



Institutional determinants of entrepreneurial intention: The need for strategic alliances and entrepreneurial ecosystem

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Abstract

University education is no longer a passport to secure employment for graduates. In Zambia, for example, 72.3% of unemployed graduates are below the age of 35. Youth unemployment represents an enormous cost to society in terms of lost potential for economic growth, negative return on investment in education as well as a potential increase in vices such as crime. It appears the number of graduates is increasing while available job opportunities are fewer. This is compelling stakeholders to consider initiatives that promote new venture creation as an additional viable career option. Extant literature indicates that individuals with higher intention to start a business are more likely to actually engage in entrepreneurship than those with low or no intention. Understanding the determinants of entrepreneurial intention (EI), therefore, becomes important. In exploring the determinants of EI, prior studies investigate the effects of individual factors, contextual (institutional) factors and entrepreneurship education (EE) in isolation from each other; integrative models are lacking. Moreover, literature on the effect of EE on EI shows mixed conclusions. There is scanty research on EE and EI in developing countries such as Zambia and this limits the generalisability of research conclusions. The current study, by considering EE as the kernel, firstly examines individual and institutional determinants of EI. Secondly, it explores whether EE affects the relationships between EI and its individual and institutional determinants. To explore the interconnectedness of these issues while relying on a qualitative research strategy, the paper presents empirical results from 13 semi-structured interviews; interviewees being final year undergraduate students, entrepreneurship educators and practitioners in enterprise support organisations in Zambia. The findings indicate that the effect of EE on EI should be evaluated in conjunction with factors at the individual and institutional levels. This means that relevant individual and institutional factors exert their influence on EI directly and indirectly through their impact on the effectiveness of EE. The conclusions suggest that to promote graduate entrepreneurship, multifaceted and concerted efforts (strategic alliances) will be required from policymakers (to shape institutions), educators (to design and deliver appropriate EE content and pedagogy) and practitioners (to devise and implement collaborative enterprise support strategies and mechanisms).

Keywords: Institutional determinants, entrepreneurial, intention

1. Introduction

Entrepreneurship involves identifying, evaluating, and exploiting opportunities and introducing new products to the market through organised efforts that have not previously existed (Carree and Thurik, 2010; Kirzner, 1997; Knight, 1921; Miller, 1983; Schumpeter and Backhaus, 1934; Shane, 2003). There is a general recognition that entrepreneurship contributes to economic development, competition, innovation and employment generation in economies (de Kok and de Wit, 2014; Hessels and van Stel, 2011; Neumark *et al.*, 2011; Peters, 2014; Pickernell *et al.*, 2011; Wennekers *et al.*, 2005). For instance, in Zambia, micro, small and medium-sized enterprises.

(MSMEs) account for 97% of all firms and contribute 89% of the jobs in the economy (CSO, 2011a; CSO, 2011b; CSO, 2013) ^[12]. In developed countries like the United Kingdom, MSMEs account for 99.9% of all enterprises, 58.8 % of private sector employment and 48.8% of private sector turnover (Lord Young, 2012).

Globally, there is increasing recognition that University education is no longer a passport to secure employment for graduates (Collins *et al.*, 2004b; Nabi and Bagley, 1999; Henry, 2013) ^[10]. For example, in Zambia, the developing country used as the context for my primary research, overall graduate unemployment is above 20%. Specifically, 72.3% of unemployed graduates are below the age of 35 (CSO, 2013) ^[12]. This means that there is an increasing number of educated youth confronted with rising unemployment. Youth unemployment represents an enormous cost to society in terms of lost potential for economic growth, negative return on investment in education as well as the potential increase in vices such as crime (Agbor *et al.*, 2012) ^[11]. It appears the number of graduates is increasing while available job opportunities are fewer. Based on Global Entrepreneurship Monitor surveys, 15% of Zambians reported that they had recently started a new business, 4% indicated they owned an established business and 20% reported closing a business recently. The GEM data for 2010 and 2012 also show a decline in the actual new business birth rate from 17% to 15% and a decline in the proportion of the population that owns and manages an established business from 10% to 4%, respectively. The established business ownership rate at 4% is much lower than the factor-driven economies average of 11%. These issues are compelling stakeholders to consider initiatives that promote new venture creation and growth as an additional viable career option. Thus, understanding factors that promote graduates' involvement in entrepreneurship becomes vital (Nabi and Liñán, 2011).

Given the contribution of SMEs to any economy's GDP and employment, there is an increasing expectation that entrepreneurship can help to address unemployment challenges faced by university graduates (Henry, 2013). Chimanga (2007) ^[9] indicates that 67% of graduates who start their own businesses in Zambia lament that university education only prepares them for employment in existing firms. Despite an increasing number of universities in Zambia offering EE since the year 2000, less than 5% of university students engage in EE. In developed economies like the EU, the EE engagement rates are higher i.e. between 16% and 23% (Consultants, 2008; Rae *et al.*, 2012). The low engagement rate in Zambia is perhaps because of a lack of empirical evidence on the impact of EE on EI in Zambia. Literature also indicates that individuals with business start-up intention are more likely to actually launch a business than those with no intention (Henley, 2007; Kautonen *et al.*, 2013; GEM, 2012) ^[16]. Against the backdrop of mixed conclusions in prior research about the effect of entrepreneurship education (EE) on entrepreneurial intention i.e. EI (Bae *et al.*, 2014) ^[3] and the shortage of integrated conceptual models explaining the development of EI (Shook *et al.* 2003; Fayolle and Linan, 2014) ^[13], this research explores the interconnectedness of EE, individual factors and environmental factors in determining start-up intention. Scholars argue that it would be meaningful to explore how the effects of EE differ depending on differences in the context and the individual (Wang and Chugh, 2013; Shepherd, 2011).

2. Literature Review

Concerning entrepreneurship education, there is often a challenge when attempting to consider the quantity and quality of EE because of diversity in the curriculum (content, breadth and depth), pedagogical approaches, and level of offering whether at post-graduate level, undergraduate level, nascent/fledgling entrepreneur level or indeed whether it is a full programme or merely a module/course (Blenker *et al.*, 2011; Henry *et al.*, 2003; Henry, 2013; Hills, 1988; Van der Sijde, 2008). While there are many variations to the conceptualisation of EE, in this paper EE has the purpose to develop skills and knowledge in new venture creation (Edelman *et al.*, 2008), management and growth (Blenker *et al.*, 2011; Henry *et al.*, 2005; Rideout and Gray, 2013). Theoretically, two perspectives suggest that EE may be positively related to entrepreneurial intention and behavioural outcomes (Morris *et al.*, 2013; Vanevenhoven and Liguori, 2013). Firstly, the human capital theory predicts that individuals who possess higher levels of knowledge, skill, and other competencies will achieve higher performance outcomes (Becker, 1962; Ployhart and Moliterno, 2011; Unger *et al.*, 2011). There may be a positive relationship between performance and human capital assets specific to entrepreneurship. Secondly, based on social cognitive theory (Bandura, 1993; Chen *et al.*, 1998; McGee *et al.*, 2009), entrepreneurial self-efficacy relates to the belief in one's abilities to successfully perform the various roles and tasks of entrepreneurship. EE is expected to help develop entrepreneurial self-efficacy through (1) enactive mastery – action-based learning, (2) vicarious experience - learning from case studies and guest entrepreneurs, 3) verbal persuasion - encouragement and theory, and (4) emotional arousal - inspiration (Hindle *et al.*, 2009; Zhao *et al.*, 2005). Higher entrepreneurial self-efficacy is expected to lead to higher EI and other entrepreneurial outcomes (Fitzsimmons and Douglas, 2011; Schlaegel and Koenig, 2014).

There is a small but growing body of empirical research regarding the effect of EE on EI. The nature of this body of research suggests mixed and inconsistent conclusions (Bae *et al.*, 2014; Küttim *et al.*, 2014; Williamson *et al.*, 2013) ^[3]. Moreover, only a few studies investigate the effect of EE on EI via perceived feasibility and desirability of entrepreneurship (Souitaris *et al.*, 2007; Fayolle *et al.*, 2006; Nabi *et al.*, 2010).

Based on the works of Ajzen (1991) ^[2] on the theory of planned behaviour, Shapero and Sokol's (1982) ^[25] entrepreneurial event model and a recent meta-analysis of related empirical studies (Schlaegel and Koenig, 2014), the entrepreneurial intention has emerged as a critical feature in the entrepreneurial process. This is because individuals with high EI are more likely to start a business than those with low EI (Kautonen *et al.*, 2013; Henley, 2007) ^[16]. Thus, understanding EI is important for understanding entrepreneurial behaviour (GEM, 2012). There is a small but growing body of research on determinants of EI. In exploring the determinants of EI, prior studies investigate the effects of individual factors, contextual (environmental factors) and EE in isolation from each other; there is a shortage of integrative conceptual models (Shook *et al.*, 2003; Rideout and Gray, 2013; Linan and Fayolle, 2014) ^[13]. Furthermore, based on social cognitive theory's concept of self-efficacy (Bandura, 1993, Chen *et al.* 1998; Mauer *et al.* 2009; McGee *et al.*, 2009) as well as human capital theory (Becker 1962, Unger *et al.*, 2011), research on the effects of EE on EI has yielded

mixed conclusions; some studies find positive impact while others report negative or no impact at all (Bae *et al.*, 2014) ^[3]. The inconsistent findings have prompted scholars to suggest that since EE and business support by government and other stakeholders are investments, empirical research with sound theoretical underpinnings is required to clarify how these initiatives impact EI (Nabi *et al.*, 2010; Rae *et al.*, 2012). Lastly, the literature shows that research on the determinants of EI is mainly conducted in developed countries and this limits the generalisability of conclusions to developing countries. For example, there is no research examining the determinants of EI in Zambia, the developing country that was used as the context for this primary research. In response to the issues identified in the literature, this study sought to:

- a. Explore the determinants of EI at the individual level. This is based on trait theory which posits that individuals with relevant personal characteristics are more likely to be attracted to venture into entrepreneurship (McClelland, 1965; Frank *et al.*, 2007) ^[14] and social learning theory which indicates that individuals with prior exposure to the workings as well as the rewards or disadvantages of certain career options either through role models within or outside the family are more likely to be desirous and confident about performing such roles (Bandura, 1977; Mauer *et al.*, 2009; Shapero 1982).
- b. Investigate the determinants of EI at the institutional level. This is based on institutional theory generally and particularly on the country's institutional profile for entrepreneurship (Busenitz *et al.*, 2000; Bruton *et al.*, 2010; Wicks, 2001) ^[7]. Albeit mainly considered at the macro level, empirical studies in developed countries find evidence that favourable regulatory, cognitive and normative institutions positively influence the rate and type of entrepreneurial activity in an economy (Bruton *et al.*, 2010; Ebner, 2006; Falck *et al.*, 2012; Rønning, 2006; Wicks, 2001). Regulatory institutions include favourable laws and regulations for business formation and operations as well as mechanisms supportive of individuals' entrepreneurial efforts. Cognitive institutions refer to the level of shared knowledge and information in society about venture creation, operations and growth. Lastly, normative institutions refer to the acceptability and admiration of innovation, creativity and entrepreneurial careers in society (Busenitz *et al.*, 2000; Engle *et al.*, 2011; Hofstede, 1984; Manolova *et al.*, 2008; Reynolds, 2011; Spencer and Gomez, 2004) ^[7].
- c. Enquire whether and how EE affects the relationships between EI and its individual and institutional determinants. This is partly based on social cognitive theory's concept of self-efficacy (Bandura, 1993; Chen *et al.*, 1998; Mauer *et al.*, 2009; McGee *et al.*, 2009) and human capital theory (Becker 1962, Unger *et al.*, 2011) which clarify that acquisition of skills and knowledge concerning a particular task or career would positively influence individuals to adopt that career. This is because of understanding developed about the rewards of that career and the confidence to undertake the activity.

The overall justification for these research objectives is that extant literature indicates the need to explore if, why and how EE and its impact may differ in different learning contexts and with different individuals (Rideout and Gray, 2013; Fayolle and Linan, 2014; Wang and Hugh, 2014) ^[13]. This is

necessary to generate conclusions that are relevant to policy, practice and research.

2.1 Conceptual considerations

Several conceptual models explaining the antecedents of EI (Bird, 1988; Boyd and Vozikis, 1994; Davidsson, 1995; Krueger and Carsrud, 1993; Krueger, 1993; Krueger and Brazeal, 1994; Lim *et al.*, 2010; Lüthje and Franke, 2003) ^[5] are primarily based on Shapero and Sokol's (1982) ^[25] entrepreneurial event model and Ajzen and Fishbein's (1991, 2002, 2005) ^[2] theory of reasoned action and planned behaviour. According to these theories, EI can be parsimoniously regarded as a function of the perceived desirability and feasibility of entrepreneurship (Brännback *et al.*, 2006; Fitzsimmons and Douglas, 2011; Schlaegel and Koenig, 2014). Desirability reflects the degree to which a person has a favourable evaluation of the entrepreneurial career i.e. 'Do I perceive that this would be a good thing for me to do?' Feasibility reflects an individual's perception of ease of performing the behaviour i.e. 'Could I do it if I want to?'

However, extant literature raises critical questions concerning the adequacy of the basic EI model. Specifically, scholars indicate that there is little knowledge about what factors determine perceptions of feasibility and desirability (Davidsson, 2004; Dohse and Walter, 2012; Hindle *et al.*, 2009; Rideout and Gray, 2013; Schlaegel and Koenig, 2014). In attempts to decipher the antecedents of EI, previous research has provided two, mostly, separate strands of explanations. Firstly, the individual-focused strand holds that individuals with personality traits, background and demographic factors matched to entrepreneurial tasks are more likely to have higher EI than those without (BarNir *et al.*, 2011; Lee and Wong, 2004; Stewart Jr and Roth, 2001; Verheul *et al.*, 2012; Zhao *et al.*, 2010a). Secondly, the environment-focussed strand holds that inhibiting or facilitating factors in the external environment influence EI (Birdthistle, 2008; Lüthje and Franke, 2004; Robertson *et al.*, 2003; Shane, 2004; Smith and Beasley, 2011; Walter *et al.*, 2011). The forgoing research strands on EI have evolved relatively isolated from each other. This view is shown in the quotes below:

"With regard to theoretical limitations, the EI literature has not resulted in cumulative knowledge because the various perspectives have been pursued in isolation from other perspectives. Future work on EI should attempt to integrate and reduce the number of alternative models." Shook *et al.* (2003, p.386)

"(on the future of entrepreneurial intention research)...as Krueger (2009) suggests, the construct of intentions appears to be deeply fundamental to human decision making, and as such, it should afford us multiple fruitful opportunities to explore the connection between intent and a vast array of other theories and models that relate to decision making under risk and uncertainty. This view opens the door for the development of integrative and more sophisticated theoretical models of the entrepreneurial process... New research may consider interaction...moderation...and mediation effects." Fayolle and Liñán (2014, p.664) ^[13]

As a consequence, scholars call for studies to examine how

factors at the individual and institutional levels jointly shape EI (De Clercq *et al.*, 2011; Fayolle and Liñán, 2014; Hitt *et al.*, 2007; Krueger, 2009) ^[13]. A cross-level approach may address inconsistent findings on determinants of EI since it may, ultimately, be determined by a combination of dispositions, context and other interventions (Cope, 2005; Gartner, 1989a; Hindle *et al.*, 2009; House *et al.*, 1996; Krueger, 2009; Mitchell *et al.*, 2007; Wang and Chugh, 2014). In addition, the impact of country institutional profile developed and validated in Europe and the US has not been applied in developing countries (Bruton *et al.*, 2010; Hoskisson *et al.*, 2011). Consequently, it is vital to explore whether the findings generated in the developed economies can be replicated in the developing context (Giacomin *et al.*, 2011).

This study aims to investigate the effect of EE on the relationships between individual and institutional factors and EI. This proposition is based on two reasons. Firstly, based

on reviews of extant literature, scholars indicate the need to explore if, why and how EE and its impact may differ in different learning contexts and with different individuals (Rideout and Gray, 2013; Wang and Hugh, 2014; Cope, 2005; Fairlie and Holleran, 2011; Liñán, 2008; Fayolle and Liñán, 2014) ^[17, 13]. It would be enlightening to study EE and its interaction with contextual and individual factors. Secondly, EI is incorporated in many studies even when research coverage has not been extended to EE (BarNir *et al.*, 2011; Birdthistle, 2008; Davey *et al.*, 2011; Levenburg *et al.*, 2006; Wu and Wu, 2008). For instance, Luethje and Franke (2003) establish that individual factors and some elements of the entrepreneurial environment are positively associated with EI. Therefore, it would be worthwhile to go a step further to explore the role EE plays in this process.

Building on Shapero and Sokol (1982) ^[25] and Azjen (1991), Luethje and Franke (2003) propose a model that examines factors influencing EI (See Figure 1 below).

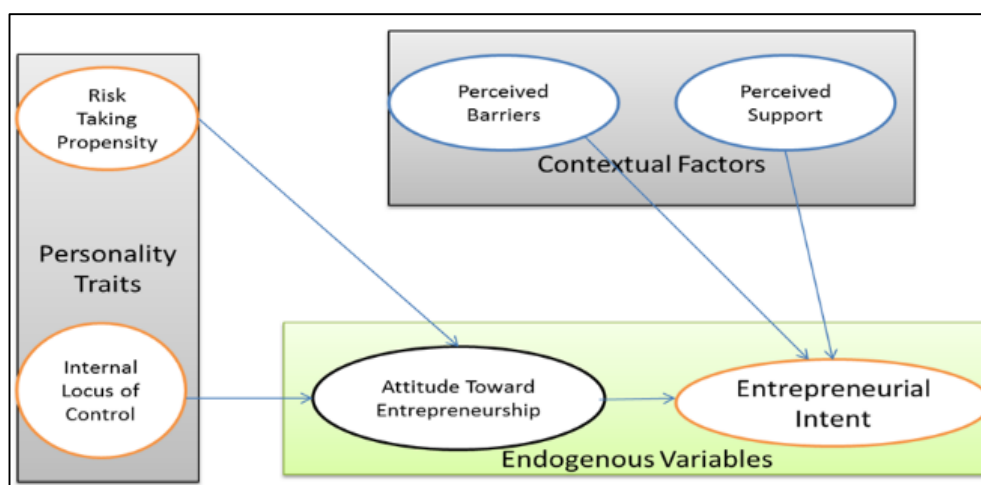


Fig 1: Luethje and Franke (2003) Entrepreneurial Intention Model

The major advantage of their model is that it integrates, though not comprehensively, some elements of trait theory, contextual factors and the basic EI model to investigate the combined effect of entrepreneurial traits, perceived barriers and support factors on EI. However, their model neither incorporates the influence of entrepreneurial self-efficacy (Nabi *et al.*, 2010) nor the influence of EE on EI. In addition, their model does not capture a wide range of institutional and individual factors. The current research adopts and extends the themes in Luethje and Franke's (2003) model and attempts to investigate whether EE intervenes in the impact of individual and institutional factors on EI. Based on the foregoing discussion the following propositions are put forward

Proposition 1: Relevant individual factors lead to entrepreneurial intention

Proposition 2: relevant institutional factors influence entrepreneurial intention

Proposition 3: entrepreneurship education intervenes in the effect of individual and institutional factors on entrepreneurial intention

3. Research Design

To empirically explore the foregoing propositions, the current study adopted a qualitative (narrative) research design. It was believed that this design would provide a deeper and broader understanding of the under-researched

issue of the interconnectedness of education, individual and institutions factors on business start-up intention, especially in the under-researched Zambian context (Fielding and Fielding, 2008; Fielding, 2012; Stevenson and Jarillo, 1990; van Burg and Romme, 2014; Creswell, 2014).

The reasons for this choice were three-fold. Firstly, scholars indicate that quantitative research can only identify ('what') relationships between variables but cannot provide an in-depth rationale (Gartner, 2010; De Clercq *et al.*, 2011). For an in-depth understanding of answers to 'how and why' questions in under-research topics and contexts, qualitative research is required (Wang and Chugh, 2014, p.41; Creswell, 2014; Morse, 1991). To facilitate qualitative research, insights based on the knowledge and experiences of relevant stakeholder groups were sought through the in-depth interviews, as a research method. The interviews were facilitated by a semi-structured questionnaire as a data collection instrument. One advantage of interviews is the likelihood of collecting affluent information, as well as allowing the interviewer to clarify any responses. However, one disadvantage is the limited number of interviews one can have due to various resource constraints (Colombotos, 1969; Creswell, 2014; Novick, 2008; Opdenakker, 2006). Qualitative research has not been intensively used in studies investigating the effect of EE on EI.

To execute this design, the interviews were conducted from February to April. A non-probability purposive sample of 13

participants ensured a mix representing the key stakeholder groups (see Table 1). It was believed that the mix of interviewees would provide a more comprehensive assessment of the entrepreneurial environment and the factors influencing EI. After designing the semi-structured interview

questionnaire based on the literature review, the instrument was piloted with research active experts for content validity. The questionnaire was revised based on comments from these specialists. This was necessary to ensure that the questions were clear and appropriate to address the research objectives.

Table 1: Profiles of Interview Participants

Age	Gender	Participant	Affiliation/ Organisation	Qualifications/ Degree enrolled
26	Female	Student	Private University A	BA Business Administration
34	Male	Student	Public University B	BCom Entrepreneurship
33	Female	Student	Public University B	BCom Entrepreneurship
24	Male	Student	Public University C	BA Business Administration
25	Male	Student	Public University C	BA Business Administration
22	Female	Student	Public University C	Bsc Agro Forestry
32	Male	Student	Public University C	BSc Wood Science and Technology
50	Male	Lecturer	Private University A	BA and MBA
37	Male	Lecturer	Public University B	Bsc and MBA
58	Male	Senior Lecturer	Public university C	BA, MBA, PhD
32	Female	Practitioner - Regional Manager	Public Support Institution D	BSc and MBA
46	Male	Practitioner - Director	Public Support Institution E	MA/MBA
40	Female	Practitioner - Regional Manager	Non-Profit Support Institution F	BBA, Dip. Acc

After transcribing the interviews and once respondent validation was obtained, Nvivo was used to analyse the data. The coding approach was based on two considerations: i) the themes identified in the literature review; and, ii) new themes suggested by the interview data.

4. Key Findings

Based on the primary research findings from the 13 interviews, as depicted in figure 2 which was generated from interview transcripts, the study finds empirical support for the propositions put forward that individual and institutional

factors influence the perception that a business start-up is worthwhile (desirable) and that it is viable (feasible). Perceptions of feasibility and desirable then influence business start-up intention. The findings further show that individual and institutional factors indirectly influence EI through their impact on the effectiveness of EE. This means that relevant individual and institutional factors influence both the interest (uptake) and level of effort in EE. These influence the level of knowledge and skills acquired through EE. Thus the effect of EE should be evaluated in conjunction with factors at individual and institutional levels.

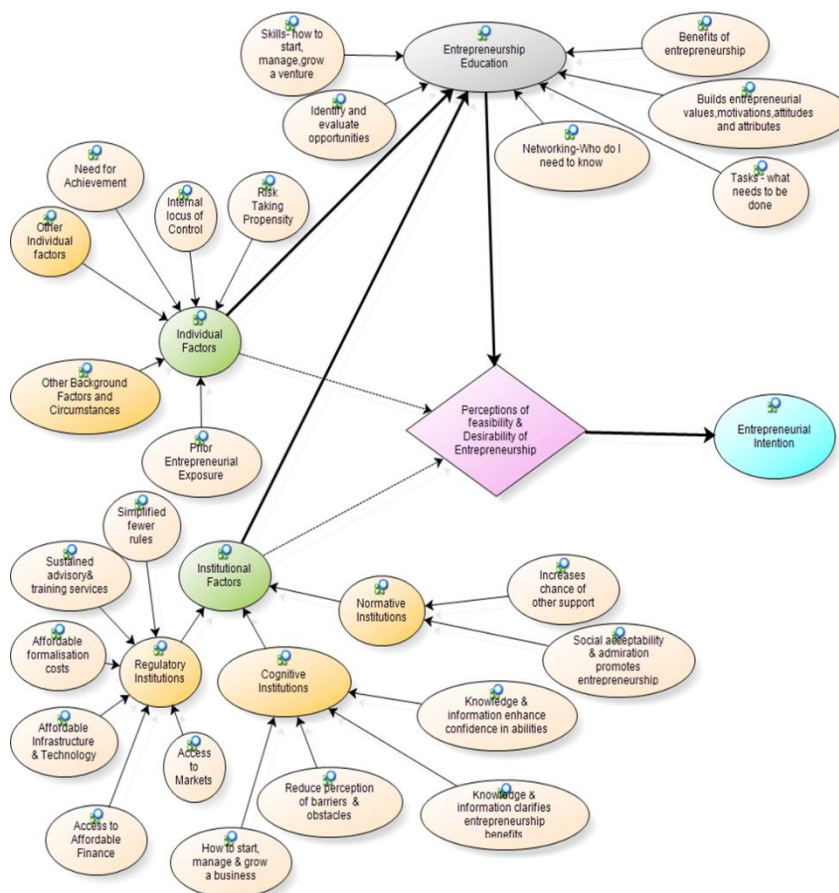


Fig 2: Overview of Qualitative Research Findings on Influences on EI

In a nutshell, the conclusions are twofold. Firstly, individual and institutional factors influence EI via perceived feasibility and desirability of entrepreneurship. Specific elements of the individual and institutional factors are involved. Concerning individual factors, major influences include the need for achievement, risk-taking propensity, locus of control and prior entrepreneurial exposure. These influence perception that entrepreneurship is a valuable undertaking and that it is possible.

“...from my experience in interacting with entrepreneurs that come to our institution to access various support facilities, I have observed prominent personal characteristics among these entrepreneurs; the characteristics include risk-taking tendency, appetite to achieve something and the desire to be independent in life...the desire and belief to determine their destinies and future...wanting to be one's boss...such people believe in their abilities and are attracted to the rewards of business.” Practitioner 3.

The major institutional factors include the normative, cognitive and regulatory institutions. While the perception of low job prospects in the labour market may lead an individual to consider starting a business, the evidence suggests that its influence is limited. This is because it may not necessarily lead to EI or successful start-up if perceived feasibility is low. This means that although lack of job opportunities may be a trigger, other factors that affect feasibility and desirability may be more important. These findings show how institutions affect individuals' cognition and EI; institutions influence the perception that a business start-up is worthwhile and viable. Hitherto institutions have been conceptualised and investigated as determinants of entrepreneurial activity at the macro level (Bruton *et al.*, 2010; Wicks, 2001; De Clercq *et al.*, 2011; Linan and Fayolle, 2014) ^[13].

“...from experience, I can say that government and other institutions' support affects the intention to start a business in many ways but mainly by reducing barriers. Therefore, for would-be entrepreneurs, the availability of support makes them begin to think that a business start-up is achievable. I consistently noticed that there are individuals who started their businesses because assistance for start-ups became available from our institution. In other words, these individuals would not have started if support was not available.” Practitioner 2

Secondly, EE has an intervening role in the relationships between EI and its individual and institutional determinants. This entails that individual and institutional factors influence the effectiveness of EE i.e. level of entrepreneurship knowledge and skills acquired through EE. The effectiveness of EE, in turn, influences EI through perceived feasibility and desirability. This means that institutions drive people to EE; institutions make people realise the importance of entrepreneurship and this leads to interest, favourable attitude, and effort toward EE. Potvin *et al.* (2014) indicate that the level of interest and attitude in education influences effort and performance in science education. This affects the effectiveness of EE. The effectiveness of EE then affects feasibility and desirability perceptions. Individual factors also influence zeal, effort and receptiveness toward entrepreneurship and EE. This affects the effectiveness of EE

which in turn influences EI via perceived feasibility and desirability.

“I think that entrepreneurship education enables individuals to understand their environment better and how that environment would influence success or failure for a prospective start-up. Therefore, students become more aware of the support or lack of support in the environment from various stakeholders. However, the environment affects the extent to which they believe entrepreneurship is important and worthwhile. For me, this perception affects my interest and intensity of involvement in the entrepreneurship module. Ultimately, this affects the extent to which one learns how to start and manage a business and the extent to which they believe that entrepreneurship is worthwhile. In the end, I think it will affect the business start-up decision.” Educator 2

“Available support currently includes access to capital from CEEC and microfinance institutions though the latter prefer dealing with salaried employees. But most, if not all, available debt finance requires collateral. So it is not easy for someone who cannot meet these conditions, especially us young ones at the start of our careers. There are no specific places where one can go for business advisory services in Zambia.... Because of such challenges, many of my fellow students have low interest in becoming an entrepreneur and in entrepreneurship training...So even if I receive training on how to start and run a business, the extent to which I think I have acquired enough knowledge and skills to successfully start a business is hampered by these challenges in the environment.” Student 6

“Training helps individuals become more aware of their environment from a business point of view. It also highlights how to identify the opportunities and support in the environment and how to benefit from the available support. But unsupportive environment affects the level of interest and effort in the training. Now if the environment is unsupportive, it will adversely affect how the individual applies himself/herself during the training and this would affect the extent to which the individual thinks that he/she has learnt how to start and manage a business through the training. It will also affect the thinking about whether a business start-up is worth it and possible. So for me, it is clear that we need to improve the support in the environment and offer training for us to promote entrepreneurship.” Practitioner 2

Lastly, some scholars suggest that EE and its impact may differ in different learning contexts and with different individuals (Cope, 2005; Wang and Hugh, 2014; Rideout and Gray, 2013). Moreover, De Clercq *et al.* (2011) recommend that future studies should investigate combinations of individual and institutional factors' influence on the perceived feasibility to start a business. However, hitherto, no empirical study has developed a conceptual model to reflect these suggestions. Clearly, the results in this study have shown that individual and institutional factors are the primary predictors of EI. The role of EE is to provide additional avenues/mechanisms for individual and institutional factors to influence EI.

5. Conclusion and implications

LeCompte and Goetz (1982) suggest that internal validity considers whether there is a good match between the researcher's observations (data) and the theoretical ideas they develop. Internal validity is a particular strength of qualitative research because transcripts of interviews, especially if they are confirmed by the participants as was the case in this study, provide a basis for checking the level of congruence between concepts and observations. External validity refers to the degree to which the findings can be generalised across a social setting (Guba and Lincoln, 1994; LeCompte and Goetz, 1982; Lincoln and Guba, 1985; Lincoln and Guba, 1986). Lecompte and Goetz (1982) argue that, unlike internal validity, external validity presents a problem in qualitative research because of the tendency to employ small samples. In this study, the sample for the qualitative research represented a diverse range of stakeholders in the social setting. A sample of 13 participants still presents an external validity problem (Cook, 2008). Future research could test the proposed model for external validity.

The foregoing limitation notwithstanding, the paper makes important contributions. Given its contribution to the economy, the changing employer expectations and the increasing problem of graduate unemployment, there is a growing need to understand the factors that contribute to increasing entrepreneurship. EI is critical in the entrepreneurial process since empirical evidence shows that individuals with EI are more likely to start their own businesses (Bird, 1988; Bird, 1992; Henley, 2007; Kautonen *et al.*, 2013)^[5, 6, 16]. The small but growing body of literature on the influence of EE on EI shows that findings are sometimes contradictory to each other. Apart from the scarcity of studies from developing countries on EE and EI, there is a shortage of studies investigating whether EE has an impact on relationships between EI and its individual and institutional determinants (Rideout and Gray, 2013; De Clercq *et al.*, 2011; Ertuna and Gurel, 2011; Krueger, 2009; Fayolle and Liñán, 2014)^[13]. Furthermore, research on the influence of EE, individual and institutional factors on EI has grown in isolation from each other (Fayolle and Liñán, 2014)^[13]. There is also a shortage of empirical studies investigating the influence of a country's institutional profile of entrepreneurship on EI (Bruton *et al.*, 2010; De Clercq *et al.*, 2011; Engle *et al.*, 2011).

Responding to the foregoing knowledge gaps, based on qualitative research in the under-researched Zambian context, this study has developed a conceptual model showing that the effect of EE on EI should be evaluated in conjunction with individual and institutional factors. Firstly, EI is primarily a function of the perceived feasibility and desirability of entrepreneurship. Secondly, individual and institutional factors influence the perceived feasibility and desirability of entrepreneurship in two ways: directly and indirectly via EE. Lastly, the findings derived suggest that, to promote graduate entrepreneurship, multifaceted and concerted efforts will be required from policymakers (to help shape institutions), practitioners (to devise and implement collaborative support mechanisms), educators (to design and deliver appropriate EE content and pedagogy) and scholars (to evaluate and develop knowledge). This calls for stakeholders to initiate, develop and sustain entrepreneurial ecosystems that are non-existent in Zambia. An entrepreneurship ecosystem refers to the elements – individuals, organizations or institutions – outside the individual entrepreneur that are conducive to, or

inhibitive of, the choice of a person to become an entrepreneur or the probabilities of his or her success following launch. A vibrant ecosystem should exhibit increasing density, fluidity, connectivity and diversity among key players (Stangler and Bell-Masterson, 2015). Indeed strategic alliances are no longer an option to effectively link government policy, regulatory framework and infrastructure; funding and finance; supportive culture; local and global markets; universities as catalysts, education and training; workforce and human capital; and, mentoring, advisors and supports systems (Mazzarol, 2014).

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