantly associated with these three rates.

work lies at the intersection of entrepreneurship and a developmental-contextual perspective. Our study emphasizes that both intrinsic, i.e., age, and environmental factors, i.e., culture, together drive and shape self-employment motivation (cf. Shane et al. 2003). Our data indicate that a normative timetable does exist for self-employment motivation across the lifespan. This timetable pattern is, however, only partially universal across cultures as it seems to be influenced by prevalent cultural practices.

2 Literature overview and theoretical framework

Self-employment motivation generically refers to ''what activates a person, what makes the individual choose one behavior over another, and why do different people respond differently to the same motivational stimuli'' in an entrepreneurial setting (Carsrud and Brännback 2011: 11). In particular, self-employment motivation has been related to the degree to which individuals value entrepreneurial behavior and find the prospect of becoming an entrepreneur to be attractive, i.e., *desirability beliefs*, and the degree to which individuals think they can successfully perform entrepreneurial behavior as target behavior, i.e., *feasibility beliefs* (Krueger 1993; Krueger et al. 2000). Together they work as fundamental motiva- tional factors that transform attitude and perceptions of control, respectively, into entrepreneurial intention (Schlaegel and Koenig 2014). Desirability and feasibility beliefs figure prominently in self-employment motivation models such as Shapero and Sokol (1982) entrepreneurial event model. Another example is Ajzen (1991) theory of planned behavior applied to self-employment motivation (Obschonka et al. 2010; Schlaegel and Koenig 2014; Kautonen et al. 2015), where desirability beliefs are framed as attitudes and feasibility beliefs as control and self-efficacy beliefs (Krueger et al. 2000). Both models, the entrepreneurial event model and the theory of planned behavior, deem desirability and feasibility beliefs as core elements through which background motivational factors (e.g., personality factors such as risk-taking, goal orientation, motives, career-stage-specific factors) affect entrepreneurship (e.g., Goethner et al. 2012).

By definition, feasibility and desirability beliefs are regarded as motivators to perform and solve entrepreneurial tasks and to ''stay on track'' when barriers and challenges emerge, which is common along the whole entrepreneurial process, both during nascent start-up or the post-start-up phase (Mitchell et al. 2002). Moreover, such motivational factors are also instrumental in achieving entrepreneurial success. For example, feasibility beliefs, such as entrepreneurial self-efficacy and locus of control, are among those motivational individual factors that show the strongest effects on entrepreneurial success (Rauch and Frese 2007) and self-employment entry and exit decision (Caliendo et al. 2014). It is, thus, accurate to conclude that desirability and feasibility beliefs stand at the ''heart of entrepreneurship,'' with important effects from the earlier to the later stages in the entrepreneurial process.

2.1 Is there a general trend in age differences in desirability and feasibility beliefs regarding self-employment?

As indicated by lifespan psychology (Baltes et al. 2006), performance-related motivational factors (e.g., control beliefs or attitudes regarding challenging goals) are not constant across the lifespan but show normative lifespan patterns. This is likely to also apply to the specific case of self-employment motivation; notwithstanding the relevance of this question, very few works have initiated a scholarly dialog around it (Krueger 2007).

We argue that self-employment motivation is intertwined with, and in part an expression of, the person's general psychosocial development. This general development is a lifelong process from birth to late adulthood (Baltes 1987; Baltes et al. 2006) and follows certain normative timetables and developmental trends within biological and social potentials and constraints across the lifespan (Lerner 2006). In his theorizing about the drivers behind entrepreneurial thinking, Krueger (2007) stressed the relevance of such a developmental lifespan perspective on entrepreneurial desirability and feasibility beliefs. He deemed such beliefs to be embedded in and shaped by the individual's normative developmental trends. In other words, it is likely that systematic, normative age differences in self-employment motivation in the general population exist.

But what exactly would such a normative lifespan curve in self-employment motivation look like? Given the scarcity of research on age differences in core

motivational factors in the context of entrepreneurship and self-employment, we draw on the literature and empirical findings on normative lifespan trends of background motivational factors that are relevant for work motivation (Kooij et al. 2011), and show a conceptual link to entrepreneurship. By means of this literature, we then infer our expectations on the shape of the lifespan curves of desirability and feasibility beliefs regarding self-employment.

It is widely acknowledged that relevant motivational background factors that show a conceptual link to self-employment in entrepreneurship research are the person's: (a) personality traits, (b) general belief systems, (c) dealing with uncertainty, risk, proactivity, and challenging goals, (d) generativity, and (e) seeking self-determination (e.g., self-employment is an opportunity to enjoy higher levels of job autonomy and self-determination at work) (see Benz and Frey 2008). Interestingly, these background factors show a remarkably similar lifespan pattern with an increase in young adulthood, a peak in middle adulthood and a strong decline toward late adulthood. This may account for a similar lifespan trend in the core motivational factors behind self-employment (desirability and feasibility beliefs). This would be consistent with lifespan career theory (Super 1980) and the research on age differences in actual entrepreneurial behavior (Gielnik et al. 2012). In the following, we refer to the existing body of research on age differences on these background motivational factors together with lifespan career theory (Super 1980).

First, we consider research on general self-esteem and self-efficacy. The average lifespan curve of self-esteem in the general population shows a steady increase in young and middle adulthood with a peak in late middle adulthood and then a steady decrease in late adulthood (Orth et al. 2010; Robins et al. 2001). Self-confidence and optimism are often mentioned as personal characteristics that are relevant for entrepreneurship and self-employment, because one actually needs to have ''the guts'' to trust oneself to become an entrepreneur and to succeed (Simon et al. 2000).

Second, we draw on research on age differences in control beliefs. Here, lifespan control theory (Heckhausen and Schulz 1995) states that the individual's capacities for the use of control strategies that target the active controlling of the environment and its risks, and of one's own destiny (primary control), should increase early in life and then peak in late early and early middle adulthood, and then decline in later ages because secondary control, that is the dealing with losses and biological and social constraints of psychological development, becomes more and more important. In other words, people might feel most capable of controlling their own destiny when they mature into independent adults and do not yet face the biological and social constraints of human development and agency that come along with an increase in years, particularly in late adulthood. Clearly, entrepreneurship and the motivation for self-employment can be regarded as forms of human agency that require primary control due to their proactive and challenging nature (Rauch and Frese 2007). Such control striving is, for example, stressed as a central motivational factor behind effectuation principles (Read et al. 2010). Hence, one can assume the inner self-employment motivation system to show a similar lifespan trend to the primary control research.

Third, we draw on research on goal orientation, motives, and risk-taking over the lifespan. Research in developmental psychology indicates that goal orientation with regard to opportunities for personal growth (e.g., improvement of one's own situation or the achievement of something new) follows a certain developmental timetable. Research on individuals' general goal orientation across the lifespan with regard to personal growth shows that people tend to orient their life decisions toward personal growth in middle adulthood, whereas personal growth plays a less prominent role in young adulthood and late adulthood. Specifically, studies found that, on aver- age, growth-oriented goals regarding all kinds of life topics are most common in middle-aged adults, and less common in younger adults and older adults (Ebner et al. 2006). Whereas the growth goals seem to be the dominant goal orientation in young and middle- aged adults, maintenance and prevention of loss goals become much more important in older adults. In late adulthood, instead of growth goals, the focus on existing close relationships and the sense of the remaining lifetime become dominant life topics (Carstensen 2006). Furthermore, meta-analyses found that work-related growth and extrinsic motives are less likely in late adulthood than in earlier develop- mental stages (Kooij et al. 2011). Regarding prefer- ences for risk, research indicates that older adults are often more risk-averse than younger adults,

particularly when the actual risk involved in a certain task or decision is not made explicit, and if only incomplete information about the actual risk is given (see Rolison et al. 2012). One central characteristic of self-employment and entrepreneurship is that often the risk involved cannot be fully (and correctly) estimated, particularly in early phases of the entre- preneurial process. Entrepreneurship and self-em- ployment as an arena of personal growth (e.g., due to own agency, work autonomy and self-determina- tion, and challenging tasks) (Obschonka et al. 2015) and relatively inexplicit risk (Kan and Tsai 2006) might thus be least valued in late adulthood. Instead, it might be mostly valued in middle adulthood, where a growth-oriented life orientation might drive both attitudes and control beliefs that favor and support personal growth.

Fourth, further indications of a characteristic form of the lifespan curve of self-employment motivation come from lifespan career research. Super (1980) lifespan model of career development postulates a normative timetable of career development from birth to late adulthood. Regarding adulthood, it defines young adulthood as the period of exploration and establishment, middle adulthood as the period of growth and maintenance, and then later stages as a period of decline. These ''overall themes'' of career development guide occupational interests, attitudes, goals, ambitions, and achievements. Since middle adulthood is the phase of both personal growth and establishment, entrepreneurship and self-employment might fit this developmental phase best, particularly with regard to related work motivation such as the motivation to engage and start entrepreneurial activ- ities in one's career.

Finally, Erikson (1980) stage model of psycholog- ical development over the lifespan deems generativity the omnipresent life topic in the phase of middle adulthood. Some entrepreneurship scholars use the terms ''firm birth,'' ''gestation,'' and ''nurturing one's own business'' when describing the venture creation process and the involvement of the founder (Reynolds and Miller 1992), and starting a business might be a response to this generativity life topic that is salient in middle adulthood.

Taking these theoretical and empirical arguments together, we have good reason to assume that a general age-graded normative trend in desirability and feasi- bility regarding self-employment exists, following a general curvilinear trend with a peak in early–mid- adulthood.

2.2 Lifespan and self-employment motivation across cultures

Individual normative development is embedded in the wider cultural context and thus in population-wide shared values, practices and norms which influence human motivation (Baltes et al. 2006; Bronfenbrenner 1986). This relies on the recent ''call for finer grained studies and inductive research in different contexts to determine the traits profiles of potential entrepreneurs in different cultures'' (Mueller and Thomas 2001: 69). Hence, it is important to clarify, for example, whether age and culture show a characteristic interplay in the developmental trends in self-employment motivation. Such a developmental-contextual perspective is a predominant approach in lifespan psychology and sociology, e.g., in the scientific investigation of cognitive development over the lifespan) (see Baltes et al. 2006) and of human agency over the lifespan (see Elder 1994). Moreover, such cross-cultural perspec- tive has been helping to reveal important insights in the study of human motivation and cognitions (McCrae et al. 1999; Donnellan and Lucas 2008). Applied to the case of self-employment motivation, the cross-cultural perspective can be valuable to address our second research question: Do the age- related changes in self- employment motivation depend on culture? If so, how?

Age changes in motivation may be ascribed to intrinsic (biologically originated and universal) devel- opmental processes, or to contextual influences that vary across cultures, or both (Cohler 1985). Recent cross-country entrepreneurship research has looked at universal patterns of entrepreneurial endeavor across the lifespan (Campopiano et al. 2016; Kautonen et al. 2014; Gielnik et al. 2012). This is supported by the view that entrepreneurship is to a considerable extent a result of genetic inheritance (Nicolaou et al. 2008); hence, entrepreneurship's development over the lifes- pan has a biological origin that is universally recog- nizable (Shane and Nicolaou 2015). The arguments we have developed so far, specifically for self-employ- ment motivations, are in line with this research.

However, to such universalistic approaches several scholars have opposed the environmental perspective, which suggests different and specific developmental

patterns based on historical and cultural trends (Wyrwich 2013), and linked with cultural features such as childrearing (Laspita et al. 2012) and cultural dimensions (Lafuente and Vaillant 2013). It has been argued that ''[a] more balanced analysis would emphasize the complex interaction between culture and developmental psychology'' (Gould 1999: 597). Although there is as yet no validated theory that offers a systematic link between cultural values and lifespan cognitive development (McCrae et al. 1999), cross-cultural comparisons are very instructive to the *universal* versus *environmental* debate. In particular, cultural practices measured by usual conducts and institutional practices and norms, as actually perceived by the individuals (e.g., House et al. 2004), might represent suitable examples of pervasive contextual influences that affect the development of self-employment motivation (Autio et al. 2013).

Hence, it is reasonable to assume that lifespan patterns in self-employment motivation might not be universal across cultures, but that cultural differences get manifested in different lifespan curves across cultures. A large body of literature from cross-cultural psychology indicates that these cultural differences affect human motivation and its interplay with age (Gould 1999; Park et al. 1999). To clarify such interplay, lifespan literature comes to our aid; in particular, it suggests several mechanisms through which the various age-graded normative influences, which form motivational aspects, are shaped by the cultural context (Baltes et al. 2006). A few examples are offered illustratively.

First, Park and colleagues (Park and Huang 2010; Park et al. 1999) have offered a description of two ways culture can shape cognitive functions and motivational changes across the lifespan. On the one hand, some basic ''hardware of mind,'' such as memory or processing speed, declines consistently, so that differences that might be visible across cultures for young individuals are then attenuated with age. For example, (Hedden et al. 2002) found a ''culture 9 age'' interaction so that younger sample Chinese participants were superior to American ones in processing speed, while over the lifespan, culture could influence less, so that no such difference was found in older individuals. This indicates that for certain tasks, basic cognitive functions have increasing requirements with age, and culture may not suffice to support in this task. In this example, since processing speed is a correlate of opportunity recognition and exploitation (Baron and Ward 2004), we might expect young adults in cultures such as Chinese to show higher proficiencies and stronger motivations for entrepreneurship than in other cultures. On the other hand, there are instead other functions that are strongly subject to cultural influence along the whole lifespan and Park and colleagues' model suggests that living longer in a given culture is likely to facilitate or hinder members of that culture in performing related tasks. Specifically, individuals ''attune and elaborate'' (Heine et al. 1999; Zhang et al. 2014) their self-perception according to their cultural backgrounds. For example, You et al. (2009) showed that high optimism was displayed more in older than in younger individuals in the American sample, while the opposite was true in the Hong Kong Chinese sample. This is because Americans emphasize optimism while Chinese people do not. Research has shown that optimism is relevant for entrepreneurship (Cooper et al. 1988; Simon et al. 2000) as it affects entrepreneurial self-efficacy; following these arguments, it is likely that young individuals in optimistic cultures such as South-East Asian or Scandinavian (Hofstede and Hofstede 2001) will display high self-employment motivation. Conversely we might expect this to be true for the elderly in cultures such as Russian or South European.

Second, societal support for an entrepreneurial career in youth is highly cross-culturally variable. Practices such as childrearing, parenting and role modeling do affect young individuals' vocational development and career choice (Gibson 2004), including entrepreneurship and self-employment (Van Auken et al. 2006; Lafuente and Vaillant 2013). Besides, literature also offers evidence for significant cross-cultural differences in parenting practices (Wong 2005), socialization processes (Mueller et al. 2002) and role models (Hisrich 1990). Hence, there should exist significant cross-cultural differences with respect to entrepreneurship supportiveness during adolescence and early adulthood (Mueller and Thomas 2001). In fact, for instance, research has shown that socialization processes of young adults in masculine cultures make them more psychologically predisposed toward entrepreneurship than their peers in feminine cultures (Mueller et al. 2002).

Third, culture might affect the association between age and self-employment motivation via societal preferences and desirability biases toward youth rather

than aging. Only certain cultures are known to worship youth: for example, since the early 1960s, subjective age research regularly tracks age denial attitude among adult Americans or Northern Europeans (Barak et al. 2001); on the contrary, in Far East or Mediterranean cultures one more likely venerates and respects ancestors and elders, so that efforts to remain ageless (e.g., through surgery and heavy use of cosmetics), and age denial do not appear as so self-evident (Mosquera et al. 2002). In this latter context, elderly people should benefit from a higher socioeconomic status, and receive more support and respect. Thus, older people's entrepreneurial engagement may be seen as more legitimate and desirable. The overall societal (and institutional) support, in turn, may enhance skills development and resource acquisition, so making entrepreneurship also more feasible at that age.

Fourth, individuals in each culture learn to be more culturally appropriate as they grow older. This process is known as ''cultural learning'' (Vygotsky 1962) in the human development literature. Cultural differences in aging can, therefore, occur when people from different contexts learn different ways to fit cultural expectations of their environment. We thus expect that there will be higher self-employment motivation for people at older ages, for example, in high-uncertainty avoidance cultures that are more favorable toward entrepreneurship (Autio et al. 2013), where entrepreneurship may be seen more as culturally appropriate.

Taken together, these arguments indicate that it is unlikely that lifespan patterns are always exactly the same (universal) across cultures. We rather expect cross-cultural differences in prevalent cultural practices to co-determine population-level age trends in self-employment motivation. Our study thus explores and quantifies whether and how prevalent cultural practices might actually affect population-level age trends in self-employment motivation.

3 Methods

There are several methods of studying lifespan trends in motivational variables. Ideally, one would follow the same persons across their life-course with repeated age-adequate measures of the variables of interest to analyze the lifespan patterns in these variables (under consideration of cohort, age, and period effects). Such a long-term longitudinal data set delivering longitudinal information on self-employment motivation (from preferable representative samples) was, however, not available for the present analysis. Since this is a common problem in psychological lifespan research, many lifespan researchers apply an alternative method. This alternative method analyzes cross-sectional age differences in the variables of interest by drawing from large, representative samples of the study population (Srivastava et al. 2003; Mayr et al. 2012). This method is well established in developmental research (Lucas and Donnellan 2009).

As said, the central limitation of this cross-sectional design is that it cannot disentangle cohort effects and age-related change (Schaie 1965). Hence, these studies, strictly speaking, should not be over-interpreted as ultimate evidence for developmental trends and effects within the life-course of individuals. However, two arguments mitigate such concern for this type of studies. First, such cross-sectional studies yield valuable information on systematic age differences in cognitions and motivations that is consistent with developmental theories and extant research (Srivastava et al. 2003); when cross-sectional and longitudinal studies agree in their results, it can be argued that development (the common effect between the two designs) is the cause of such results. For this reason, studies in lifespan development psychology commonly consider different designs jointly (Srivastava et al. 2003; Mayr et al. 2012; Lucas and Donnellan 2009) to rule out cohort effects, e.g., in personality studies (see Terracciano et al. 2005). Second, because cohort effects tend to vary with culture, studying whether the patterns of age differences are the same or different across cultures can help to partially isolate developmental changes from culture-related cohort effects (McCrae et al. 1999). To the degree that similar patterns of age changes emerge in different cultural settings, the variety in historical development reinforces the case for understanding them as intrinsic maturational processes.

3.1 The data

The databases used for this research are the 2012 Flash Eurobarometer survey[2] and the Global Leadership and Organizational Behavior Effectiveness (GLOBE) project. The Flash Eurobarometer survey's main aim is to

[2] A report showing main findings of the survey is available at http://ec.europa.eu/public_opinion/flash/fl_354_en.pdf.

examine entrepreneurship and entrepreneurial mindsets in people. The survey also examines the motivation, choices, experiences, and obstacles linked to self-employment. It originally contained information on 42,080 individuals from 40 different countries. Each national sample is representative of the working-age population. Previous versions of this data set have been recently used in entrepreneurship research (e.g., Block et al. 2013; Verheul et al. 2012). The Flash Eurobarometer survey provides several advantages to studying cross-sectional and national age differences between individuals. First, it is representative of the working-age population, which assures variability in the age of respondents. Second, it provides variability in the culture-related dimensions as it includes individuals who belong to 40 different countries, which are differently related to virtually all major cultural dimensions. Third, the data collection has been undertaken in the same period for all the respondents, avoiding potential secular trends effects among observations (Srivastava et al. 2003).

The GLOBE project was used to assess cross-cultural differences in the age-desirability beliefs and feasibility relationship. GLOBE is a multi-phase, multi-method research program that focuses on culture and leadership. The GLOBE data collected in the mid-1990s from 17,000 middle managers from 931 organizations in 62 countries yielded nine distinct cultural dimensions: in-group collectivism, institutional collectivism, humane orientation, assertiveness, performance orientation, power distance, uncertainty avoidance, gender egalitarianism, and future orientation (House et al. 2004). The GLOBE dimensions have been applied in subsequent cross-cultural research in various fields, such as psychology (e.g., Zhao and Seibert 2006), ethics (e.g., Alas 2006), and innovation research (e.g., Taylor and Wilson 2012). The GLOBE study distinguishes between cultural *practices* and cultural *values*. It measures cultural practices with ''as is'' statements and cultural values with ''as should be'' statements (House et al. 2004). Following Autio et al. (2013), we used cultural practice measures rather than value measures. Perceptions of cultural practice reflect how cultural norms are embodied in behaviors, policies, and actual prescriptions (Segall et al. 1998), while values indicate expectations individuals have toward collective behaviors. Besides, cultural practices are external, observable, and detached from individual influence (Sapienza et al. 2006); therefore, they are considered better predictors of entrepreneurial behavior than cultural values (Autio et al. 2013). They are also best suited for individual-level studies such as ours, in which individuals are seen as proactive, self-reflecting, and self-regulating, and behave in response to their social context (Rauch and Frese 2007).

3.2 Sampling procedure

In our sample, data on self-employment motivations are available for a population of potential entrepreneurs, i.e., individuals who are not yet engaged in self-employment. Given our research goal and the policy valence of the phenomenon we study, it is interesting to focus on potential entrepreneurs as the seedbed for future entrepreneurial potential. In addition, although such individuals may have a preexisting preparedness to accept self-employment opportunities (i.e., ''potential''), the potential for self-employment is still latent and is causally and temporally prior to intentions (Shapero and Sokol 1982; Krueger et al. 2000) and decision to act (Krueger et al. 2000). This approach is appropriate given our focus on motivation; it is also in line with those empirical studies that focused on the determinants of entrepreneurial feasibility and desirability beliefs in individuals (e.g., Krueger et al. 2000; Fitzsimmons and Douglas 2011). Consequently, we (a) removed from the sample 10,736 individuals who were already entrepreneurs or had decided to start act as such,[3] (b) restricted the sample to working-age individuals between 18 and 64 years (cf. Kautonen et al. 2015), dropping 9726 observations. Finally, we removed observations with missing values for the variables used in our models. Most of the missing values are generated when matching individual-level observations with country data. Indeed, for some of the countries presented in the 2012 Flash Eurobarom- eter survey there are no available scores for cultural dimensions provided by the GLOBE project. Our final sample is country-representative and consists of 13,963 individuals nested in 21 countries.[4]

[3] This choice has also been driven by the design of the survey; indeed, measures of both desirability beliefs and feasibility were assessed in individuals who were not entrepreneurs or were taking steps to become such.

[4] Denmark, Germany, Greece, Spain, Finland, France, Ireland, Italy, Netherlands, Austria, Portugal, Sweden, Hungary, Poland, Slovenia, Turkey, Switzerland, Brazil, Japan, United States, South Korea.

3.3 Measures

3.3.1 Dependent variables

Desirability beliefs reflect a person's ''intrinsic interest in entrepreneurship'' (Krueger and Brazeal 1994: 96) or ''one's affect toward entrepreneurship'' (Krueger 1993: 8). In this study, desirability beliefs were assessed through the question, ''Personally, how desirable is it for you to become self-employed within the next 5 years?'' (see Krueger et al. 2000; Zampetakis 2008), with responses on a four-point Likert scale (1 = very undesirable, 4 = very desirable). *Feasibility beliefs* reflect instead an individual's perceived ability to execute a target behavior—that is, perceived self-efficacy or the degree to which the individual feels capable of starting a business (Krueger et al. 2000). In this study, feasibility beliefs were assessed through the question, ''Regardless of whether you would like to become self-employed, how feasible would it be for you to become self-employed within the next 5 years?'' (1 = very unfeasible, 4 = very feasible) (see Iakovleva and Kolvereid 2008; Kickul and Krueger 2004).

3.3.2 Independent variable

Individuals' *age* has been measured by the age of the respondents. Although some studies prefer to measure age in cohorts, others consider it as a limitation, since—especially in cross-culture analyses—it provides a less detailed understanding of which age bands affect entrepreneurial beliefs (see Kautonen et al. 2010). Based on this, age was used as a continuum. Moreover, the quadratic term of age (age squared) is included to test for the curvilinear effects.

3.3.3 Moderating variables

Many different dimensions of culture can influence entrepreneurship directly or indirectly. Focusing on the cultural dimensions as identified by the GLOBE study, Autio et al. (2013) anticipate the societal cultural practices of societal *institutional collectivism (IC), uncertainty avoidance (UA),* and *performance orientation (PO)* to be particularly salient influences, because they resonate and shape many of the factors commonly ascribed to self-employ- ment motivation.

IC practices matter, as entrepreneurship is fundamentally an individual-level endeavor; therefore, IC practices affect legitimacy and resource mobilization for entrepreneurship in a society (Oyserman et al. 2002). As a consequence, factors such as self-esteem, self-efficacy control, risk-taking and individual goal definition, and their lifespan patterns, will be affected by IC, as will their lifespan effects on motivation for self-employment. Entrepreneurship is also described by words such as proactivity and competitiveness. As resources and personal commitment are needed before entrepreneurship can yield any type of return, the risk-taking aspect of entrepreneurship is crucial (Kan and Tsai 2006). Individuals' risk taking and its lifespan patterns will be severely influenced by UA. Finally, since PO influences societal incentives and rewards for performance, competition, and innovation pursuing, it will likely affect an individual's position toward professional goals and career strategy, including entrepreneurship and self-employment (Rauch and Frese 2007). Abundant research on entrepreneurship has considered the direct effect of IC, UA, and PO on the entrepreneurial process. For the above reasons, we believe that in addition to the direct effect, the indirect effect of these cultural practices is also important, so that age-related changes of individuals' perception over the lifespan regarding entrepreneurship and self-employment will likely interact with IC, PO and UA practices; given the exploratory nature of our work, and following Autio et al. (2013), we advance that these three dimensions represent an initial set of sufficiently parsimonious and theoretically consistent moderators for our analysis.

3.3.4 Control variables

We control for individual-level variables and country-level variables as such exogenous factors are believed to affect feasibility beliefs and desirability (Drennan et al. 2005; Krueger et al. 2000). First, we control for *gender* as women may differ from men regarding their feasibility beliefs and desirability to start a new business (Verheul et al. 2012). Second, we control for the presence of *self-employed parent(s)* as they are believed to affect both feasibility beliefs and desirability (Drennan et al. 2005). Individuals' education

and experience are key control factors in this study. Indeed, many studies have used individuals' age as a proxy for human capital (see Coleman 2007) and more generally, experience (see Littunen and Virtanen 2009). Thus, if we control our model for both education and experience, we overcome the eventual problem of having age as proxy of education or experience. Educational background is assessed through two binary variables. Following Kautonen et al. (2014), generic *education* was measured by a binary variable coded 1 if the respondent has left full-time education aged 20 or older, otherwise 0. We controlled for individuals' *entrepreneurial education* coded 1 if the respondent has ever taken part in any course or activity about entrepreneurship while attending school or college, otherwise 0. We also controlled for *entrepreneurial experience*, coded 1 if in the past the respondent has started a business or taken over an existing one, otherwise 0. Working background is assessed with two binary variables. *Professional* is coded 1 if individual's current job is professional/office employee, otherwise 0. *Manual worker* instead is coded 1 if individual's current job is manual worker, otherwise 0 (cf. Kautonen et al. 2014).

As economic, financial, and demographic macro-factors are likely to affect our dependent variables, we incorporated three control variables at the country level: GDP, old-age dependency ratio, and unemployment rate. The country-level control variables were computed using a wide range of secondary data and were included based on prior use in cross-national studies. Macro-economic data were drawn from the OECD, World Bank, and EUROSTAT data sets. Macro-economic data such as a country's *GDP* have historically been used as measures of the institutional characteristics of a country in regard to economic structure and economic development (Barro 1989) as well as labor market characteristics (Nickell 1997). Moreover, *old-age dependency ratio*, the ratio between the total number of elderly persons of an age when they are generally economically inactive (aged 65 and over) and the number of persons of working age (from 15 to 64), acknowledges differences in the demographic structure among countries and has often been used in economic research (Fougère and Mérette 1999; An and Jeon 2006). Finally, we controlled for a country *unemployment rate*. Following Kreiser et al. (2010), a 5-year average ending with the year of data collection (2012) for each country was computed for GDP, old-age dependency ratio, and unemployment rate.[5]

Table 1 describes the variables used in this research. Means, standard deviations, and Pearson correlations are instead shown in Table 2.

3.4 Model specification

In order to test for cross-sectional age differences in self-employment motivation and interaction cultural effects, analytical techniques are needed that accurately account for individual- and group-level effects of such behaviors (Peterson et al. 2012; Sieger and Minola forthcoming). Multi-level research design presents important theoretical and empirical advantages (see Autio et al. 2013 for a thorough discussion). Our sample thus consists on two levels: individual-level observations (level 1) nested within countries (level 2). As a result, a multi-level mixed effects regression model (Raudenbush and Yang 1998) was used to estimate the effect of age on feasibility beliefs and desirability to start a new business.

4 Results

Standardized coefficients from the final models are illustrated in Tables 3 and 4, and predicted scores from these regression equations for the two motivational dimensions are plotted in Fig. 1. First, we tested models of the data that allow curvilinear age differences in the magnitude of age coefficients, using regressions with quadratic age, and then we tested for culture interaction terms. In both tables, control variables at the individual level were first entered (Model 1). In Model 2 we added age country-level control variables, and in Model 3 we added the cultural dimensions. The linear effect of age was entered in Model 4, while its quadratic term was entered in Model 5. Table 3, in particular, presents the results of regressing age, cultural dimensions and their interaction on desirability beliefs. Results show that age is significantly related to desirability beliefs ($b = -0.427$, $p < 0.001$ for age; $b = -0.151$, $p < 0.001$ for age squared). This suggests a negative and curvilinear relationship between age and desirability

[5] In the case some year was missing, the average was calculated for the remaining years.

Table 1 Description of variables

Variable	Description
Individual-level variables	
Perceived desirability	''Personally, how desirable is for you to become self-employed within the next 5 years?'' Four-point Likert scale variable where 1 very undesirable, 2 somewhat undesirable, 3 somewhat desirable, and 4 very desirable
Perceived feasibility	''Regardless of whether or not you would like to become self-employed, how feasible is would it be for you to become self-employed within the next 5 years?'' Four-point Likert scale variable where 1 very unfeasible, 2 somewhat unfeasible, 3 somewhat feasible, and 4 very feasible
Gender	Binary variable with value 0 if respondent is male, 1 if female
Education	Binary variable with value 1 if the respondent has left fulltime education aged 20 or older
Entrepreneurial education	Binary variable with value 1 if the respondent has ever taken part in any course or activity about entrepreneurship while attending school or college
Entrepreneurial experience	Binary variable with value 1 if the if respondent has ever started or took over a business
Self-employed parents	Binary variable with value 1 if the mother, father, or both are or have been self-employed and 0 if neither of the parents is or has been self-employed
Professional	Binary variable with value 1 if respondent's current job is professional/office employee
Manual worker	Binary variable with value 1 if respondent's current job is manual worker, 0 if otherwise
Age	Age of the respondent in years (linear and squared, standardized)
Country-level variables	
GDP	Gross domestic product, value, market prices/($10*e^{12}$). Source: OECD
Old age dependency ratio	Ratio between the total number of elderly persons of an age when they are generally economically inactive (aged 65 and over) and the number of persons of working age (from 15 to 64). Source: Eurostat (European countries), World Bank (Brazil), OECD (USA and Asian countries)
Unemployment rate	Percentage of unemployed individuals among the working population. Source: OECD (European countries)
Institutional collectivism	The degree to which organizational and societal institutional practices encourage and reward collective distribution of resources and collective action. Source: GLOBE
Performance orientation	The extent to which a community encourages and rewards innovation, high standards, excellence, and performance improvement. Source: GLOBE
Uncertainty avoidance	The extent to which a society, organization, or group relies on social norms, rules, and procedures to alleviate the unpredictability of future events. Source: GLOBE

beliefs. Models 6–11 explore the moderating effect of age and the cultural dimensions on desirability beliefs. We looked for both linear and curvilinear interactions effects to check which model fits the data best.

Table 4 then presents the results of regressing age, cultural dimensions, and their interaction on feasibility beliefs. Results show that age is significantly related to feasibility beliefs (b = —0.454, $p < 0.001$ for age; b = —0.164, $p < 0.001$ for age squared). This suggests a negative and curvilinear relationship between age and feasibility beliefs. Models 5–11 explore the moderating effect of age and the cultural dimensions on feasibility beliefs. Again, we looked for both linear and curvilinear interactions effects to check which

model fits the data best. Tables 3 and 4 support the arguments that culture moderates the relationship between age and self-employment motivations. The discussion of such results is presented in the next section.

In order to assess the nature of the curvilinear relationship between age and self-employment motivation, we run several tests. More specifically, as our theoretical predictions and empirical results speak in favor of curvilinear relationship, such tests serve to check the robustness around such a type of relationship between the independent and dependent variables. First, we draw on the tests of Lind and Mehlum (2010) to further assess the validity of the curvilinear

Table 2 Descriptive statistics and correlation matrix

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	VIF
1. Age	42.862	13.286																
2. Desirability	2.144	1.067	—0.26															
3. Feasibility	2.119	1.065	—0.21	0.47														
4. Gender	0.579	0.494	0.07	—0.10	—0.13													1.04
5. Education	0.472	0.499	0.07	—0.03	0.12	—0.01												1.15
6. Entrepreneurial Education	0.266	0.442	—0.10	0.08	0.16	—0.05	0.12											1.05
7. Entrepreneurial Experience	0.144	0.351	0.18	0.07	0.11	—0.07	0.04	0.08										1.07
8. Self-employed Parents	0.295	0.456	—0.02	0.08	0.06	0.02	0.03	0.02	0.05									1.04
9. Professional	0.509	0.500	—0.02	—0.04	0.09	—0.07	0.27	0.07	0.01	—0.00								1.27
10. Manual worker	0.103	0.304	—0.02	—0.00	0.02	—0.11	—0.06	—0.02	—0.01	—0.02	—0.35							1.23
11. GDP	82.798	267.480	—0.14	0.06	—0.01	—0.04	0.08	—0.06	—0.00	0.14	—0.03	0.03						3.31
12. Old age dependency ratio	23.132	6.252	0.14	—0.19	—0.08	0.01	0.05	—0.02	—0.05	—0.09	0.05	0.05	—0.14					1.69
13. Unemployment Rate	8.515	3.795	—0.02	0.04	—0.09	0.03	—0.08	—0.01	0.03	—0.02	—0.06	—0.06	—0.37	0.02				1.78
14. Institutional collectivism	4.288	0.506	0.01	—0.07	0.07	—0.05	0.18	0.00	—0.02	0.06	0.00	0.16	0.53	—0.02	—0.52			2.66
15. Performance orientation	4.102	0.412	0.04	—0.05	0.07	—0.03	0.10	—0.00	0.00	0.06	0.13	—0.05	0.25	—0.18	—0.53	0.42		2.63
16. Uncertainty avoidance	4.248	0.664	0.15	—0.18	0.07	—0.01	0.08	0.05	—0.04	—0.01	0.09	0.11	—0.27	0.35	—0.39	0.38	0.52	4.46

$N =$ 13,963. Correlations with values of |0.02| or greater are significant at $p \setminus 0.05$

Table 3 Effects of age and cultural dimensions on perceived desirability

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
Intercept	2.170***	2.640***	2.778***	2.577***	2.709***	2.704***	2.703***	2.712***	2.711***	2.698***	2.700***
	(0.072)	(0.241)	(0.227)	(0.203)	(0.203)	(0.201)	(0.201)	(0.201)	(0.201)	(0.202)	(0.202)
Gender	−0.214***	−0.214***	−0.214***	−0.181***	−0.193***	−0.192***	−0.192***	−0.193***	−0.193***	−0.194***	−0.194***
	(0.018)	(0.018)	(0.018)	(0.017)	(0.017)	(0.017)	(0.017)	(0.017)	(0.017)	(0.017)	(0.017)
Education	−0.029	−0.029	−0.028	0.013	−0.007	−0.012	−0.014	−0.011	−0.012	−0.009	−0.009
	(0.019)	(0.019)	(0.019)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)
Entrepreneurial education	0.226***	0.226***	0.225***	0.151***	0.162***	0.162***	0.162***	0.160***	0.160***	0.162***	0.162***
	(0.020)	(0.020)	(0.020)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)
Entrepreneurial experience	0.140***	0.140***	0.139***	0.269***	0.261***	0.261***	0.261***	0.261***	0.261***	0.262***	0.262***
	(0.025)	(0.025)	(0.025)	(0.025)	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)
Self-employed parents	0.112***	0.111***	0.112***	0.118***	0.122***	0.119***	0.118***	0.121***	0.121***	0.121***	0.121***
	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)
Professional	−0.055**	−0.055**	−0.055**	−0.089***	−0.148***	−0.155***	−0.154***	−0.148***	−0.147***	−0.150***	−0.151***
	(0.019)	(0.019)	(0.019)	(0.019)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)
Manual worker	0.037	0.037	0.038	−0.002	−0.067*	−0.071*	−0.071*	−0.070*	−0.069*	−0.066*	−0.067*
	(0.032)	(0.032)	(0.032)	(0.031)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)
GDP		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Old age dependency ratio		−0.029***	−0.026**	−0.021**	−0.021**	−0.020**	−0.020**	−0.021**	−0.021**	−0.020**	−0.020**
		(0.008)	(0.008)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Unemployment rate		0.022	−0.003	−0.005	−0.006	−0.006	−0.006	−0.006	−0.006	−0.006	−0.006
		(0.015)	(0.015)	(0.014)	(0.014)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Institutional collectivism			−0.093	−0.072	−0.067	−0.054	−0.046	−0.066	−0.066	−0.065	−0.065
			(0.061)	(0.055)	(0.054)	(0.054)	(0.054)	(0.054)	(0.054)	(0.054)	(0.054)
Performance orientation			−0.042	−0.030	−0.031	−0.027	−0.027	−0.022	−0.014	−0.028	−0.028
			(0.068)	(0.061)	(0.060)	(0.060)	(0.060)	(0.060)	(0.060)	(0.060)	(0.060)
Uncertainty avoidance			−0.060	−0.061	−0.059	−0.060	−0.059	−0.056	−0.055	−0.057	−0.065
			(0.089)	(0.079)	(0.079)	(0.078)	(0.078)	(0.078)	(0.078)	(0.079)	(0.079)
Age				−0.317***	−0.427***	−0.427***	−0.427***	−0.428***	−0.428***	−0.431***	−0.433***
				(0.012)	(0.017)	(0.017)	(0.017)	(0.017)	(0.017)	(0.017)	(0.018)
Age 9 age					−0.151***	−0.157***	−0.159***	−0.152***	−0.152***	−0.156***	−0.156***
					(0.017)	(0.017)	(0.017)	(0.017)	(0.017)	(0.018)	(0.018)
Age 9 institutional collectivism						0.063***	0.050**				
						(0.011)	(0.015)				

Table 3 continued

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
Age 9 age 9 institutional Collectivism							−0.019				
							(0.015)				
Age 9 performance orientation								0.047***	0.033*		
								(0.011)	(0.016)		
Age 9 age 9 performance Orientation									−0.020		
									(0.016)		
Age 9 uncertainty avoidance										0.028*	0.041*
										(0.012)	(0.016)
Age 9 age 9 uncertainty Avoidance											0.019
											(0.016)
Random-effects parameters											
Number of observations	13,963	13,963	13,963	13,963	13,963	13,963	13,963	13,963	13,963	13,963	13,963
Number of countries	21	21	21	21	21	21	21	21	21	21	21
Variance of random intercept	0.317	0.234	0.194	0.173	0.172	0.170	0.170	0.170	0.170	0.170	0.170
	(0.050)	(0.037)	(0.031)	(0.028)	(0.028)	(0.028)	(0.028)	(0.028)	(0.028)	(0.028)	(0.028)
Model fit statistics											
Chi-square (v^2)	398.82	416.20	433.15	1,176.54	1,258.25	1,295.82	1,297.48	1,278.21	1,279.92	1,264.58	1,266.21
Log likelihood	−19,935.77	−19,929.49	−19,925.66	−19,577.41	−19,539.96	−19,523.13	−19,522.34	−19,531.17	−19,530.35	−19,537.19	−19,536.47
AIC[a]	39,891.53	39,884.97	39,883.31	39,188.83	39,115.93	39,084.26	39,084.68	39,100.35	39,100.7	39,112.39	39,112.95
LR test versus linear regression v^{2b}	1114.71***	618.85***	429.53***	358.31***	358.56***	353.36***	353.74***	350.98***	351.90***	356.36***	355.82***
LR test of model fit: v^{2c} (null model in parentheses)	–	12.56**	7.66	696.49***	74.90***	805.05***	1.57	788.97***	1.65	776.92***	1.44
		(vs. 1)	(vs. 2)	(vs. 3)	(vs. 4)	(vs. 3)	(vs. 6)	(vs. 3)	(vs. 8)	(vs. 3)	(vs. 10)

Beta coefficients reported. Standard errors are in parentheses. Standardized variables were used for independent and moderating variables

$p < 0.1$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

[a] AIC is Akaike's information criterion (2*k*-2)*(log likelihood), where *k* denotes the degrees of freedom (number of predictors in the model). Gradually smaller values over models denote improved model fit

[b] Statistical significance confirms that the country-level variance component is important

[c] LR test performed between models using maximum-likelihood estimates (MLE)

Table 4 Effects of age and cultural dimensions on perceived feasibility

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
Intercept	1.968***	2.538***	2.601***	2.389***	2.533***	2.531***	2.529***	2.536***	2.532***	2.525***	2.517***
	(0.050)	(0.170)	(0.179)	(0.173)	(0.177)	(0.177)	(0.177)	(0.179)	(0.180)	(0.177)	(0.177)
Gender	−0.236***	−0.236***	−0.236***	−0.201***	−0.214***	−0.214***	−0.211***	−0.214***	−0.213***	−0.214***	−0.214***
	(0.018)	(0.018)	(0.018)	(0.017)	(0.017)	(0.017)	(0.017)	(0.017)	(0.017)	(0.017)	(0.017)
Education	0.144***	0.145***	0.144***	0.186***	0.165***	0.162***	0.158***	0.161***	0.159***	0.164***	0.163***
	(0.019)	(0.019)	(0.019)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)
Entrepreneurial education	0.318***	0.317***	0.317***	0.239***	0.251***	0.251***	0.251***	0.249***	0.249***	0.251***	0.252***
	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.019)	(0.019)	(0.019)	(0.019)	(0.020)	(0.019)
Entrepreneurial experience	0.265***	0.265***	0.265***	0.402***	0.393***	0.393***	0.392***	0.393***	0.393***	0.394***	0.396***
	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)
Self-employed parents	0.110***	0.111***	0.110***	0.116***	0.121***	0.119***	0.118***	0.119***	0.119***	0.120***	0.120***
	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)
Professional	0.111***	0.111***	0.112***	0.075***	0.012	0.009	0.011	0.012	0.014	0.010	0.013
	(0.019)	(0.019)	(0.019)	(0.019)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)
Manual worker	0.064*	0.065*	0.062	0.020	−0.050	−0.052	−0.053	−0.053	−0.051	−0.049	−0.047
	(0.032)	(0.032)	(0.032)	(0.031)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)
GDP		−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Old age dependency ratio		−0.014*	−0.019**	−0.013*	−0.014*	−0.013*	−0.013*	−0.014*	−0.014*	−0.013*	−0.013*
		(0.006)	(0.007)	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.006)	(0.006)
Unemployment rate		−0.027**	−0.022	−0.024*	−0.025*	−0.025*	−0.024*	−0.025*	−0.025*	−0.025*	−0.024*
		(0.010)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
Institutional collectivism			0.027	0.049	0.054	0.060	0.089	0.055	0.055	0.056	0.055
			(0.048)	(0.046)	(0.047)	(0.047)	(0.048)	(0.048)	(0.048)	(0.047)	(0.047)
Performance orientation			−0.060	−0.047	−0.049	−0.047	−0.047	−0.040	−0.017	−0.046	−0.047
			(0.053)	(0.052)	(0.052)	(0.053)	(0.053)	(0.053)	(0.054)	(0.053)	(0.052)
Uncertainty avoidance			0.071	0.070	0.073	0.072	0.074	0.076	0.076	0.074	0.110
			(0.070)	(0.067)	(0.069)	(0.069)	(0.069)	(0.070)	(0.070)	(0.069)	(0.069)
Age				−0.334***	−0.454***	−0.453***	−0.454***	−0.454***	−0.453***	−0.457***	−0.448***
				(0.012)	(0.017)	(0.017)	(0.017)	(0.017)	(0.017)	(0.017)	(0.018)
Age 9 age					−0.164***	−0.167***	−0.171***	−0.166***	−0.166***	−0.167***	−0.165***
					(0.017)	(0.017)	(0.017)	(0.017)	(0.017)	(0.018)	(0.018)
Age 9 institutional Collectivism						0.028**	−0.024				
						(0.011)	(0.015)				
Age 9 age 9 institutional collectivism							−0.071***				
							(0.015)				

Table 4 continued

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
Age 9 performance Orientation								0.048*** (0.011)	0.010 (0.016)		
Age 9 age 9 performance orientation									—0.053*** (0.016)		
Age 9 uncertainty avoidance										0.019 (0.012)	—0.037* (0.016)
Age 9 Age 9 Uncertainty avoidance											—0.079*** (0.016)
Random-effects parameters											
Number of observations	13,963	13,963	13,963	13,963	13,963	13,963	13,963	13,963	13,963	13,963	13,963
Number of countries	21	21	21	21	21	21	21	21	21	21	21
Variance of random intercept	0.207 (0.033)	0.161 (0.027)	0.150 (0.025)	0.145 (0.024)	0.148 (0.024)	0.148 (0.024)	0.148 (0.024)	0.150 (0.025)	0.151 (0.025)	0.148 (0.024)	0.148 (0.024)
Model fit statistics											
Chi-square (v2)	877.86	892.63	898.52	1,737.80	1,836.19	1,843.76	1,869.61	1,856.16	1,869.27	1,839.16	1,867.27
Log likelihood	—19,999.72	—19,994.74	—19,993.25	—19,609.81	—19,565.75	—19,562.38	—19,550.95	—19,556.67	—19,550.77	—19,564.41	—19,552.03
AIC[a]	40,019.43	40,015.47	40,018.5	39,253.63	39,167.5	39,162.76	39,141.91	39,151.35	39,141.55	39,166.83	39,144.07
LR test versus linear regression v^{2b}	468.90***	267.72***	240.37***	252.28***	269.58***	271.29***	271.95***	276.77***	281.53***	270.62***	269.83***
LR test of model fit: v^{2c} (null model in parentheses)	–	9.96* (vs. 1)	2.98 (vs. 2)	766.87*** (vs. 3)	88.12*** (vs. 4)	861.73*** (vs. 3)	22.85*** (vs. 6)	873.15*** (vs. 3)	11.80** (vs. 8)	857.67*** (vs. 3)	24.76*** (vs. 10)

Beta coefficients reported. Standard errors are in parentheses. Standardized variables were used for independent and moderating variables

$p \setminus 0.1$; * $p \setminus 0.05$; ** $p \setminus 0.01$; *** $p \setminus 0.001$

[a] AIC is Akaike's information criterion (2*k*-2)*(log likelihood), where *k* denotes the degrees of freedom (number of predictors in the model). Gradually smaller values over models denote improved model fit

[b] Statistical significance confirms that the country-level variance component is important

[c] LR test performed between models using maximum-likelihood estimates (MLE)

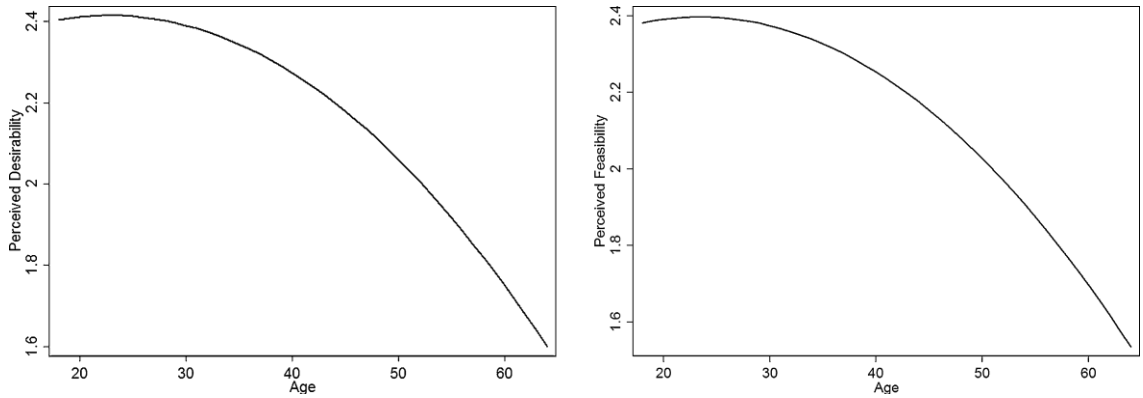

Fig. 1 Curvilinear effect of age on desirability beliefs (*left*) and desirability beliefs (*right*) in the overall sample (including all cultures)

relationship between age and our self-employment motivation variables. Without these tests, it is difficult to determine whether the potential maximum point (or the inflection point) is within the bounds of the data. First, the tests begin with a Wald test to assess the joint significance of the direct and squared terms of age. The results confirm that both terms are jointly statistically significant for desirability [$F_{(2,13947)}$ = 433.64; Prob [F = 0.0000] and feasibility beliefs [$F_{(2,13947)}$ = 424.86; Prob [F = 0.0000]. Second, the Sasabuchi test (Sasabuchi 1980) was used to assess whether (1) the effect of age on self-employ- ment motivation variables is increasing at low values of age, and (2) the effect of age on self-employment motivation variables is decreasing at high values of age. Significant values, as in our case, indicate the presence of an inverted *U*-shaped relationship for both desirability (lower bound slope = 0.0067806; *t* value = 2.221547; p [$|t|$ = 0.013165; upper bound slope = —0.0738197; t value = —11.56896; p [$|t|$ = 4.09e—31; overall test of presence of an inverse U-shaped relationship: t value = 2.22; p [$|t|$ = 0.0132) and feasibility beliefs (lower bound slope = 0.006268; t value = 2.056345; p [$|t|$ = 0.0198839; upper bound slope = —0.0721317; t value = —11.31957; p [|t| = 7.07e—30; overall test of presence of an inverse U-shaped relationship: t value = 2.06; p [$|t|$ = 0.0199). To further assess whether the maximum point is within the upper and lower bounds of age, Lind and Mehlum (2010) propose the Fieller approach to estimating confidence intervals around the extreme points. If the confidence intervals are within the bounds of the low and high values of age, it provides further evidence of the inverted U-shaped relationship in the data. In our analysis, the estimated maximum point is 21.98 years for desirability beliefs and 21.64 years for feasibility beliefs, and both values are included between the upper and lower bounds of age (95 % Fieller interval for extreme point).

The robustness of all models presented in Tables 3 and 4 is granted by the significant reduction of the *log-likelihood* function value. Such reduction is calculated by subtracting the value of the *log-likelihood* function when only the intercept is introduced from the value of the model that also takes into account the explanatory variables in the model. Therefore, the reduction of the *log-likelihood* confirms the better suitability of the model. The Wald Chi-square test proves that such reduction is statistically significant with p \ 0.001 in all models. Moreover, we conducted pairwise likelihood ratio (LR) tests on all subsequent models in order to test whether adding new variables reduces significantly the log-likelihood ratio and thus improves model fit significantly. This test is significant in all plotted models.

We run a VIF test for Model 4 in Tables 3 and 4 to check potential multi-collinearity among explanatory variables. All values are below 10 (Hair et al. 2006) (see Table 2). To rule out cohort effect as alternative explanation, we followed Gielnik et al. (2012) subsamples procedure (three cohorts created based on GDP growth or decline over the age range of our population). Three additional models were estimated on each subsample, revealing the same figure as the total sample. This reduces the likelihood that cohort

effects affected our results and yields a mitigation of such methodological concern.[6]

5 Discussion and limitations

While previous research has delivered important insights into the role of age differences in entrepreneurship (Caliendo et al. 2014; Kautonen et al. 2010; Heim 2015), this study takes a novel perspective by studying the interplay between age, culture, and self-employment motivation. In doing so, we examine age differences in two central motivational factors behind self-employment and entrepreneurship, desirability and feasibility beliefs. We used a large, cross-national, representative sample to examine cross-sectional age differences in these two motivational factors in individuals from age 18 to age 64. We then investigated whether prevalent cultural factors moderate this lifespan pattern.

First, results from the overall data set show a curvilinear association of changes in entrepreneurial desirability and feasibility beliefs with age in cross-sectional estimations. Patterns are very similar for the two curves, portraying a reversed U-shape with a peak around the age of 22, which mirrors our reasoning based on lifespan literature.

Second, we tested for cross-cultural generalizability of the intrinsic maturational perspective against the prominence of environmental influences on psychological development (Baltes et al. 1999). We indeed found indications for a moderating effect of cultural factors. Given the significant cross-cultural differences that emerge, our results indicate that developmental patterns are only partially universal across cultures. In particular, our evidence (Fig. 2) from sociocultural contexts with high degree of IC, UA and PO practices (as compared with contexts scoring low in these practices) shows: (a) culture moderation of *some* age differences, with larger culture effects at young age until adulthood and general convergence (indicating a marginal effect of culture) at older ages; (b) mean changes in self-employment motivations curves, in particular with a negative shift over the whole lifespan for desirability, and a more nuanced difference for feasibility; (c) a ''buffering effect,'' meaning that declines in motivation occur at later age for both desirability and feasibility. While the buffering effect of cultural practices is probably the most interesting finding and suggests possible theoretical implications, the three effects taken together reveal an articulate view and indicate that the interaction ''age 9 culture'' reflects quite dynamic and complex relationships which are worth considering in age–entrepreneurship research.

With respect to the first of the three effects, while considerable differences generally appear at young ages, we observe an overall convergence at old ages. Based on Park et al. (1999) model, this indicates that self-employment desirability and feasibility belief highly reflect some ''basic hardware of mind'' (such as memory, control, and processing speed) that decline consistently with age, and cannot be influenced much by culture. This means that the cognitive requirements needed to show a high level of self-employment motivations increase with age and the supporting effect of our cultural dimensions cannot counter individual losses. Higher level of cultural practices are needed with increasing age for a compensation of the associated biological weakening—a perspective that follows Baltes et al. (1999) model of the overall architecture of lifespan development which highlights the lifespan dynamics between biology and culture. One crucial assumption in this meta-theory, in fact, is that cultural efficiency in maintaining psychosocial functions decreases in late adulthood.

To discuss the latter effects (mean differences and buffering), for the sake of simplicity, the discussion of our results considers desirability and feasibility separately. The case of IC can serve as an illustrative example. According to Fig. 2.b1, high societal level of IC negatively affects desirability (across the whole lifespan, and especially at young ages); this is in line with works that have suggested that practices of IC generally discourage entrepreneurship (McMullen and Shepherd 2006): venturing into new business, indeed, acts as a strong signal for self-interest and self-loyalty, hampers individuals' societal standing, and represents a legitimacy cost that reduces desirability of entrepreneurship. Figure 2b1 also reports a light increase in desirability until early adulthood and then a decline from late adulthood; when IC is high, such

[6] These analyses are available from authors upon request, together with other analyses such as: the repetition of the estimations through OLS regression, not taking into consideration the nested data structure; robustness checks on outlying nation; and effect size representation of the estimations.

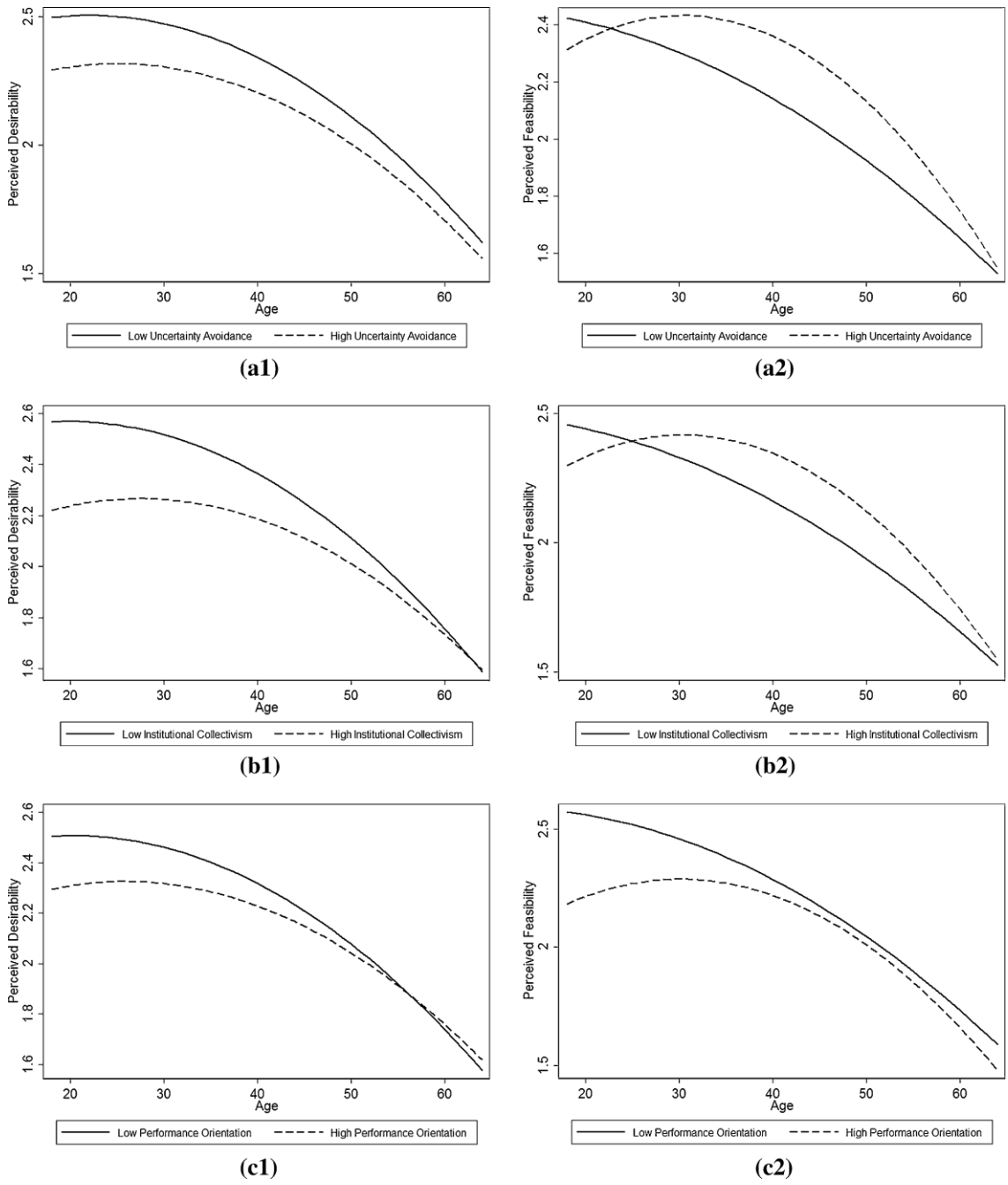

Fig. 2 Moderating effect of cultural dimensions

decline begins at later ages and we referred to that as ''buffering effect.'' Despite the overall effect of IC cultural practices, which could be labeled as ''negative,'' this buffering effect might be described as ''positive,'' meaning that age-related decline is retarded. This might be explained with the fact that adult individuals in IC cultures are cognizant of, and keener on, the potential benefit their would-be venture could bring to broader society (Reynolds and Miller 1992). For example, successful founders are often referred to as ''job creators'' (Bruno et al. 2014) and in societies that exhibit strong IC practices, individuals

would be motivated to work harder and display high entrepreneurial commitment (desirability) when they perceive a co-alignment between their success and societal benefits such as economic development and employment. In high IC context, this sense of creation associated with goals and commitment toward self-employment and entrepreneurship more strongly resonates with the interest for generativity of older individuals (Erikson 1980). These people will experience a more persistent attitude and optimism; over longer time frames, they will drive career preferences toward self-employment (Wu et al. 2007). This might explain the initial growth of desirability and its peak at middle adulthood for high IC, while the peak for low IC occurs much earlier.

Turning to feasibility beliefs, IC practices are mostly associated with upward mean differences, which speaks in favor of a general ''positive'' effect of IC on feasibility: Societal redistribution mecha- nisms that are typical of IC societies have here the advantage to offer social structures that encourage the pursuit of entrepreneurial endeavor and increase access to collective resources (e.g., through grants and subsidies) (Autio et al. 2013). Based on this, individuals may experience inflation in self-efficacy and risk-taking perceptions. Besides, and more central to our reasoning, buffering effects become even more evident for feasibility (Fig. 2b2): While with low IC, curves show a quasi-monotonic age decline, and the curvilinear effects nearly disappear, with high IC, the decrease with age is smoother until late adulthood and starts from later age, until mid-adulthood feasibility perception shows positive changes with age. Hence, our results suggest that, in their development from childhood to early adulthood, individuals' feasibility beliefs could particularly benefit IC practices; people might be able to avoid intrinsic losses in control, declines in risk-taking and, in turn, feasibility, and be enabled by cultural context to maintain a higher level of control and self-esteem for longer.

Our work offers some important theoretical contributions. First, lifespan psychology, which has been mainly used so far to study entrepreneurial actions, emerges as an insightful perspective also for the study of self-employment motivations. Besides, the findings reveal that the same cultural practice dimension can exert contrasting effects on the two motivations (Figs. 2a1, a2) or on the same motivation at different ages (Fig. 2c2). This (apparently) ambivalent effect of cultural practices is not new in entrepreneurship research. For example, from a legitimacy perspective (Autio et al. 2013), the same practices that inhibit desirability for entrepreneurial entry have been found to enhance feasibility beliefs and growth orientation (Baker et al. 2005; Kim et al. 2012). Hence, our findings confirm a fairly nuanced picture of the cultural effect over lifespan; therefore, a first theoretical contribution of our work is that referring to generic age ''effects'' in entrepreneurship while ignoring culture, appears limitative, if not inappropriate.

Another theoretical contribution of our work lies at the intersection of lifespan perspectives and entrepreneurship (Obschonka et al. 2011; Obschonka and Silbereisen 2012). In sum, our work emphasizes that both intrinsic and environmental perspectives (McCrae et al. 1999) are at work when observing age changes in self-employment motivation. A normative timetable does exist, but it is only partially universal and is highly influenced by cultural practices. In particular, by looking at Figs. 1 and 2 together, one can easily recognize that by including cultural practices as moderators of the curvilinear age-related patterns, there emerges a more comprehensive understanding of lifespan development of self-employment motivation. This conclusion resonates with other developmental psychology research, such as personality studies (McCrae et al. 1999; Donnellan and Lucas 2008) but, to the best of our knowledge, has not yet been extensively adopted in entrepreneurship research.

Third, studies of self-employment motivation that include both age difference and culture are rare, and often focus on one aspect while marginally mentioning the other. These two dimensions, taken together and based on the systematic cross-cultural variation of age changes, suggest that age patterns are sociocultural constructions. This reflects some studies of entrepreneurial intention on gender and culture (Shneor et al. 2013), or family embeddedness and culture (Danes et al. 2008), and overall confirms that self-employment motivation and its development are ''contextualized state[s] of mind'' (Hindle et al. 2009).

Our study has some limitations. The first limitation of the study is the cross-sectional nature of the data. Hence, our data cannot pinpoint the exact cause of the correlation between self-employment motivation and age. However, our results are consistent with developmental research on comparable motivational constructs such as general self-esteem/self-efficacy, risk,

growth goals, and self-determination, as described in Sect. 2.1. Future studies should explore this issue to infer more causal conclusions, possibly with the use of longitudinal designs and of different birth cohort, e.g., cohort-sequential design (Schaie 1965) or cross-temporal meta-analysis (Twenge and Campbell 2001). Another limitation is represented by our measures of desirability and feasibility, which were assessed by means of a single item. However, previous studies have shown that single-item measures of well-defined constructs are reliable in cross-cultural development psychology investigations (e.g., Lucas and Donnellan 2009; Robins et al. 2001). Likewise, earlier research on self-employment motivation also used single-item measures (Schjoedt et al. 2014). Finally, we have to stress again that due to the nature of the data we use, our analyses refer to potential entrepreneurs only. This was a given restriction of the cross-cultural data set we used—it does not contain information on self-employment motivation in acting entrepreneurs. Nevertheless, the ''potential entrepreneurs'' population in each society can be considered as a ''seedbed'' for future entrepreneurship in these societies and we study central motivational factors (desirability and feasibility beliefs) that drive such entrepreneurial endeavors. Moreover, many public policy measures aiming to stimulate more entrepreneurial thinking and acting focus, first and foremost, on the potential entrepreneurs.

6 Implications for research and practice

Previous studies indicate that people in mid-adulthood are considerably more prone to engage in self-employment than younger and older individuals (Kautonen et al. 2010; Heim 2015). While mirroring these results, our findings point to a specific antecedent of entrepreneurial engagement (i.e., motivation) and raise attention to the cultural embeddedness of lifespan patterns in self-employment motivation. This offers a number of implications for future research and also indicates that, by looking at the age differences in entrepreneurship and self-employment, one can gather a better understanding about the mechanisms through which institutions and societies shape individual decisions for self-employment (Wyrwich 2013). Research in this stream might be developed along several directions; for example, what are the cultural origins of institutional and socioeconomic differences that affect self-employment? Since many cross-country institutional differences are likely to be culturally rooted, it might be interesting to study how cultural practices specifically affect formal and informal institutional arrangements (such as role models, educational systems and financial capital available for innovation) that make self-employment more desirable or feasible within a certain context. Another implication stems from the fact that many other aspects of the relationship between age and entrepreneurship have been objects of recent empirical studies. Therefore, bringing the cultural buffering argument over lifespan might extend prior research on growth (Aidis and Van Praag 2007), innovation (Allen et al. 2007), decision-making speed (Forbes 2005), and stress (Bluedorn and Martin 2008) of older versus younger entrepreneurs. Besides, personality traits are often indicated as crucial antecedents to entrepreneurship and self-employment (Obschonka et al. 2012). Lifespan and cross-cultural psychology also largely study age difference in personality (Lucas and Donnellan 2009). We believe that future research might be enriched by considering how age differences in personality across cultures reflect on the different facets of entrepreneurship in multi-country settings. Finally, it might be particularly appropriate to further disentangle the developmental effect from cohort/historical effects in self-employment motivation; while longitudinal research would better serve to illustrate developmental patterns, time-lag designs (comparing different samples measured in different years) would allow capturing of secular trends or sociocultural heritage that are typical of a given region. In this respect, transition economies offer unique opportunities to study *zeitgeist* and historical effects on age differences in entrepreneurship (Wyr- wich 2013; Lafuente and Vaillant 2013).

Our research resonates with Lévesque and Minniti (2011) and Minola et al. (2014) by suggesting that scrupulous assessment of individual characteristics jointly with contextual factors can shed light on incentives for self-employment (Caliendo et al. 2014) and result in practical implications (Evans and Leighton 1989). Our results are not causal, but if they could be replicated in more causal analyses, this would have definitive important policy implications. Our results on self-employment motivations, in fact, point to the importance of different mechanisms in fostering the entrepreneurial potential of individuals at different

ages and in different countries. Policymakers should consider the culturally embedded nature of entrepreneurship and that one size does not fit all (Lévesque and Minniti 2011). Cultural practices such as those addressed in this study are obvious antecedents of a country's regulatory frameworks and infrastructure, and will directly and indirectly affect entrepreneurship policies, e.g., through education and support programs or tax incentives and immigration strategies, respectively.

In countries with a high level of UA such as Switzerland and Germany, we would expect a comparative shortage of role models and social desirability for entrepreneurship and a lack of potential entrepreneurs with desirability for self-employment at all ages, especially among young people (see Fig. 2a1). Therefore, in such countries policies should promote publicly available and visible support systems that facilitate early career sensitization (Minola et al. 2014). Support systems should address obstacles that are specific to national culture such as positional (dis)advantages of aging (Siivonen and Isopahkala-Bouret 2014) and stylized role and status of young people (Pantea 2015). Our findings indicate this might be a particular concern in countries that score high in IC, such as South Korea and Japan, where both desirability and feasibility beliefs are penalized in youth. Furthermore, recent works have also highlighted the importance of cross-country collaborative entrepreneurship education initiatives (Solomon et al. 2008). In fact, they are spreading considerably at the European level, especially for young people (Athayde 2009). Based on our work, these programs might better take into account not only age (e.g., approaching and educating different age groups differently), but also cultural factors, by tailoring programs for each culture.

Talking about indirect effects, immigration is particularly relevant in aging countries (Arthur and Espenshade 1988) and has required explicit strategies and interventions by nations, which should be considered with the aim of fostering aggregate entrepreneurship (Lévesque and Minniti 2011). On one hand, our study contributes to explaining why in countries such as USA, Australia, and Canada a concern on productivity of new immigrants has recently been induced to include young age as an admission criterion. On the other hand, our findings highlight that the ''right'' age categories of immigrating individuals for a given country depend on the cultural setting of that country. The promotion of young immigrant entrepreneurs might be particularly valuable in countries with a high level of IC such as South Korea and Japan; similarly, older immigrant entrepreneurs might serve to bridge the gap of third-age entrepreneurs that is particularly pronounced in countries high in UA such as Switzerland and Germany.

The weaker level of self-employment motivation in late adulthood/old age is to some extent not surprising (cf. Heim 2015); however, under progressively higher exclusion of third-age workers from the job market, this represents a growing concern (Kautonen et al. 2011). Policies that are particularly concerned about the inclusion of third-age people in social and economic life (Kautonen et al. 2014) clearly need to be culture-specific. Based on our findings, in low PO cultures such as Italy and Portugal, where the prevalent culture does not buffer the decline in motivation in old age as much, there is an obvious need for ''stronger'' programs for older adults to stimulate their self-employment motivation. In a similar vein, based on the importance of socialization practices to support third-age entrepreneurship (Kautonen et al. 2010), countries scoring low in IC (such as Hungary and Greece), where social support is likely to be weaker ex ante, should proactively tackle the disad- vantages of older individuals; in those countries, programs should cultivate cultural attitudes toward enterprise and the mechanism of peer support (Tornikoski and Kautonen 2009), so to increase people's general understanding of self-employment as a feasible and desirable late-career decision.

7 Conclusion

Taken together, the cross-sectional age differences identified in this study, and their overlap to existing developmental theories and research on comparable constructs, speak for a certain normative age trend of self-employment motivation. This normative trend also shows some similarities with the observed age trends in actual entrepreneurial behavior. However, and this is maybe the most important message from this study, the data suggests that this age trend in self-employment motivation is not strictly universal across cultures and that such age trends differ by cultural factors such as IC, UA, and PO. Hence, self-employment motivation should not be taken as being

independent of age and culture, either in future research or in the world of practice (e.g., entrepreneurship promotion programs targeting self-employment motivation).

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1.3 Interview Guide

Introduction

- Introduction
- Research purpose and explanation of the data capturing and analysis process
- Confidentiality and anonymity contract
- Benefits to respondent

Interview Guide Questions:

Background

1. Tell me about your upbringing and yourself and your journey to entrepreneurship.
2. Why did you become an entrepreneur?
3. Are they any key experiences or instances that you recall that made you decide to become an entrepreneur?
4. What level of education do your parents currently have? –
5. Are your parents formally employed or entrepreneurs?

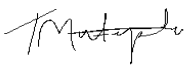
Critical Learning Experiences

6. When did you first learn about entrepreneurship?
7. What did you learn about entrepreneurship at home?
8. What did you learn about entrepreneurship at school?
9. What were the foundation experiences or moments that shaped your motivation and made you become an entrepreneur?
10. What is your current level of education?
11. What other sources of training have you undertaken, and how do you learn new skills?
12. Did you have the opportunity to have any work experience before starting your business? (if yes, hat skills and training are you using from your work experience?)
13. Why did you decide to go to school/ why did you choose not to go to school? If no- Given the choice of going back and studying, would you? Or have you found other types of training more useful?
14. Which training or skills have been most beneficial in your career as an entrepreneur? (Soft Skills, communication/ EQ/- Technical Skills)- Informal training- learning on-the-job training, practical aspects of the individuals.
15. Is this your first business? - If no, What did have you have learnt from that business that is significant in the way you operate/run your business today.
16. What has been the most significant leaning experience or practice that has significantly impacted the way you operate or run your business today?
17. Why do you think young entrepreneurs fail in entrepreneurship? (Interview to probe for education, sector choice).

18. What advice/assistance would you give a young entrepreneur regarding earning or training who is wanting to open a venture in the same sector?

1.4 Plagiarism declaration form

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.



Tanyaradzwa Mutepfa

01 December 2020

1.5 Copyright Declaration Form

22.1 COPYRIGHT DECLARATION FORM

Student details			
Surname:	MUTEPFA	Initials:	T.E.M
Student number:	19391928		
Email:	19391928@mygibs.co.za/ tanya.mutepfa89@gmail.com		
Phone:	0786638209/ +263734542085		
Qualification details			
Degree:	MBA	Year completed:	2020
Title of research:	GIBS		
Supervisor:	Anthony Wilson-Prangley		
Supervisor email:	pranleya@gibs.co.za		

Access

A.	My research is not confidential and may be made available in the GIBS Information Centre and on UPSpace.

I give permission to display my email address on the UPSpace website

Yes	X- YES I confirm	No	

B.

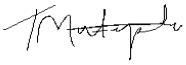
	My research is confidential and may NOT be made available in the GIBS Information Centre nor on UPSpace.

Please indicate embargo period requested

Copyright declaration

I hereby declare that I have not used unethical research practices nor gained material dishonesty in this electronic version of my research submitted. Where appropriate, written permission statement(s) were obtained from the owner(s) of third-party copyrighted matter included in my research, allowing distribution as specified below.

I hereby assign, transfer and make over to the University of Pretoria my rights of copyright in the submitted work to the extent that it has not already been affected in terms of the contract I entered into at registration. I understand that all rights with regard to the intellectual property of my research, vest in the University who has the right to reproduce, distribute and/or publish the work in any manner it may deem fit.

Signature: 	Date: 1 December 2020

Supervisor signature: 	Date: 1 Dec 2020

1.6 Certification of Additional Support

Please note that failure to comply and report on this honestly will result in disciplinary action

I hereby certify that (please indicate which statement applies):

- ***I RECEIVED*** *additional/outside assistance - editorial service on my research report*

  …….

If any additional services were retained– ***please indicate below which:***

Statistician - No

☐ ***Transcriber- NO***

☐ ***Editor - YES***

☐ ***Other (please specify: .....)***

Please provide the name(s) and contact details of all retained:

NAME: …… Jacqueline Baumgardt ……...

EMAIL ADDRESS: ……jaybee@telkomsa.net……..

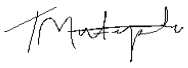
CONTACT NUMBER: ……0784487 9285……

TYPE OF SERVICE: ……Editing Services…….

I hereby declare that all *statistical write-ups and thematic interpretations of the results for* **my study were completed by myself without outside assistance**

NAME OF STUDENT: Tanya Mutepfa

……..



SIGNATURE:

……..

STUDENT NUMBER:

19391928

…… ……

STUDENT EMAIL ADDRESS:

19391928@mygibs.co.za

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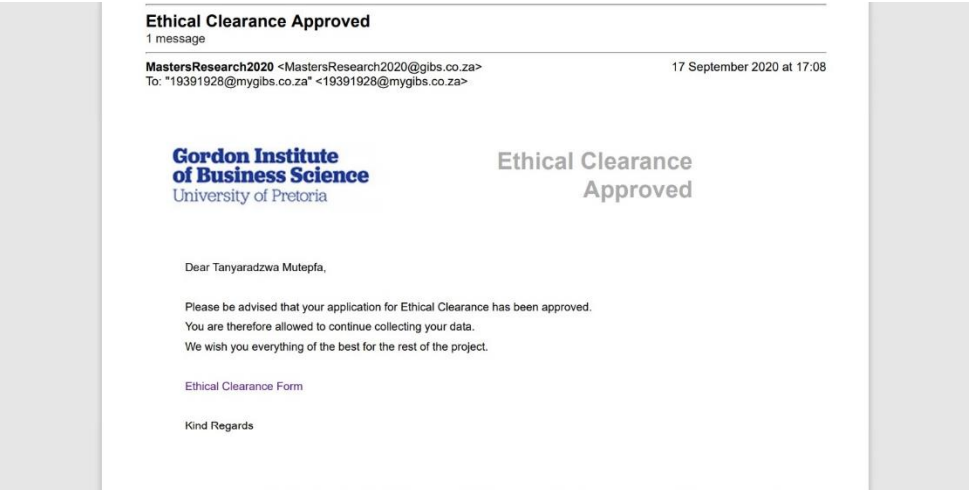
1.7 Ethical Clearance



Ethical Clearance Approved
1 message

MastersResearch2020 <MastersResearch2020@gibs.co.za> 17 September 2020 at 17:08
To: "19391928@mygibs.co.za" <19391928@mygibs.co.za>

Gordon Institute of Business Science
University of Pretoria

Ethical Clearance Approved

Dear Tanyaradzwa Mutepfa,

Please be advised that your application for Ethical Clearance has been approved.
You are therefore allowed to continue collecting your data.
We wish you everything of the best for the rest of the project.

Ethical Clearance Form

Kind Regards