

## Effect of Locus of Control on Entrepreneurial Attitudes and Self-Employment Intentions: The Moderating Role of Individualism

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Applying Ajzen's planned behavior theory, we study the impact of control beliefs (reflected by an internal locus of control) and normative beliefs (investigated via individualistic cultural orientation) on entrepreneurial attitudes and self-employment intentions of final year university students. We particularly explore the interactive effect of internal locus of control and culture when explaining entrepreneurial attitudes, which consequently shapes self-employment intentions. The data were collected at a German university and three universities in East Africa. We received 590 complete responses. We used PROCESS Macro to test our model and hypotheses. Our findings show that both internal locus of control and culture predict entrepreneurial attitudes and self-employment intention. The effects of international locus of control are mediated by entrepreneurial attitudes. Moreover, the indirect effect is further conditioned by culture. Theoretical and practical implications of these findings are discussed.

**Keywords:** Culture; entrepreneurial attitudes; individualism; intentions; self-employment; theory of planned behavior.

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## INTRODUCTION

What should I do after graduating from my university? How and where to get a meaningful job? How do I further my career progression? How to successfully negotiate one's entry into the labor market? Young people ahead of graduation face exactly these questions. What about starting a business of one's own? Self-employment or precisely job creation for one's self is increasingly a common agenda in development and career discourses. The unavailability of jobs is a huge concern for both nations and individuals, particularly the unemployed, those in insecure jobs and the students at the completion phase of their studies.

The inevitability of the unemployment challenges in the years following financial or economic crises (Reinhart and Rogoff, 2009) necessitates consideration of self-employment not only as means to creating jobs but also boosting economic development. Extant literature shows that entrepreneurship (one form of self-employment) is a basis for economic resilience, growth, and development (Fritsch and Wyrwich, 2014; Ireland and Webb, 2007; Skriabikova *et al.*, 2014; Valliere and Peterson, 2009; Williams *et al.*, 2013). It has also been observed that entry into self-employment tends to increase in the face of changing dynamics in the labor situations such as limited opportunities for salaried positions (Falter, 2005; Rissman, 2003). Graduating with a degree or a diploma is no guarantee for a successful job search. Self-employment thus becomes a more viable solution, for it is a process through which entrepreneurial ideas are promoted and implemented thus increasing employment opportunities (Fritsch and Wyrwich, 2014; Wolff and Nivorozhkin, 2012). Therefore, self-employment has the potential for being the foundation for tackling the exacerbated unemployment rates and enhancing economic progression.

Although self-employment has been observed to increase in periods following economic or unemployment crises, it would be misleading to assume that self-employment is completely a reactive response to some sort of challenge. Some individuals choose self-employment as a proactive career decision (Walker and Webster, 2007). In this direction, some studies reveal that unemployment actually has a minor effect on entry into self-employment (Patel and Thatcher, 2014). On the contrary, entry into self-employment can also be influenced by rather positive circumstances and attractions such as entrepreneurial culture and expected outcomes (Abada *et al.*, 2014; Goetz and Rupasingha, 2013; Wang *et al.*, 2012). Most recent research confirms this, showing that despite the economic conditions, personal characteristics remain the most essential predictors of

entrepreneurial activity engagement (Santos *et al.*, 2017). Understanding behavioral motivation is not only important for theorizing but also individuals need to understand why they make certain choices (Krueger *et al.*, 2000; Krueger, 2009) relating to their careers.

To explain what motivates people into entrepreneurial activities, several frameworks have been developed. However, the Theory of Planned Behavior (Ajzen, 1985, 1991) is by far the most applied cognitive model to explaining entrepreneurial intentions. The theory posits that behavior is largely determined by intention. Moreover, intention, which is the readiness to engage in the specific behavior, is a consequence of attitudes towards the behavior, subjective norm and perceived behavioral control (Ajzen, 1991). Ajzen's model suggests that these components combine to influence intentions and consequently behavior. In the present study, we propose that self-employment intentions are formed through both mediated and moderated processes between attitudes, subjective norm and perceived behavioral control. We operationalize control beliefs by internality of locus of control. We also conceptualize normative beliefs with the cultural orientation of individualism which has been posited to be a major characteristic of entrepreneurial cultures (Contiua *et al.*, 2012; Dana, 1995; Lee and Peterson, 2000; Mueller and Thomas, 2001). Individualism is particularly a measure of cohesiveness or looseness of interpersonal relations among members of a given society (Hofstede *et al.*, 2010; Minkov and Hofstede, 2011).

Culture is an important determinant of variations in levels of entrepreneurship (Geert Hofstede *et al.*, 2004; Mueller and Thomas, 2001; Suddle *et al.*, 2010). In some places, culture is a major determinant of who engages in business, defines the entrepreneurship ethics, and the nature of entrepreneurship (Dana, 1997). Consequently, there have been several efforts to explain an entrepreneurial culture (e.g. Freytag and Thurik, 2010; Geert Hofstede *et al.*, 2004; Thomas and Mueller, 2000; Wyrwich, 2012). In these discourses, individualism is one of the cultural dimensions that appear consistently (cf. Geert Hofstede *et al.*, 2004; Kirkman *et al.*, 2006). It is particularly posited that individualism facilitates autonomy, innovativeness, and risk-taking behavior (Kreiser *et al.*, 2010; Omerzel, 2016; Shane, 1992)). However, low individualism has also been found to relate to the high prevalence of small-scale businesses in low-income countries (Geert Hofstede *et al.*, 2004). The present study examines whether the context of low and high individualism explain the variations in the effects of internality of control and entrepreneurial attitudes on self-employment intentions. Although entrepreneurship occurs in a given context, the

individual is critical to the entrepreneurial process (Verbeke and Ciravegna, 2018), hence the examination of the interaction of context and person-level variables is important.

In the model of planned behavior, internality of control is important in the conceptualization of perceived behavioral control (Ajzen, 2002). On the other hand, culture is an important contributor to normative beliefs, given that each country or society also has a set of defined normative standards that generally apply to at least most of its citizens (Geert Hofstede, 1984). Therefore, based on the (Ajzen, 1991) model for predicting behaviors, we argue that there are interactions between the elements of the model in leading to behavioral intentions. We particularly investigate (1) the impact of internal locus of control on self-employment intentions; (2) the mediating effect of entrepreneurial attitudes on the relationship between internal locus of control and self-employment intention; (3) the moderating effect of normative beliefs on the mediation effects stated in 2 above.

## **THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT**

Self-employment entry, in an entrepreneurial sense, is a planned process (Krueger *et al.*, 2000) therefore intentional. This implies that individuals cautiously think about becoming self-employed or starting businesses of their own before taking practical steps towards actual entry (Krueger, 2003). Intentionality of behavior can be well understood from the Ajzen (1985, 1991) theory of planned behavior. This perspective attributes behavioral intentions to attitudes, subjective norm and perceived behavior control (Ajzen, 1991; Greaves *et al.*, 2013; Obschonka *et al.*, 2010; Tkachev and Kolvereid, 1999). Yet intentions strongly predict behavior (Kautonen *et al.*, 2013; Krueger *et al.*, 2000).

The fundamental idea is that intentions, antecedent on attitudes, are the best predictor of actual behavior (Ajzen, 1991; Krueger and Carsrud, 1993). From this viewpoint, individuals with positive attitudes towards behavior tend to have higher intentions and more likely to engage in the behavior. Indeed, Kautonen *et al.* (2015) and Krueger *et al.* (2000) showed that much of entrepreneurial behavior is intentionally planned. The theory has been supported by a number of empirical findings. In both Kautonen *et al.* (2015, 2013) studies, the three factors emphasized by the theory were significant predictors of entrepreneurial intentions; while entrepreneurial alertness and importance attached to financial security were essential for entrepreneurial

intentions in Gelderen *et al.* (2008) study of perceived behavior control aspects. Empirical research supporting this perspective shows that entrepreneurial intentions and behavior are influenced by personal and situational factors via attitudes (Basu and Virick, 2008; Krueger *et al.*, 2000; Pfeifer *et al.*, 2016) and behavioral motivation (Krueger *et al.*, 2000). We particularly investigate the interactions between the elements of the planned behavior model in influencing entrepreneurial attitudes and intentions. We posit that control and normative beliefs interact to influence entrepreneurial attitudes, through which they indirectly impact on self-employment intentions. We further assume that there are likely to be variations in intention levels between countries resulting from differences in national cultures (particularly individualism dimension), which further demonstrates the role of normative beliefs.

The aspect of behavior control refers to the individual's perceived competence or efficacy to engage in the behavior as well as to have control over the behavior (Krueger and Carsrud, 1993). Self-employment or entrepreneurship involves high levels of risk, which affects intentions and decision making (e.g. Caliendo *et al.*, 2010; Hu, 2014; Nabi and Liñán, 2013; Orobio *et al.*, 2011). Hence perceived controllability is important to the formation of entrepreneurial intentions. We operationalize control beliefs with the internalization of locus of control, a construct that has for long been linked to entrepreneurial behavior (e.g. Ahmed, 1985; Diaz, 2003; Kaufmann and Welsh, 1995). Internal locus of control measures the belief that oneself, rather than chance or situation, has control over what happens. The perceived belief that one can control what happens to the venture or cope with the competitive and risky nature of the business is essential for developing a positive entrepreneurial attitude and consequently the formation of self-employment intention.

The component of subjective norms in the planned behavior model denotes social normative beliefs relating to the behavior, specifically whether significant others support or do not support the behavior (Krueger and Carsrud, 1993). From this analogy, the subjective norm aspect is closely linked to cultural orientations, specifically the individualism dimension, which relates to the looseness or cohesiveness of interpersonal relations (Hofstede, 1994; Hofstede *et al.*, 1991; Minkov and Hofstede, 2011). This dimension reflects the extent to which individuals tend to be independent (Sharma, 2010). The ability to decide and act autonomously is important in entrepreneurial situations. We posit that a high level of locus of control and high entrepreneurial attitudes strongly enhance

self-employment intention of students in a highly individualistic culture than in a society that is low on individualism.

### Internal Locus of Control and Entrepreneurial Intentions

The construct of locus of control was first conceived by Rotter (1966) and defined as an individuals' belief in the ability to control events that affect them; or the internality and externality tendencies in attributing causes of reinforcement (Kormanik and Rocco, 2009). Thus locus of control plays a role in the perception of control (Roddenberry and Renk, 2010) based on the beliefs about the relationship between behavior and outcomes. Individuals are considered to have an internal locus of control when they attribute events to their own actions or competences. On the other hand, the externality of locus of control implies attributing behavior to chance or powerful others (Levenson, 1973; Roddenberry and Renk, 2010).

Behavioral control is an important component in the planned behavior theory, particularly in relation to the impact of factors that are indigenous to a given behavior in a particular situation. Perceived control over such factors is associated with behavioral intentions, in a manner that high levels of perceived control increase behavioral intention, thus indirectly impacting on actual behavior (Ajzen, 2002). In the theory of planned behavior, control perceptions regard the degree to which an individual believes that he or she has the ability and resources to perform a given behavior (Ajzen, 2002). Both internal and external perceptions of control have implications for engaging or avoiding a given behavior (Ajzen, 2002), thus a distinction between internal and external causes maybe important (Ajzen, 2002, 1985) for they may reflect the perceived ability or inability to have control over a behavior. However, Ajzen (2002) observes that this is a misperception because difficulty or easiness of performing a behavior may be linked to both forms of locus of control. Hence, Ajzen proposes a unitary measure of controllability. However, based on previous studies highlighting the role of internalized locus of control to entrepreneurial outcomes (e.g. Diaz, 2003; Hansemark, 2003; Khan and Ahmed, 2011), we specifically focus on the internal aspect. Therefore, we use an internal locus of control as a factor in controllability, and not as a full measure of perceived control.

Locus of control is an essential personality concept in business-related situations. Hansemark (2003) longitudinal study revealed that it is a valid predictor of business startups. Recent empirical evidence suggests locus of control plays an influential role in deciding to enter and exit self-employment (Caliendo *et al.*, 2014). However, there may be variations in its

impact on intentions in different populations. Internal locus of control tends to lower self-employment preferences for women (Verheul *et al.*, 2012). Nonetheless, research on the characteristics of entrepreneurs has revealed that the locus of control of entrepreneurs and the self-employed is predominantly internal (Verheul *et al.*, 2012). In line with the assumptions of the theory of planned behavior, empirical evidence suggests that locus of control affects readiness for self-employment via attitudes (Lüthje and Franke, 2003).

We argue that internalized locus of control enables the individual to draw upon his or her positive attributes which enhance the perceived ability to undertake an entrepreneurial task, and enhance optimism for a positive outcome (Baluku *et al.*, 2016). A key aspect of perceived behavioral control in the theory of planned behavior is self-efficacy (Ajzen, 2002), which also represents individual's appraisal of his or her competence to engage in and control over a behavior (Roddenberry and Renk, 2010). Internalized locus of control implies that an individual considers him- or herself not only being responsible for the action and its outcomes but also recognition of the personal ability to engage in the behavior. The ability to recognize that one has the capability to achieve the desired goals from a self-employment venture as well as the perception of the ability to overcome personal and situational impediments in the process of pursuing the desired goal is likely to boost self-employment intention. We therefore hypothesize:

**Hypothesis 1:** Internal locus of control is positively associated with self-employment intentions.

### **Individualism and Entrepreneurship Intentions**

The individualism dimension of Hofstede's model for national cultures refers to the looseness or cohesiveness of interpersonal relations in a society (Hofstede, 1994; Hofstede *et al.*, 1991; Hofstede, 1984; Minkov and Hofstede, 2011). It symbolizes the need for freedom or independence than interdependence among members (Dalby *et al.*, 2014). Research based on Hofstede's model of national culture has demonstrated the relevance of culture in entrepreneurship at different stages; implying that a given culture may be conducive or unfavorable for self-employment (e.g. Hayton and Cacciotti, 2013; Krueger *et al.*, 2013; Li and Zahra, 2012; Mueller and Thomas, 2001; Sabah *et al.*, 2014; Stuetzer *et al.*, 2016; Zhao *et al.*, 2012).

In a broad sense, culture focuses on how societies respond to basic social issues (Minkov and Hofstede, 2011), hence in line with the description of

normative beliefs (or subjective norm) in the theory of planned behavior. Cultural dimensions provide an understanding of why individuals in a given society behave or respond to stimuli in specific patterns, including business situations. Research has already shown that the extent and manner in which cultural values and norms are applied in business situations vary among societies (Frederking, 2004). Overall, however, culture does impact on entrepreneurial motivations and behavior. This includes the perception of opportunities, barriers, support mechanisms, and personal abilities to engage in entrepreneurial activities (Autio *et al.*, 2013; Migliore, 2011; Shinnar *et al.*, 2012; Wennberg *et al.*, 2013); development and usage of cultural and social capital (Chand and Ghorbani, 2011; Jayawarna *et al.*, 2014); and generally the choice of entrepreneurship as a career (Freitag and Thurik, 2010). The individual's dominant cultural orientation, therefore, can influence the extent to which the person exhibits pro-entrepreneurship attitudes and behaviors (Davidsson, 1995; Huggins and Thompson, 2014; Tlaiss, 2014). Past studies show that cultural orientations influence entrepreneurial competencies such as risk attitude, need for achievement, self-efficacy, and innovativeness (Krueger *et al.*, 2013; Mueller and Thomas, 2001; Wennberg *et al.*, 2013) which are associated to entrepreneurial intentions, entry and outcomes.

Consistent with the above, Mueller and Thomas (2001) claim that some cultures are more conducive for entrepreneurship than others. More relevant to the present study, entrepreneurship tends to thrive in cultures that are individualistic (Lee and Peterson, 2000; Mueller and Thomas, 2001; Tlaiss, 2014). On the other hand, entrepreneurship has been found to be negatively related to high collectivism (Eroglu and Picak, 2011). At the individual level, empirical evidence suggests that individualistic orientation affects entrepreneurship behavior via its effect on individuals' level of innovativeness, autonomy, and risk-taking (Kreiser *et al.*, 2010; Lee and Peterson, 2000; Mueller and Thomas, 2001; Omerzel and Omerzel, 2016). Individualism is further associated with individuals' ability and willingness to undertake a business venture (Mitchell *et al.*, 2000).

Therefore, it seems that the individualistic tendency is interweaved with the competency and willingness to engage in entrepreneurial activities. The expression of an entrepreneur as an individual champion who maneuvers through a string of obstacles to establish a business reflect the values of individualism (Zeffane, 2014). In relation to these strengths, entrepreneurial activity has been found to be stimulated by individualistic values such as self-direction, achievement motivation, and pleasure seeking (Liñán *et al.*, 2016; Wdowiak *et al.*, 2012). These are important for individuals to

recognize and exploit opportunities, accept the risk and responsibility that are associated with the business (Zeffane, 2014), which may not only relate to intention but also ability to persist and succeed in self-employment.

An important outcome that people seek in the workplace is autonomy of decision making and action. Empirical evidence suggests that this need is more satisfied in self-employment than in salaried-employment. Thus this could be related to self-motivation for self-employment (see: Deci *et al.*, 2001) in societies with individualistic values. Moreover, individuals with a high need for freedom are more likely to prefer workplaces that offer them high levels of autonomy. Therefore, even when self-employment is perceived as involving risks or challenging, individualistic values are likely to lead individuals to seek self-employment opportunities (Benz and Frey, 2008; Binder and Coad, 2013; Croson and Minniti, 2012). Therefore entrepreneurship intentions are expected to be higher in societies emphasizing individualistic values (Liñán *et al.*, 2016). Overall, independence as a cultural dimension predisposes individuals to values and attitudes that are relevant for entrepreneurship, consequently offers an environment that may pull individuals to self-employment. In the present study, we examine the effects of internality of locus on control on entrepreneurial attitudes and self-employment intentions in Germany (which has a high score on individualism) and East Africa (which has a low score on individualism) (Hofstede *et al.*, 2010). For East Africa, the study was conducted in Uganda and Kenya. Available evidence suggests that East African states have very similar scores on Hofstede's cultural dimensions. For example, data is only available for two states in this region (Kenya and Tanzania) and both have a score of 25 on individualism and 50 on uncertainty avoidance (cf. <https://www.hofstede-insights.com/product/compare-countries/>).

**Hypothesis 2:** Individualism is positively associated with self-employment intention, such that intentions are higher in Germany and lower in East Africa.

## **Entrepreneurial Attitudes and Intentions**

There is a huge amount of empirical evidence proving that attitudes influence career choices and behaviors. The championing work of Robinson *et al.* (1991) stimulated applications of the concept in neuro-entrepreneurship research. Majority of the studies have demonstrated that attitudes are relevant in understanding the choice of entrepreneurship as a career (Callanan and Zimmerman, 2016; Lars Kolvereid, 1996). In this

direction, studies mostly grounded on planned behavior theory have demonstrated that attitudes impact on entrepreneurial interests and behaviors (e.g. Douglas and Fitzsimmons, 2013; Dreisler *et al.*, 2003; Fayolle and Gailly, 2015; Fitzsimmons and Douglas, 2005, 2011; Harris *et al.*, 2011; Kibler, 2013; Rauch and Hulsink, 2015). Consequently, intentions to enter self-employment could result from positive entrepreneurial attitudes (Douglas and Shepherd, 2002; Harris and Gibson, 2008).

Moreover, an individual's utility evaluation, which determines interest or disinterest, is related to attitudes towards different aspects of entrepreneurship. In (Jones *et al.*, 2011) study, entrepreneurial attitudes increased interest in the opportunity of the future or immediate entrepreneurial career. However, attitudes are not constant, they tend to vary with time and circumstances (Gibson *et al.*, 2010). Entrepreneurial attitudes specifically vary among regions, gender and cultures depending on social and economic systems; as well as experience and or training in business (Harris and Gibson, 2008; Henderson and Robertson, 2000; Loveridge *et al.*, 2012).

Past research on entrepreneurial attitudes has tended to study attitudes as a general construct. However, another cluster of research has focused on specific attitudes including attitudes towards risk, autonomy, work effort, change, money, competition, and attitudes towards entry requirements (Douglas and Shepherd, 2002; McNally *et al.*, 2016; Valtonen, 2007). In the present study, we focus on the general attitude towards entrepreneurship. Much of the literature nonetheless, highlights the role of risk and autonomy in describing liking of or dislike for entrepreneurship. The general finding that has been replicated in numerous studies is that intentions are associated with higher risk attitudes (Brachert *et al.*, 2014; Brown *et al.*, 2011; Douglas and Shepherd, 2002; Gupta and York, 2008; Hu, 2014; Schwarz *et al.*, 2009; Skriabikova *et al.*, 2014). This is because individuals with lower levels of risk attitudes tend to prefer the stability of income (Di Mauro and Musumeci, 2011) in salaried employment, yet income in self-employment is highly variable. Risk attitudes also have an effect on the entrepreneurial role an individual adopts, for instance, low-risk persons are likely to become a necessity rather than opportunity or innovation-driven entrepreneurs (Block *et al.*, 2015).

There is an increasing focus on studying autonomy attitude as a motivator of entry into self-employment. The increase in the importance of work autonomy in career decisions is facilitated by changing social trends that emphasize self-reliance (van Gelderen, 2010) and changing family roles that require work-family balance. Independence is one of the factors that

individuals consider when calculating the expected utility of self-employment (Croson and Minniti, 2012; Douglas and Shepherd, 2002). van Gelderen and Jansen (2006) observed variations in work autonomy needs among the self-employed. Some individuals have a preference for self-employment because they do not want to work for other people or want to be responsible or undertake work that is in line with one's values and beliefs, while others simply want to take independent decisions in work methods and time. Based on these reasons of autonomy, self-employed individuals have been found to have higher job satisfaction than individuals in salaried employment (Lange, 2012). Congruent to the planned behavior theory, goals such as the search for autonomy, and positive attitudes towards other aspects of entrepreneurship such as risk increase the liking and intention for self-employment. We hypothesize that:

**Hypothesis 3a:** Entrepreneurial attitudes are positively associated with intentions for self-employment.

In the model of indigenous entrepreneurial attitude, Lindsay (2005) proposes that personal and contextual variables impact on entrepreneurial attitudes which further facilitates entrepreneurial behavior. In essence, the model suggests that entrepreneurial attitudes mediate the effects of factors such as personality and culture on entrepreneurial behavior. This is congruent to Ajzen (1991) model of planned behavior proposition that attitudes are impacted on by the beliefs, and in turn has the highest impact on behavioral intention. We, therefore, expect entrepreneurial attitudes to mediate the relationship between internal locus of control and self-employment intentions. This expectation is in line with previous studies on entrepreneurial intentions (Byabashaija and Katono, 2011; Lüthje and Franke, 2003; Tsai *et al.*, 2016; Zampetakis *et al.*, 2009) which highlight the mediational role of attitudes in the relationship between person-level factors and intentions. We, therefore, hypothesize that:

**Hypothesis 3b:** Internal locus of control is positively associated with entrepreneurial attitudes.

**Hypothesis 3c:** Entrepreneurial attitudes mediates the effect of internal locus of control on self-employment intentions.

In this study, we propose that control beliefs (internal locus of control) are associated with entrepreneurial attitudes and consequently related to self-employment intentions. We have already noted in previous sections that attitudes towards entrepreneurship differ across situations and are affected

by culture. This suggests a group or cross-cultural differences in entrepreneurial attitudes and intentions (García-Rodríguez *et al.*, 2015; Hofstede and Hofstede, 2001; Santos *et al.*, 2016; Valtonen, 2007). There are differences among cultures regarding perceptions of business and business-related behaviors such as autonomy. For instance, Valtonen (2007) in the assessment of culture's contributions to entrepreneurial attitudes observes that unlike the Finnish, American entrepreneurs emphasize free market system, competition, and risk-taking. This confirms the assumption that the effect of attitudes on intentions to start a business is moderated by beliefs (Phan *et al.*, 2002). In this regard, we argue that culture (individualism) interacts with an individual's control beliefs and attitudes to influence intention for self-employment. Moreover, such differences may also arise out of other contextual factors such as level of development, or labor market dynamics existent in a given country (such as unemployment rates). This is in line with previous research and argumentations about how culture differentially impacts on intentions. Liñán and Chen (2009), for example, posit that national cultures can promote entrepreneurship through its influence on social and economic institutions; whereas in the context of unfavorable cultures, self-employment entry is motivated by the need for self-fulfillment. We therefore also posit a moderated mediation model, whereby the indirect effects of internal locus of control on self-employment intentions via entrepreneurial intentions vary among countries (that is, moderated by culture). We hypothesize that:

**Hypothesis 4a:** Individualism is associated with entrepreneurial attitudes such that attitudes are higher in a country with higher ratings on individualism.

**Hypothesis 4b:** Individualism moderates the relationship between internal locus of control and entrepreneurial attitudes.

**Hypothesis 4c:** The mediation effect of entrepreneurial attitudes on the relationship between internal locus of control and self-employment intention is conditioned by individualism.

## METHODS

### Participants and Procedure

The study involved final-year undergraduate students in Germany and two countries in the East African Community (Kenya and Uganda). Overall, 590 students aged 18 to 30 years ( $M = 23.61$ ;  $SD = 0.60$ ) valid responses

after deletion of cases with incomplete questionnaires and outliers. For the German sample, students at Philipps University Marburg were invited to participate via an online survey; leading to 286 valid responses (male = 164, female = 118). For the East African sample, students at Makerere University (Uganda) and Kisii and Maseno Universities (Kenya) were invited to fill in survey questionnaires in their lecture rooms; leading to 304 valid responses (male = 143, female = 161). Of the total 590 participants, 76% reported having self-employment/entrepreneurial experience through either a personal venture or a family business.

## Measures

### *Internal Locus of Control*

Control beliefs were operationalized by assessing internality locus of control. The multidimensional locus of control scale (Levenson, 1973) was used. For the purpose of this study, we used items that specifically measure internality of locus of control (8 items,  $\alpha = 0.73$  sample item: when I make plans, I am almost certain to make them work; 1 = strong disagree, 6 = strongly agree).

### *Cultural Context*

Specific attention is given to the individualism dimension following (Hofstede *et al.*, 2010). This is applied as an operationalization for normative beliefs. Individualism is a cultural dimension that defines how an individual relates to the social environment in terms of looseness of ties between members (Hofstede *et al.*, 2010; Sharma, 2010). We measure culture by employing Hofstede's tool for differentiating nature cultures (in our analyses and discussion referred to as "country"). Particularly regarding individualism, Germany is rated high (67) and East Africa – specifically Kenya rated low (25) (Hofstede *et al.*, 2010). The scores are available on the website: <https://geert-hofstede.com/national-culture.html>. In our analysis, we code German as 1 and East Africa as 0.

### *Attitudes*

Entrepreneurial attitudes were measured using Schwarz *et al.* (2009) questionnaire; which measures specific attitudes. The questionnaire measures different entrepreneurially relevant attitudes on a 5-point Likert scale (1 — strongly disagree to 5 — strongly agree). Two items relating to the

general attitude towards entrepreneurship were adopted ( $\alpha = 0.72$ ; sample item: I would rather establish a new company than be the manager of an existing one). Although this reliability is above the threshold of 0.70 (Nunnally, 1978), it can still be considered low which is a challenge with short measures (Credé *et al.*, 2012). However, in certain circumstances, such short measures are preferable (Credé *et al.*, 2012). This points to the need to develop more reliable entrepreneurial attitude measures that are neither long nor too short.

### *Intentions for Self-Employment*

Intentions for self-employment were measured by using (Francisco Liñán and Chen, 2009) entrepreneurial intentions questionnaire. The items were rated on a 7-point Likert scale ranging from 1 (totally disagree) to 7 (totally agree). The questionnaire consists of six (6) items (sample item: I will make every effort to start and run my own business). However, one item was dropped from analysis since it loaded below 0.30 during factor analysis. This procedure is recommended as a way of achieving a proper factor structure (Osborne and Costello, 2005). The instrument showed high internal consistency ( $\alpha = 0.97$ ).

To substantiate that entrepreneurial attitude is conceptually distinct from entrepreneurial/self-employment intention, we conducted a Confirmatory Factor Analysis (CFA) using Amos 21.0 (Arbuckle, 2012). Our findings support the differentiation of entrepreneurial attitude from intentions ( $\chi^2 = 194.87$ ,  $df = 0.79$ ,  $p < 0.001$ ,  $\chi^2/df = 2.47$  [ratio  $< 2.5$  indicates a good model fit], CFI = 0.98, RMSEA = 0.05) which provided a significantly better fit ( $\Delta\chi^2 = 182.24$ ,  $df = 10$ ,  $p < 0.001$ ) than a model combining entrepreneurial attitude and intention on one scale ( $\chi^2 = 377.11$ ,  $df = 89$ ,  $p < 0.001$ ,  $\chi^2/df = 4.24$ , CFI = 0.95, RMSEA = 0.07).

### **Control Variables**

Participants were asked to report their age, sex, and if they have prior experience in entrepreneurship/self-employment. previous entrepreneurship research has indicated that these variables impact on entrepreneurial attitudes, intentions, and entry (Beladi and Kar, 2015; Chen *et al.*, 1998; Gupta and York, 2008; Hsu *et al.*, 2017; Zhao *et al.*, 2005). However, the analysis of the impact of self-intentions, results showed citizenship status had non-significant effects. However, sex affects both interest in business and behavior in operating business (Moult and Anderson, 2005). We, therefore,

controlled for the effects of age, sex and previous entrepreneurial experience in the regression models.

## RESULTS

Table 1 shows the means, standard deviations and correlation matrix for the variables in the study. We observe that internal locus of control and entrepreneurial attitudes are positively correlated with self-employment intentions.

We used regression (in PROCESS Macro — model 4) to confirm that internal locus of control and culture are associated to entrepreneurial attitudes and predict intentions. The model also tests for mediational effect of attitudes. Results (Table 2) show that both internal locus of control ( $B = 0.30$ ,  $CI = 0.15$  to  $0.44$ ) and country ( $B = -1.00$ ,  $CI = -1.18$  to  $-0.81$ ) are associated to entrepreneurial attitudes; thus hypotheses 3b and 4a are supported. The regression model in Table 2 shows that none of the control variables predicted entrepreneurial attitudes. On the other hand, age ( $B = -0.14$ ,  $CI = -0.32$  to  $-0.04$ ) and previous entrepreneurial or business related experience ( $B = 0.54$ ,  $CI = 0.33$  to  $0.75$ ) are associated to self-employment intention. Internal locus of control ( $B = 0.35$ ,  $CI = 0.19$  to  $0.52$ ), country ( $B = -2.03$ ,  $CI = -2.32$  to  $-1.75$ ) and entrepreneurial attitude ( $B = 0.53$ ,  $CI = 0.42$  to  $0.63$ ) predicted entrepreneurial intention, thus hypotheses 1, 2, and 3a are supported. The indirect effects were significant ( $B = 0.15$ ,  $CI = 0.08$  to  $0.25$ ). As indicated by the Sobel test ( $B = 0.16$ ,  $z = 3.70$ ,  $p < 0.01$ ), the mediating effect of entrepreneurial attitudes on the relationship between internal locus of control and self-employment intention is confirmed. Thus hypothesis 3c is also supported.

We used PROCESS Macro (Hayes, 2013) to test our conceptual model in Figure 1. We used Model 15 (testing for moderated mediation). Hence the model (Table 3) tested for interactive effects of internal locus of control and

Table 1. Descriptive Findings and Correlation of the Study Variables.

| Measure                   |     | N Items | M    | SD   | $\alpha$ | (A)    | (B)    | (C) |
|---------------------------|-----|---------|------|------|----------|--------|--------|-----|
| Internal locus of control | (A) | 8       | 4.55 | 0.66 | 0.73     | 1      |        |     |
| Entrepreneurial attitude  | (B) | 2       | 3.85 | 1.17 | 0.72     | 0.18** | 1      |     |
| Self-employment intention | (C) | 5       | 4.52 | 2.00 | 0.97     | 0.24** | 0.43** | 1   |

Note: \*\* $p < 0.001$ ; Controls: Age, sex, country, previous self-employment experience.

Table 2. Predictors of Entrepreneurial Attitudes and Self-Employment Intentions and the Mediation Effect.

| Predictors                          | Entrepreneurial Attitude  |      |       | Self-Employment Intention |      |       |
|-------------------------------------|---|------|-------|---------------------------|------|-------|
|                                     | B   | SE   | ULCI  | B                         | SE   | ULCI  |
| Constant                            | 2.64  | 0.40 | 1.85  | 1.77                      | 0.53 | 2.83  |
| Age                                 | 0.03  | 0.07 | -0.12 | -0.14                     | 0.09 | -0.04 |
| Sex                                 | 0.13  | 0.08 | -0.03 | -0.10                     | 0.10 | 0.10  |
| Previous SE experience              | 0.05  | 0.11 | -0.16 | 0.54                      | 0.11 | 0.75  |
| Country                             | -1.00   | 0.09 | -1.18 | -2.03                     | 0.15 | -1.75 |
| Internal LOC                        | 0.30  | 0.07 | 0.15  | 0.35                      | 0.09 | 0.52  |
| Entrepreneurial attitude            |   |      |       | 0.53                      | 0.05 | 0.63  |
| Internal Loc → attitude → intention |   |      |       | 0.15                      | 0.04 | 0.25  |
| Total effect (Internal LOC)         |   |      |       | 0.51                      | 0.09 | 0.69  |
| <i>Model summary</i>                | $F(5, 584) = 37.25^{***}, R^2 = 0.25$                               |      |       |                           |      |       |
| <i>Normal theory test</i>           | $F(6, 583) = 244.67^{***}, R^2 = 0.63$<br>$B = 0.16, z = 3.70^{**}$ |      |       |                           |      |       |

Notes: \*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; LOC = Locus of control; CIs = 95%; Bootstraps = 5000. Controls: Age, sex, previous self-employment experience. Country (East Africa = 0, Germany = 1); Experience (No = 0, Yes = 1).

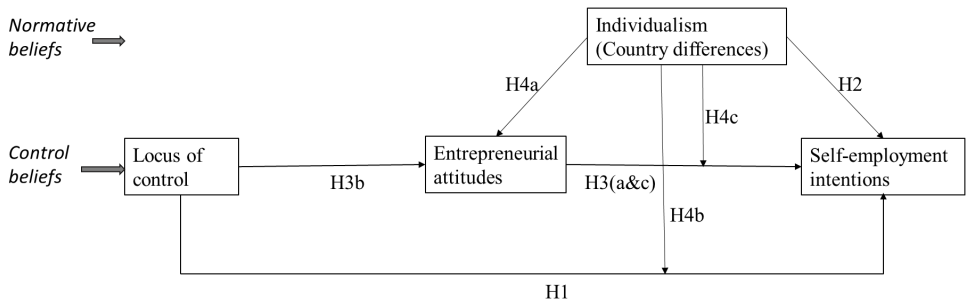


Figure 1. Conceptual Model and Hypotheses.

individualism (country) on self-employment intentions (hypothesis 4b); and the conditional indirect effects of internal locus of control on intentions via attitudes and moderated by country (Hypothesis 4c). The predictor variables were automatically centered by the PROCESS Macro before the analysis. We also applied sample bootstrapping at 5000 in line with Hayes (2013) recommendation, and a 95% bias-corrected confidence interval.

Results (Table 3) show that there was a significant effect on self-employment intentions after including the main predictors and control variables, as well as the interactions in the regression model; explaining 64% of the variance in self-employment intentions. This is in line with previous studies which have shown that theory of planned behavior constructs explains 30–59% of entrepreneurial intentions (Kautonen *et al.*, 2015; Kolvereid, 1996; Francisco Liñán and Chen, 2009; van Gelderen *et al.*, 2008). The model confirms the direct effect of internal locus of control on intentions ( $B = 0.34$ ,  $CI = 0.17$  to  $0.50$ ) as well as the effect of attitudes ( $B = 0.56$ ,  $CI = 0.46$  to  $0.66$ ). Again, among the control variables, previous experience had significant effects on both entrepreneurial attitudes ( $B = 0.30$ ,  $CI = 0.09$  to  $0.52$ ) and intentions ( $B = 0.49$ ,  $CI = 0.28$  to  $0.70$ ).

Regarding the moderation, the interactive effects of internal locus of control and country on self-employment intentions were not significant ( $B = -0.15$ ,  $CI = -0.48$  to  $0.18$ ). However, the model reveals significant positive conditional direct effects for both East African and German samples. The plots in Figure 2 illustrate that East African students had higher intentions than their German counterparts at both low and high levels of internal locus of control. Self-employment intentions tend to increase in a similar fashion with movement to higher levels of internal locus of control for both samples, confirming the non-significant moderation effect. Therefore, hypothesis 4b is not supported.

Table 3. Bootstrapped Moderated Mediation Effects on Self-Employment Intention.

| Predictors                                       | Entrepreneurial Attitude |      |       | Self-Employment Intention |                |  |
|--|--------------------------|------|-------|---------------------------|----------------|--|
|  | B                        | SE   | ULCI  | B                         | SE             | ULCI                                   |
| Constant   | -0.08                    | 0.26 | -0.58 | 4.46                      | 0.33           | 3.81                                   |
| Age  | -0.21                    | 0.07 | -0.35 | -0.10                     | 0.09           | -0.28                                  |
| Sex  | 0.22                     | 0.08 | 0.05  | -0.07                     | 0.10           | -0.27                                  |
| Previous SE experience                           | 0.30                     | 0.11 | 0.09  | 0.49                      | 0.11           | 0.28                                   |
| Internal LOC                                     | 0.43                     | 0.07 | 0.29  | 0.34                      | 0.08           | 0.17                                   |
| Entrepreneurial attitude                         |                          |      |       | 0.56                      | 0.05           | 0.46                                   |
| Country  |                          |      |       | -2.01                     | 0.14           | -2.28                                  |
| Entrepreneurial attitude × country               |                          |      |       | 0.48                      | 0.10           | 0.28                                   |
| Internal LOC × country                           |                          |      |       | -0.15                     | 0.17           | -0.48                                  |
| <i>Model summary</i>                             |                          |      |       |                           |                |  |
|  |                          |      |       |                           |                | $F(4, 585) = 17.03^{***}, R^2 = 0.11$  |
|  |                          |      |       |                           |                | $F(8, 581) = 181.64^{***}, R^2 = 0.64$ |
| Conditional direct effects (by country)          |                          |      |       |                           |                |  |
| East Africa                                      |                          |      |       | 0.41                      | 0.11           | 0.19                                   |
| Germany  |                          |      |       | 0.26                      | 0.12           | 0.02                                   |
| <i>Conditional indirect effects (by country)</i> |                          |      |       |                           |                |  |
| East Africa                                      |                          |      |       | <i>Index</i>              | <i>Boot SE</i> | <i>Boot LLCI</i>                       |
|  |                          |      |       | 0.14                      | 0.04           | 0.07                                   |
| Germany  |                          |      |       | 0.35                      | 0.07           | 0.23                                   |
| <i>Index of moderated mediation</i>              |                          |      |       | <i>Index</i>              | <i>Boot SE</i> | <i>Boot LLCI</i>                       |
| Attitude   |                          |      |       | 0.21                      | 0.06           | 0.12                                   |

Notes: \*\*\* $p < 0.001$ ; CIs = 95%; Bootstraps = 5000; SE = Self-employment; LOC = Locus of control; Controls: Age, sex, previous self-employment experience.

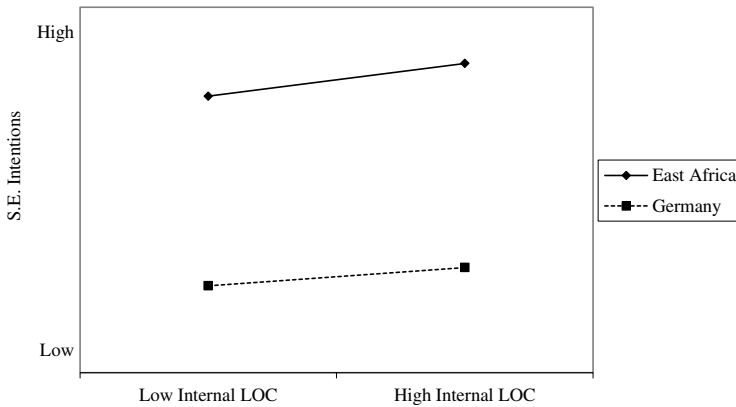


Figure 2. Interactive Effect of Internal Locus of Control and Country on Self-Employment Intentions.

In contrast to this finding, the interactive effects of entrepreneurial attitudes (mediator) and country were significant ( $B = 0.48$ ,  $CI = 0.28$  to  $0.68$ ). Overall, the index of the moderated mediation shows that the indirect effect was significantly conditioned by country ( $B = 0.21$ ,  $CI = 0.12$  to  $0.33$ ). This result supports hypothesis 4c. The conditional indirect effects were higher for Germany ( $B = 0.35$ ,  $CI = 0.23$  to  $0.49$ ) than for East Africa ( $B = 0.14$ ,  $CI = 0.07$  to  $0.23$ ). As is visualized in Figure 3, self-employment intentions for East African students were higher than for German students at low levels of entrepreneurial attitudes; however, this trend reverses when entrepreneurial attitudes are high. To put it otherwise,

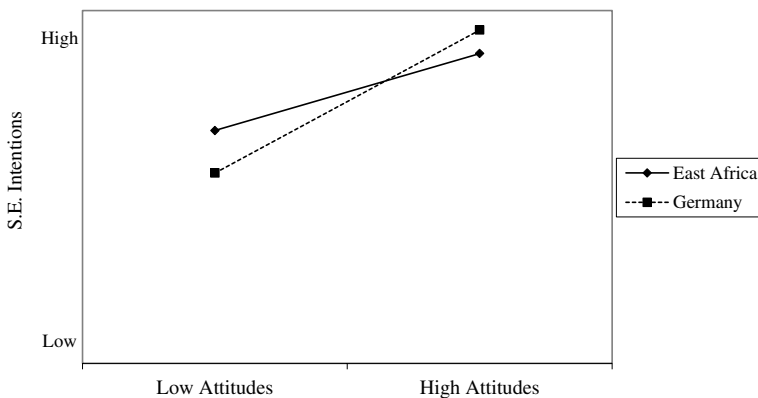


Figure 3. Interaction Effect of Attitudes (Mediator) and Country on Self-Employment Intentions.

attitudes and intentions are more closely linked for Germans than for East Africans.

## DISCUSSION AND IMPLICATIONS

The aim of this study was to examine the impact of internal locus of control (as an indicator of control beliefs) and individualistic cultural dimension (as an indicator of the subjective norm) on students' entrepreneurial attitudes and intentions for self-employment, based on the theory of planned behavior. We studied a population of German and East African university students who are in the final year of their studies because they are, in addition to successfully completing their studies, concerned with employment options after graduation. The theory of planned behavior suggests that behavior is a function of intention, which is also shaped by behavior-specific attitudes, subjective norm and perceived behavioral control (Ajzen, 2002, 1991). Previous research based on this theory reveals that intentions predict actual behavior (e.g. Kautonen *et al.*, 2013; Krueger *et al.*, 2000). In the present study, focusing on internal locus of control and individualism as specific indicators of control and normative beliefs respectively; we posit that an internal locus of control impacts intentions indirectly via entrepreneurial attitudes. We further posit that direct and indirect effects of locus of control are moderated by individualism.

Our results show that particularly, the indirect impact of locus of control seems to be less affected by cultural factors and differences in economic development. Beyond this effect, the current study contributes to the understanding of the interaction of personal and cultural factors in explaining entrepreneurial behavior. The findings show that the interaction between individualistic culture and believe in one's ability to control own behavior is important for the development of self-employment intentions. Self-employment, like other business situations, involves a high level of risk (Orobia *et al.*, 2011; Pak, 2013). Thus the belief that one can have personal control over such circumstances is important to the formation of positive attitudes and intention for self-employment. When an individual believes that the requirements for self-employment are beyond his capability or the business environment is complex beyond his ability to have control, he or she is likely to think negatively of self-employment as a viable career alternative. However, it is also important if an individual is in a position to make independent decisions and actions without relying on or worrying about the opinions of significant others.

Attempts to define entrepreneurial cultures have emphasized characteristics of individualism, power inequality, ambiguity tolerance, masculinity as well as focus on the long-term orientation (e.g. [Baughn and Neupert, 2003](#); [Lee et al., 2011](#); [Lee and Peterson, 2000](#); [Schlaegel et al., 2013](#)). The current findings support, especially the moderated indirect effects, this literature by highlighting the role of the interaction between individualism and personal characteristics in promoting entrepreneurship. There are empirical findings suggesting individuals are attracted to self-employment because it offers a high level of autonomy at the workplace compared to salaried-employment ([Binder and Coad, 2013](#); [Croson and Minniti, 2012](#)).

On the other hand, there is research highlighting that in some situations, individualism may be a hindrance to entrepreneurial intentions. This suggests that collectivism is also important for entrepreneurial intentions (e.g. [Aramand, 2013](#); [Schlaegel et al. 2013](#)). This can explain the differences between German and East African students. Our results reveal that East African students had higher self-employment intentions. In addition, the effect of internal locus of control on intention was higher for East African students; although the effect of internal locus of control on intentions via attitudes was higher for German students. Regarding cultural explanations, also the effects of risk tolerance might play a role. Entrepreneurship activity in Germany in general seems to be strongly affected by a high level of risk aversion ([Caliendo et al., 2009](#); [Wagner, 2005](#)). However, East African students generally reported higher intentions, which may be attributed to socio-economic factors, beyond the cultural factors. This could be an important topic for future research. First, the majority of the East African sample was drawn from Uganda, which ranks high on youth entrepreneurial propensity ([Singer et al., 2015](#)). Second, we find high youth unemployment rates in the region, which is a key push factor for self-employment ([Abada et al., 2014](#); [Oh, 2008](#)).

Further, in relation to the individualistic cultural dimension, some of the previous research has highlighted that collectivism is not necessarily bad for entrepreneurship ([Aramand, 2013](#); [Siu and Lo, 2013](#)). East Africa is more collectivistic than individualistic, where social relations are valued. Therefore, the quality of relationships with others is important for some individuals in the process of becoming self-employed. For example, given low incomes hence challenges in startup capital, young people rely on their parents or significant others for startup funding as well as approval of self-employment activity or idea. A logical conclusion to this effect is drawn by ([Siu and Lo, 2013](#)) that for people who value connectedness, the

significant others influence the entrepreneurial intent. Yet the views of significant others are quite less influential for the individuals who value independence. Hence at the multivariate level, we observe that entrepreneurial attitudes have a higher effect on intentions in individualistic society (Germany) than in a collectivistic society (East Africa).

Our findings also have empirical contributions to the study of self-employment or entrepreneurship, as well as the application of the theory of planned behavior. Studies applying the theory of planned behavior to entrepreneurship intentions have demonstrated that the model explains significant variance in entrepreneurial intentions (e.g. Gelderen *et al.*, 2008; Kautonen *et al.*, 2015; Malebana *et al.*, 2014; Tsai *et al.*, 2016). Although we measure limited aspects of control and normative beliefs, the findings demonstrate not only mediational but also interactional influences the components of the model have on self-employment intentions, which improves the predictive power. The results also demonstrate that the application of the planned behavior model to self-employment intentions could be affected by differences between societies which may be linked to national cultures and development context.

Entrepreneurial culture has often been studied at the national level based on Hofstede (1984) model. This model is not only a complete representation of national cultures but has also provided basis of studying entrepreneurial cultures and predicting entrepreneurial behavior (e.g. Lee and Peterson, 2000; Mueller and Thomas, 2001; Swierczek and Quang, 2004; Vinogradov and Kolvereid, 2007). Our study further confirms the value of the national culture for entrepreneurial promotions. More precisely, we show that it is at least relevant in explaining attitudes and intentions for self-employment.

Besides the theoretical and empirical implications, the study also has implications for policy development relating to the promotion of self-employment. Self-employment promotion is currently a concern for governments and development partners in both developing and developed countries. This push for self-employment particularly arises from economic challenges such as unemployment and changing work arrangements and preferences, particular emphasis on the service sector (Abada *et al.*, 2014; Baumgartner and Caliendo, 2008; Fritsch *et al.*, 2012; Oh, 2008). The present study contributes to the understanding of factors important to the formation of positive attitude and intention for self-employment. We have demonstrated that high internal control beliefs and individualistic values impact on behavioral attitude. These are important for entrepreneurial education and promotion programs. We propose that support programs for

prospecting entrepreneurs should highlight perception of personal competence and control as well as individualistic values.

### **Strengths, Limitations, and Ideas for Future Research**

Our study has a few strengths. First, we studied a population of students that are at the end of their university studies. This is a time when young persons are considering the available and feasible employment options. It is, therefore, a good time to evaluate attitudes and intentions to become self-employed or to become a salaried worker. Second, we used a sample from different universities in Germany and East Africa. Therefore, our findings may apply to the context of both developing and developed countries, as well as in different cross-cultural application.

The study has, nonetheless, two major limitations that should be considered when generalizing or applying our findings. First, the use of a cross-sectional dataset might be critical. Thus we did not establish whether the entrepreneurial attitudes and intent for self-employment remain the same or change after graduating from university. Second, our sample consists of only students in their final semester of their bachelor, diploma, or masters courses. It may therefore not be representative of the general student and youth populations.

Future research could employ a longitudinal approach to establish whether attitudes and intentions for self-employment are maintained or change after graduating from university. It could also be interesting to study how entrepreneurial attitudes and intent changes at different levels of education, from high school through different years at college and after graduation. Other variables such as social networks (particularly having family members and friends who are engaged in business) could be considered as well, particularly as moderators in the relationship between control beliefs, cultural orientations, attitudes and intention for self-employment.

In addition, our findings indicated that self-employment intentions are higher in East Africa compared to Germany. This is contrary to our hypothesis and extant literature suggesting that intentions are higher in an individualistic cultural context. We have suggested that this could be as a result of the socio-economic context. We, therefore, propose that future research should investigate the role of socio-economic contextual factors in the development of entrepreneurial intentions. Previous research shows that such factors, for example, levels of life satisfaction, can explain variations in self-employment among countries (Noorderhaven *et al.*, 1999, 2004).

Moreover, differences in economic development could also be relevant to understanding variations in the success of entrepreneurship promotion efforts (Baluku *et al.*, 2018). Given that self-employment is increasingly the dominant form of employment in developing countries (Falco and Haywood, 2016; Gindling and Newhouse, 2014), it could be interesting to examine the importance of individualism in necessity versus opportunistic entrepreneurship in low-income and high-income countries.

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