

**Cultural predictions of entrepreneurial orientation and the moderating role of  
entrepreneurial competencies on graduate entrepreneurial intentions:  
A cross-sectional survey of East Africa**

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## DECLARATION

This thesis fully represents my own work, both in concept and execution.

Signed by candidate

Isaac Wasswa Katono

August 2019

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## LIST OF ACRONYMS

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AMB:	Ambiguity intolerance
AVE:	Average variance extracted
CFA:	Confirmatory Factor Analysis
CFA:	Confirmatory factor analysis
CO:	Cultural orientation
COSTECH:	Tanzania Commission for Science and Technology
CR:	Composite reliability
EFA:	Exploratory factor analysis
EI:	Entrepreneurial intentions
EO:	Entrepreneurial orientation
GoK :	Government of Kenya
ILO:	International Labor Organization
IND:	Independence
INT:	Interdependence
KIU:	Kampala International University
LGO:	Learning goal orientation
MAS:	Masculinity
nACH:	Achievement motivation
PBC:	Perceived behavioral control
PCA:	Principal component analysis
POW:	Power distance
SEM:	Structural equation modeling
STEP:	Student Training for Entrepreneurship Promotion
TPB:	Theory of Planned Behavior
UA:	Uncertainty avoidance
UBOS:	Uganda Bureau of Statistics
UCU:	Uganda Christian University
UDSM:	University of Dar es Salaam
UON:	University of Nairobi

## ABSTRACT

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This research project examines a theoretical gap (impact of culture on entrepreneurial orientation EO) to try and mitigate a practical problem (unemployment) among graduates in three East African countries: Kenya, Tanzania and Uganda. Unemployment would be mitigated if only graduates embraced entrepreneurship by starting their own business projects, and many governments have encouraged their youth/graduates to do this. Unfortunately, graduate student interest in entrepreneurial activities in many countries in Africa is very low, and the three study countries are no exception to this trend. While many explanations have been advanced for this phenomenon, a key theoretical gap left unattended in entrepreneurship research is the way in which culture impacts upon EO and how this affects entrepreneurial intention (EI), yet EO is often considered the most important variable in the formative stage of a given project. A close look at how culture influences EO is important because EO is unexplainable without considering the socio-cultural framework in which it is embedded, since it can be supportive or a hindrance to entrepreneurship in different contexts. Thus the key question which this study tries to address is: ‘Does culture constrain the development of a strong EO, eventually leading to low start-up in this region?’ Specifically, can the low graduate start-up in these countries be explained by the impact of five cultural orientation dimensions (ambiguity intolerance, power distance, masculinity, independence and interdependence) and ability perception variables (achievement motivation and learning goal orientation LGO) on two variables of EO namely risk taking and proactiveness? How does gender affect these relationships? Besides gender, this study also sought to know the level of prevalence in the study population of three other important culturally influenced variables in entrepreneurship literature namely experience, fear of failure and modernity in order to throw more light on the study problem. In particular, given that individuals with a modern outlook are somehow liberated from firm cultural norms, this study sought to establish whether students with a more modern outlook differ from those with a less modern one in terms of the study variables. Further, does optimism another important culturally inclined characteristic of entrepreneurs moderate the relationship between EO and entrepreneurial intention? Some authors argue, however, that culture does not matter; rather,

what matters are the entrepreneurial competencies of an entrepreneur. Hence another major question addressed in the current study is to what extent do entrepreneurial competencies (such as knowledge/networks) moderate the relationship between EO and entrepreneurial intention? Using the theory of planned behavior (TPB), upper echelons theory and image theory, this study seeks to address these questions based on a pragmatic paradigm and thus a mixed methods approach in two phases. Phase one of the study was qualitative consisting of non-structured interviews and conversations with various stake holders and is the basis upon which the study instrument was refined. Phase two was quantitative, utilizing a cross-sectional survey research design based on a non random sampling to gather data from finalists in business faculties in three public and two private universities in the study countries (N=1086) during their classes. Data analysis consisted of three phases, comprising ten steps. Phase one was more of a preliminary analysis and consisted of five steps: Generation of descriptive statistics such as frequencies, percentages, and normality tests in step 1, T-tests to gauge the prevalence of experience, fear of failure, and modernity as well as a MANOVA to gauge the prevalence of the cultural dimensions in each study country in step 2, Exploratory factor analysis (EFA) by Varimax/promax rotation to examine the factor structures of the study dimensions in step 3, followed by examination of validity (construct validity, discriminant validity) and reliability for all study instruments (alpha and composite reliability, CR) in Step 4, while step 5 confirmed the factor structure of the measures using confirmatory factor analysis CFA (Lisrel 8.8). The second phase utilized structural equation modeling (SEM) based on latent variables (using AMOS 23) to first estimate a CFA model, followed by a structural baseline model for all data combined (omnibus model) in step 6. This was followed by fitting the baseline model into each country data set in step 7. In step 8, data was divided by gender into male and female samples and by modernity into low and high modernity groups and the baseline model was fitted into each of these four data sets. This was followed by invariance tests between the gender sets and modernity sets as a basis for their meaningful comparison (step 9). The third phase utilized the process macro in SPSS (step 10) to conduct the moderation analysis. Study findings indicate that in all three countries, only 50% of the respondents had some sort of start-up experience. A third (31%) of the students in the three countries indicated that fear of failure would prevent them from starting a business, while the rest indicated that it would not. Further, students who do not regard fear of failure as a barrier to entrepreneurial activities scored significantly higher on

proactiveness, knowledge, achievement motivation and modernity in all the three countries, while in at least two of these countries, these people scored significantly higher on risk taking, networking and learning goal orientation. This finding confirms that fear of failure is an important barrier to graduate entrepreneurship in this region. Turning to the structural models in SEM, findings indicate that the low start-up rate in these countries can be attributed to the negative impact of ambiguity intolerance (the most problematic variable), power distance, and lack of an optimistic bias as well as possible negative attitude towards those with an independent cultural orientation. However, Independence and Interdependence support EO, in agreement with researchers who assert that both cultural variables are good for entrepreneurship. Theoretically, the study makes an extension of the TPB since achievement motivation predicts intention in all study samples (apart from Kenya and Tanzania). In terms of gender, there are no significant differences on the reported levels of risk taking; however females score significantly higher on proactiveness. Further structural models indicate that males are more achievement oriented than females, while the low modernity group seems to be more entrepreneurial than the high modernity group. Lastly, networks and knowledge moderate the relationship between risk taking/proactiveness and intention, while optimism does not. The study calls for a revision of the curriculum to include tolerance for ambiguity, proactiveness and autonomy courses in entrepreneurship education as well as a change in the mode of delivery of this subject. A transformation in the education systems of the three countries is needed to produce critical thinkers and to introduce entrepreneurship early in the education system to make everyone appreciate entrepreneurship, thus nurturing an entrepreneurial culture.

## CHAPTER ONE: INTRODUCTION

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### 1.1 Background

High graduate unemployment has not been accompanied by a corresponding surge in graduate start-up, and this paradox remains unexplained in many countries in the world. While many studies have suggested various explanations for this anomaly, what they have ignored is the impact of cultural values, norms and ability perceptions on student entrepreneurial orientation (EO) and how this affects their entrepreneurial intentions. This matter deserves attention since in the start-up phase entrepreneurial orientation may be the most important variable (Frese, 2009). Despite the growth of entrepreneurship literature in public policy, socio-cultural factors remain largely understudied (Thornton, Ribeiro-Soriano, & Urbano, 2011) yet culture will either support or negate the development of a firm entrepreneurial orientation in a given society (Lee & Peterson, 2000). In order to examine the above paradox, and based on the Theory of Planned Behavior (Ajzen, 1985), Upper Echelons Theory (Hambrick & Mason, 1984) and Image Theory (Beach & Mitchell, 1987), this cross-sectional study of university students in Kenya, Tanzania and Uganda seeks to answer the question ‘Does cultural orientation constrain the development of a firm EO, thus giving birth to low graduate entrepreneurial intentions in East Africa?’ Put differently, can the low rate of graduate start-up in these countries be explained by the impact of cultural orientation on EO? Further, can other explanatory (grouping) variables like experience, fear of failure and modernity also throw light on this matter?

To address these questions, a research model based on Kollmann and Kuckertz (2007), Lee and Peterson (2000), as well Kreiser, Marino and Weaver (2002), is constructed and tested, which model is comprised of three major sections. The first one focuses on the impact of cultural orientation variables (ambiguity intolerance, power distance, masculinity, independence and interdependence) on two dimensions of EO namely risk taking and proactiveness. Also examined here is the level to which correlates of self-efficacy (e.g. achievement motivation and learning goal orientation) influence risk taking and proactiveness. The second section of the study model verifies whether risk taking and proactiveness have an impact on entrepreneurial intentions. The relationships in these two sections are examined at various levels, i.e. at an omnibus level (whole sample), by country, and by gender, since gender differences in

entrepreneurial proclivity worldwide have gone largely unexplained. Given that low or high modernity changes people's attitudes and values, the impact of modernity on the study variables is also examined for the first and second sections of the study model. In the third section, the study model focuses on whether entrepreneurial competences (knowledge and networks) and optimism moderate the relationship between EO (risk taking and proactiveness) and entrepreneurial intentions. The current study employs a mixed methods approach (Hunt, 2011). Following a qualitative phase in which the study is put into context and the study instrument refined, data is collected in the second phase (quantitative ) from finalists in business faculties in five universities in Kenya, Tanzania and Uganda during class. Data analysis is carried out in ten steps, using a variety of analytical techniques. Specifically, the first five steps carry out a preliminary analysis, while the last five steps carry out hypothesis testing.

Following this introductory section, the first chapter examines the study problem (paradox) in each study country, highlights the theoretical study gaps, deals with model specification by presenting a brief background of each of these study variables, and closes with a presentation of the study model, objectives and a rationale of the study. The second chapter presents the theoretical framework, reviews literature on the study variables and motivates the study hypotheses. The third chapter presents the study/research design, data collection methods, normality tests, common method bias issues, study measures, reliability and validity issues (exploratory factor analysis EFA and confirmatory factor analysis CFA) and lastly presents the data analysis techniques used for the study. The fourth chapter presents the findings starting with results from the qualitative study, descriptive statistics, as well as model evaluation results starting with the omnibus model, individual country models, gender and low / high modernity group models. The chapter ends by presenting moderation results. The fifth chapter discusses and synthesizes the study findings, while the sixth one concludes the study.

### **1.1.1 Entrepreneurship and entrepreneurial orientation**

Entrepreneurship is defined in many ways by different scholars (Baum, Frese, Baron, & Katz, 2007) and this definitional discrepancy is a hindrance to the emergence of a universal conceptual model of entrepreneurship (Shane & Venkataraman, 2000). According to Thornton (1999, p.20) entrepreneurship is the “*creation of a new organization which occurs as a context- dependent, socio and economic process*”. This definition is a combination of the emphasis of Gartner

(1988), that is starting an enterprise, Low and Abrahamson (1997) and Reynolds (1991). However, (Shane & Venkataraman, 2000, p.218) present a more elaborate definition of the field of entrepreneurship as *“the scholarly examination of how, by whom and with what effects opportunities to create goods and services are discovered, evaluated and exploited”*. This process-oriented definition anchors entrepreneurship on the identification of new opportunity, and acknowledges the role of the people who identify, appraise and exploit such opportunities. Acceptance of this definition by entrepreneurship researchers lends credence to the fact that some individuals embrace entrepreneurship through spotting and exploitation of opportunity, while others cannot. To emphasize the importance of the context in the entrepreneurial process, Shane and Venkataraman (2000, p.218) add *“It is improbable that entrepreneurship can be explained by reference to a characteristic of certain people independent of the situations in which they find themselves”*. This definition rhymes with entrepreneurial orientation as defined by Lumpkin and Dess (1996) and is the major reason why it is used in the current study. Lumpkin and Dess (1996) draw a line between the entrepreneurial act and the entrepreneurial orientation construct. They view entrepreneurship as new entry, or formation of a new venture, uplifting one in existence, or improving a corporation through in-house corporate maneuvers (Burgelman, 1983). Conversely, *“EO represents key entrepreneurial processes that answer the question how new ventures are undertaken, whereas entrepreneurship refers to content of entrepreneurial decisions by addressing what is undertaken”* (Lumpkin & Dess, 2001, p. 432). In other words EO is a summation of *“the processes, practices and decision-making activities leading to new entry”* (Lumpkin & Dess, 1996, p.136).

### **EO dimensionality**

Entrepreneurial orientation is *“an omnibus variable as it includes a number of different constructs”* (Frese, 2009, p.460). Some researchers assert that an entrepreneurial orientation is composed of three dimensions, i.e. innovativeness, risk taking, and proactiveness, which can be combined into one dimension to indicate the strategic direction of the firm (Covin & Slevin, 1989). In a study of small firms, Covin and Slevin (1989 p.79) note *“although the items (in risk taking, innovativeness and proactiveness) focus on different aspects of strategic posture, they are empirically related and constitute a distinct uni-dimensional strategic orientation”*. This is the uni dimensional view of EO. However, other authors such as Lumpkin and Dess (1996) argue

that besides risk taking, innovativeness and proactiveness, an entrepreneurial orientation consists of two additional constructs namely autonomy and competitive aggressiveness and that each of these five dimensions plays its own unique role in influencing firm performance. This is the multi-dimensional view of EO. Lumpkin and Dess (1996) further argue that the dimensions of EO vary autonomously of each other depending on the context, that not all the dimensions of an entrepreneurial orientation may be always present, and that configurations of entrepreneurial orientation may differ in various country settings and cultural contexts as well as in different groups of people, such as student and non-student samples. The current study follows the multi-dimensional view of EO and focuses only two of the EO dimensions (risk taking and proactiveness). This is because “*studies that adopt the multi-dimensional view tend to focus on only two dimensions of EO*” (Putniņš & Sauka, 2019, p.2). The rationale is that including three EO variables in a study for instance “*would be cumbersome and complex*” (Lumpkin & Dess, 2001, p. 431). Further proactiveness is a less studied variable in the literature (Lumpkin & Dess, 2001) thus it choice for inclusion in the current study instead of innovativeness. The next three paragraphs attempt to define the dimensions of an entrepreneurial orientation.

### **Innovativeness, autonomy and competitive aggressiveness**

An innovation is defined as an idea, a product, process or system that is perceived as being new to an individual (Vakola & Rezgui, 2000), and innovativeness refers to the extent to which a person brings forth or accepts innovations earlier than other people hailing from the same society (Rogers & Shoemaker, 1971). From a socio-cultural perspective and at an individual level, autonomy refers to an independent self-construal (Markus & Kitayama, 1991) and the inclination to move toward the attainment of own objectives views and desires (Assor, Kaplan, & Roth, 2002). Research shows that autonomy (not financial gain) is often given as the rationale for initiating a business venture (Shane, Locke, & Collins, 2003). Lumpkin and Dess (1996, p.148) describe competitive aggressiveness as “*a firm’s ability to directly and indirectly challenge its competitors, to achieve entry or improve its position*”. The ability of each of these dimensions to influence the nature and realization of the objectives of the new venture depends on many factors such as the external and internal environments as well as the characteristics of the founder manager (Lumpkin & Dess, 1996). The next section presents the description of proactiveness and risk -taking and possible relationship to entrepreneurship.

## **Proactiveness**

Proactiveness is an important variable given that it has more to do with the implementation phase of entrepreneurship (Lumpkin & Dess, 1996). However, proactiveness has not attracted much attention from entrepreneurship researchers (Kreiser et al., 2002). At the firm level, proactiveness refers to the taking of action to pursue emerging opportunities as well as entering new markets (Lumpkin & Dess, 1996). Proactive firms take advantage of their environments, influence events, in some cases create demand (Lumpkin & Dess, 1996) and are usually the first in the market (Lumpkin & Dess, 2001). For this reason, proactiveness is a response to opportunities. At an individual level, proactive people take initiative and do all they can to ensure the success of their projects (Lee, & Peterson, 2000). They recognize opportunity, take action and are persistent (Crant, 2000). In relation to this Crant (1996) showed that a positive relationship exists between proactiveness and intent to start a business. Proactive behavior has been established to be correlated with variables which are important for entrepreneurship, for instance self-efficacy (Frese & Fay, 2001). Proactive people are autonomous in character and believe in their capacity to meet desired targets (Crant, 2000). Other important individual level predictor variables related to proactiveness include knowledge, skills and ability (Frese & Fay, 2001). Therefore, with regard to an entrepreneurial orientation in the nascent stage, a proactive orientation should refer to being able to discern an opportunity in the market, but most important of all, taking steps to seize this opportunity before others do. Conversely, the literature shows that proactive individuals display both collective (Bateman & Crant, 1993) and individualistic values (Tu, Lin, & Chang, 2011). This could explain the mixed findings between individualism and proactive firm behavior where some researchers find a negative relationship (Kreiser, Marino, Dickson, & Weaver, 2010) and others a positive one (Shane, 1993).

## **Risk Taking**

This variable has been linked with entrepreneurial activity by many scholars and generally refers to a perception and willingness by the entrepreneur to embrace risk. Risk perception “*is an assessment of risk inherent in a situation*” (Norton & Moore, 2006 p.216) and the concept of risk assessment is a core tenet of entrepreneurial action. Actually entrepreneurial action was initially premised on the disposition of the entrepreneur to take calculated risks (Brockhaus, 1980).

Therefore, risk-taking behavior is a subject of great debate in the entrepreneurship literature (Zheng & Prislin, 2012). There are three notable positions regarding risk taking. The first is that individuals with entrepreneurial traits embrace more risk than those without these traits; the second is that these two groups of people do not differ in their risk-taking ability (Palich & Bagby, 1995), and the third position is that the first group are more fearful of taking risks when compared to the second lot (Stewart & Roth, 2001). These conflicting positions mean that *“the role of risk propensity in entrepreneurship remains unresolved”* (Xu & Ruef, 2004 p.332). However, Norton and Moore (2006) assert that entrepreneurs evaluate risk in a favorable manner compared to non-entrepreneurs, and that risk assessment is information based. Scholars have shown that culture dictates the way in which risks are taken and in the way they are perceived (Arrindell et al., 2004). Similarly, Hofstede (1980) argues that a culture prescribes measures that check ambiguous situations and these are further strengthened by national institutions, one’s family members or the school environment.

### **1.1.2 Entrepreneurship as an individual phenomenon**

The role of the entrepreneur in entrepreneurship has been dogged by controversy, with different scholars assigning him/her different roles and functions (Kirzner, 1973). While researchers agree on the results of entrepreneurship, there is little consensus on determining what created these outcomes, (Toma, Grigore, & Marinescu, 2014). Despite this controversy, Gartner (1985) characterized entrepreneurship in four dimensions: The first is the personal level, i.e. the person who actually initiates the venture. The view that entrepreneurship is an attribute of individuals is acknowledged by other scholars. For example, Schumpeter (1934) posits that entrepreneurship is more of a role that people play to form new enterprises, while Kollmann and Kuckertz (2007) assert that the entrepreneur is the origin of innovation with the capacity to recognize and exploit new business opportunities eventually starting a new venture. The creation of this new enterprise eventually impacts upon the society in which the entrepreneur lives (Kirzner, 1997). The second dimension is the process, i.e. the steps and activities one takes to launch a new project (Lumpkin & Dess, 1996) and this is where entrepreneurial orientation counts most, as explained later in the study. The third dimension is the venture or firm which is started, and fourth is the context or the factors that surround the entrepreneur as conceptualized by Kostova

(1997). This study combines the first dimension (individual), the second dimension (process), and the last dimension (environment) of Gartner's conceptualization. This approach follows that of Hitt, Beamish, Jackson and Mathieu (2007), who call for different levels of analyses in the study of organizational processes.

### **1.1.3 The importance of entrepreneurship**

The literature provides a vivid account of why entrepreneurship is important in world economies and why many states urge their citizens to pursue the entrepreneurial option (Chowdhury, 2007). Advocacy for this direction is premised on the fact that entrepreneurship is an economic instrument that helps to identify and alleviate inefficiencies in world economies (Baum et al., 2007). Scholars such as Mitra and Matlay (2004) assert that a high level of economic growth in many world economies is a result of start-ups formed by nascent entrepreneurs. Similarly, Audretsch, Carree and Thurik (2001), in an Organization for Economic Development (OECD) multi-country study in what they refer to as the "entrepreneurial effect", find that higher levels of entrepreneurial activity significantly lower unemployment levels. In short, the flexibility of an economy to an ever changing economic environment, economic growth and innovativeness are all premised on entrepreneurs who start a business and endeavor to make it successful (Van Praag & Versloot, 2007).

Wennekers and Thurik (1999) argue that start-ups do not take place at the same rate within industries, thus rates of economic growth differ significantly between countries (Kollmann & Kuckertz, 2007). There is limited knowledge as to why there are varying rates of entrepreneurship in different countries, and why an idea that works in one economy may not work in another (Busenitz, Gomez, & Spencer, 2000). The Penrose (1959) resource-based approach provides some theoretical insights into this matter by asserting that the link between resources and the services derived from these resources is a subjective one. Creativity, information judgment and perceived entrepreneurial possibilities are all viewed differently by entrepreneurs, managers or entrepreneurial teams, depending on their social- cultural context. Consequently it is argued in this research project that the cultural atmosphere majorly accounts for some of the arguments above and may be accountable for the paradox below.

## **1.2 The paradox**

While many countries have taken various steps to encourage graduates to embrace entrepreneurship as a measure of reducing high unemployment levels, this effort has yielded disappointing results as many graduates still shun entrepreneurship as exemplified in the practical problem below.

### **1.2.1 Practical problem**

The scourge of unemployment is a major global concern as the number of unemployed people is on the increase, with the labor market situation for the youth in particular worsening in almost every region of the world, adding up to a total of 74.5 million people (15-24 years) unemployed in 2013 (ILO, 2014). Youth unemployment is a tragic loss to society (Schoof, 2006), is a painful drain to an economy (ILO, 2014) and is a key challenge in Africa (Klasen & Woolard, 2009). Consequently, macroeconomic factors which influence job creation and entrepreneurship are considered as a solution to unemployment and as a viable tool of raising incomes among the youth (Secretariat of the Africa Commission, 2009). These arguments are given credence by the fact that small enterprises provided a large number of jobs in the past decade (ILO, 2014). Therefore the nurturing of an entrepreneurial culture is considered as a panacea for declining economic growth, low productivity, and rising levels of youth and adult unemployment in many countries (Karmel & Bryon, 2002). Of particular concern in this respect and the central thrust of the current study is graduate unemployment and how it can be mitigated by embracing entrepreneurship. Graduate entrepreneurship is defined as the series of actions a graduate takes to launch a business venture as his or her career option (Rwigema & Venter, 2004). According to Ronstadt (1990), graduate entrepreneurship is likely to come with immense benefits to a nation such as improving its competitiveness. Policies aimed at only enhancing quantity of entrepreneurship are questionable (Nicolaou & Shane, 2009), as an increase in the quality of new start-ups (through graduates) is of critical importance (Nystrom, 2009) and desirable. In light of the importance of graduate entrepreneurship, significant consideration is now given to higher education's role in facilitating venture start-up and in drawing graduate attitudes toward entrepreneurial activity in the short and long run (Galloway & Brown, 2002). Entrepreneurship educational programs emphasize qualities such as "*interactive learning, experience based learning, role models and community and business links*" (Peterman & Kennedy, 2003, p.131),

all of which combined should influence a personal desire to undertake entrepreneurship. Despite massive policy and education efforts to boost graduate entrepreneurship worldwide (Mwasalwiba, Dahles, & Wakkee, 2012) the numbers of graduates who embrace entrepreneurial activities are disappointing given the level of effort invested in attracting them into this direction (Al-Samarrai & Bennell, 2003; Mukyanuzi, 2003). Therefore those in charge of policy as well as researchers should seek answers to the question: Why do some individuals pursue possible opportunities for profit, while others do not ( McMullen & Shepherd, 2006; Shane & Venkataraman, 2000 )? This is further explored in an African context in the next section.

### **Graduate entrepreneurship in Africa**

Graduate unemployment rates have soared in Africa (Makoni, 2014; Mingat & Majgaard, 2008). Evidence indicates that many students and recent graduates detest the idea of starting their own businesses (i.e. have very low entrepreneurial intent) despite the fact that many African governments have developed specific youth programs in support of entrepreneurship (Chigunta, Schnurr, James-Wilson, & Torres, 2005). According to Matenge and Razis (2012), in a number of African countries there are many young people who would like to get jobs in the traditional civil service or big companies rather than setting up their own businesses. Ekpoh and Edet (2011), in a study in Nigeria comprising business students, established that the majority of them prefer being employed rather than self-employed. In a similar study in South Africa by Fatoki (2010), the majority of students showed very low entrepreneurial intentions. The South African government greatly acknowledges the role entrepreneurs play in the economy of this country, and in light of this it put entrepreneurship high on the national agenda, through putting in place measures to boost entrepreneurship such as the National Youth Development Agency (NYDA) which was set up in 2008, specifically aimed at lowering graduate unemployment, yet despite such policy frameworks, the level of unemployment among graduates is quite high in this country (Fatoki, 2010). The current study focuses on East Africa (Kenya, Tanzania and Uganda), and a section demonstrating this practical problem in each country is presented below.

## **Kenya**

In Kenya, the graduate labor market has changed considerably in recent years, as there is an upsurge in the number of graduates who find it hard to gain suitable employment. Graduate unemployment is such a serious issue in Kenya to the extent that Ponge (2013, p. 5) states ‘*Graduate unemployment is not unique to Kenya, but a global phenomenon. However, in Kenya it is a tragedy*’. A study led by the University of London estimates that in Kenya across the 25-29 age range, graduate unemployment stands at 15.7% and that it takes up to five years for a graduate to get a job (Makoni, 2014). According to Maina (2011), Kenyan educated youth find the informal sector unattractive, thus their shunning of this sector denies it of much-needed skills, which in turn impedes its growth. Bosire and Etyang (2003) carried out research on business cognitive skills in Kenya and established that the majority of small-scale business people were secondary school graduates or lower. Many Kenyan university graduates view it as humiliating and shameful to be associated with small businesses yet there are very few chances of one acquiring formal gainful employment in this country (Maina, 2011). These findings rhyme those of Kaijage and Wheeler (2013, p. 30) who established that “*self-employment is the last career choice for most graduates in Kenya, with only 3% indicating a preference for this option*”. The paradox is that the possibilities of getting a job after secondary education are low yet these unemployed youth do not embrace entrepreneurship. Unfortunately, despite this paradox, “*entrepreneurship researchers have paid little attention to the study of entrepreneurial attitudes, beliefs and values of Kenyan Youth*” (Maina, 2011, p.2).

## **Tanzania**

The history of this country greatly influences the entrepreneurial atmosphere, thus determining who or who does not become an entrepreneur (Mwasalwiba et al., 2012). Through socialist policies in the 1960s, the then government introduced *Ujamaa*, a political-economic model which espoused the extended family as its value system, reflected the notion that one became a person through the people or the community, and reflected reciprocity and collective effort. The *Ujamaa* policy discouraged private entrepreneurship in favor of government-run,

community-based projects and co-operatives. Having a second source of income besides one's salary was also discouraged (Hyden & Karlstrom, 1993).

The period under socialism left Tanzania in an impoverished state, such that as the 1980s drew to a close, there was a dire need for economic and political reform. After the 1995 elections, the new government started investing in entrepreneurship education and spreading the message that entrepreneurship was the way to go – and this is reflected in various policy documents such as the Tanzania Development Vision (2025) (Planning Commission [PC] 1999). Currently, youth unemployment is a big problem in Tanzania, since the youth constitute 60% of those who are unemployed (Peter, 2013). Of the 700,000 graduates entering the labor market, only 40,000 (5.7 percent) are assured of employment into the formal sector. Thus graduates in this country “*come out of universities as marginal citizens threatened by unemployment in the labor markets*” (Katundu & Gabagambi, 2014, p.841). This state of affairs is alarming because “*despite the efforts by government to create over a million jobs per annum, most graduates stay far above the age of 34 without getting their first job*” (Ndyali, 2016 p.117). Breaking from its history, boosting graduate entrepreneurial activity has been a national priority agenda for quite some time and besides other interventions, entrepreneurship has been embedded in most fields of specialization, at lower and university level (Chiraka, 2012). Nonetheless, follow up studies by Al-Samarrai and Bennell (2003), as well as Mukyanuzi (2003), indicate that the numbers of those who opt for self-employment among recent graduates in Tanzania are declining. In fact Kaijage and Wheeler (2013 p.34) note “*graduate aspirations for self-employment in Tanzania are only 14%*”. In summary therefore, “*there is a general preference for public sector employment over entrepreneurial employment in Tanzania and Kenya*” (Kaijage & Wheeler, 2013 p.44).

In a follow-up study of this problem, a content analysis of graduate entrepreneurs' stories by Mwasalwiba et al. (2012) established that Tanzanian graduates operate in an environment composed of various forces some of which promote entrepreneurship, yet others hinder it.

## **Uganda**

Uganda is in a precarious situation, as thousands of graduates pour into the streets every year in search of jobs. Although up-to-date statistics are scarce, the Ministry of Finance, Planning and

Economic Development (as cited in Kiranda, Walter, & Mugisha, 2017) estimates that the country registers 700,000 new jobseekers a year, yet only 120,000 jobs are advertised annually. Given that in Uganda the youth (18-30 years as per government definition) constitute 23% of the national population and that youth unemployment stands at 13.3% (Uganda Bureau of Statistics [UBOS], 2016/2017), Ugandan authorities urge the youth to embrace entrepreneurial activity besides other job creation strategies (Ministry of Gender, Labour and Social Development [MGLSD], 2001). The paradox in Uganda is the soaring rate of unemployment among educated people, essentially because of lack of competitive skills (Nuwagaba, 2012) yet many universities in the country, both public and private, teach entrepreneurship and other Business courses in their curricula. Despite all these strategies and programs, a close scrutiny indicates that entrepreneurship education has not resulted into a significant number of youth who have opted for entrepreneurship (Omagor & Mubiru, 2014). Langevang, Namatovu and Dawa (2012), in a study based in Kampala, found that overall youth unemployment was 32.2%, while for graduates in particular, the unemployment rate was 36%. Against this background (as in Kenya), in Uganda anecdotal evidence indicates that most entrepreneurs in this country are not graduates and do not even have a high school certificate (Walter et al., 2004). The Ugandan press is rife with stories of people who did not go far in the academic arena but who have become millionaires through entrepreneurship (“Sales girl rises to hotelier”, 2018), while many graduates walk the streets in search of jobs that are very difficult to get because they are in short supply.

### **1.2.2 Theoretical problem**

Evidence in the literature suggests that people structure their career intentions early in life (Low, Yoon, Roberts, & Rounds, 2005). Entrepreneurial intent is defined as “*the self-acknowledged conviction by a person that they intend to set up a new business venture and consciously plan to do so at some point in the future*” (Thompson, 2009, p. 676). To clarify further Thompson adds that “*intent is used in the sense of a conscious and planned resolve that drives actions necessary to start a business*” (p.671). Therefore because entrepreneurial intentions are a precursor to performing entrepreneurial behaviors (Bird, 1988), action cannot take place without intention (Lee & Wong, 2004). Consequently, the low intentionality rate among graduates is of great concern (Wu & Wu, 2008) and is a major research question (Nabi & Holden, 2008).

Many scholars have come up with theoretical explanations of this low graduate entrepreneurial intent; however, most studies have been inconclusive. Some authors attribute this problem to the existence of some constraints in their environments, for example a lack of starting capital (Fatoki, 2010; Nabi, Holden, & Walmsley, 2006), lack of skills (Nwige, 2010), a negative view of entrepreneurship by society (Morrison, 2000), a lack of self-efficacy (Robertson, Collins, Madeira, & Slater, 2003), lack of political will (Salami, 2011), inhibiting legal frameworks and cumbersome government regulations in the business environment (Odd-Helge, Kolstad, & Nygaard, 2006; Orwa, 2007). Other studies that have tried to address this challenge have dwelled on personality factors (Wang & Wong, 2004), instead of environmental factors, while other studies have pointed to fear of failure as the culprit variable (Robertson et al., 2003).

Herrington (2017) acknowledges that fear of failure is a key constraint to the development of entrepreneurship and reports its magnitude in many countries. In particular, Kelley, Singer and Herrington (2011 p. 20) report that *“in factor-driven and efficiency-driven countries, those with the highest fear of failure rates have the lowest intentions to start businesses”*. Lastly but not least, some of these studies are not gender sensitive, yet gender has been shown to be at the heart of discrepancies in career choice (Lent, & Hackett, 1987). To sum up, while there are so many theoretical explanations for the low graduate entrepreneurial intent, researchers seem to have generally ignored the role of entrepreneurial orientation (EO) among students. This gap forms the basis for the major problem under investigation in the current study, as discussed in the next section.

### **1.2.3 Statement of the research problem**

Frese, Brantjes and Hoorn (2002) regard EO as a psychological concept, in the form of an attitude or orientation. Similarly in the current study, EO is viewed both as a psychological construct and as an inter-individual difference variable which stresses the importance of the founders' psychological orientations or individual level characteristics (Krauss, Frese, Friedrich, & Unger, 2005). Conceptually, entrepreneurship is regarded as a product of entrepreneurial orientation (EO), and many authors regard EO as the variable that counts most in the pre-nascent stage of start-up (Kollmann & Kuckertz, 2007). Frese (2009) refers to EO as a central predictor

for start-up activities and “*is a construct used to measure attitude toward entrepreneurship*” (Kollmann & Kuckertz, 2007 p.10). Although many studies have paid close attention to EO and business performance (Wiklund & Shepherd, 2005), the impact of EO on the start-up decision is not clear (Kropp, Lindsay, & Shoham, 2008). This could be because the five entrepreneurial orientation dimensions represent autonomous constructs and may co-vary or vary independently of one another depending on the circumstances as argued by Lumpkin and Dess (1996), therefore their impact on the start-up decision will also vary accordingly.

Following Kostova’s (1997) conceptualization, three institutional profiles make up a country’s environment, namely regulatory (government policies and laws), cognitive (shared knowledge) and normative (culture). While all these dimensions influence entrepreneurship (Busenitz, et al., 2000), culture is particularly important because it can either complement or constrain the ability of a society to form a firm EO (Lee & Peterson, 2000). Entrepreneurship occurs in a social context which influences the entrepreneur, thus without reference to this social context, entrepreneurial orientation cannot be understood (Kollmann & Kuckertz, 2007). In essence, the impact of culture in strengthening entrepreneurial orientation has been acknowledged by many scholars (Marino, Strandholm, Steensma, & Weaver, 2002). Specifically, Lee and Peterson (2000) posit that it is only societies with particular cultural orientations that grow a firm EO and hence witness a surge in entrepreneurship and global economic activities. Unfortunately, assigning the impact of cultural values on each EO construct is a matter of debate (Lee, Lim, & Pathak, 2011) since research findings on the relationship between various dimensions of culture and EO are not in total agreement (Carson, Baker, & Lanier, 2014; Kreiser et al., 2010). An examination of the relationship between culture and EO, is therefore warranted (Marino et al., 2002) hence the current study.

### **1.3 Other shortfalls in entrepreneurial orientation research**

The above controversies notwithstanding, a number of factors complicate the EO – entrepreneurship scenario. First, turning to Sub-Saharan Africa (SSA), there is a dearth of EO-related research in this region. Wales, Gupta and Mousa (2013, p.364), conducted a qualitative review of EO empirical literature and noted that “*there is comparatively little understanding of EO in Latin America, Sub-Saharan Africa... where few studies have been done in the context of these countries.*” Therefore, while many studies have examined student entrepreneurial

intentions/entrepreneurship in East Africa (for example Maina, 2011), a literature search indicates that none of them has specifically addressed the impact of cultural dimensions on entrepreneurial orientation and how this affects student entrepreneurial intentions in this region.

Secondly, while many studies agree on the influence of self-efficacy in entrepreneurship (Robertson et al., 2003), a correlate of perceived behavioral control in the theory of planned behavior and its influence on intention, the role of other ability perception variables such as achievement motivation and learning goal orientation (LGO) on entrepreneurship is shrouded in controversy. For example, while Shaver and Scott (1992) suggest that achievement motivation is a good predictor of entrepreneurship, some other researchers do not depict a correlation between the two (Bonnett & Furnham, 1991). Hence, it is imperative that the impact of achievement motivation and LGO on entrepreneurial orientation is examined in an East African context.

Thirdly, the role of moderating factors on the EO and entrepreneurship relationship has hardly been given the attention it deserves by researchers, thus Rauch, Wiklund, Lumpkin and Frese (2009) call for assessment of moderators in this relationship. Based on this call, the current study examines the extent to which entrepreneurial competencies (knowledge and networks) and optimism moderate the link between EO variables and intention.

Due to the importance of EO in the start of any entrepreneurial venture, many studies have been conducted to compare male and female EO in various cultures. These studies indicate that male and female entrepreneurship is alike in some ways, though notable differences exist (Lim & Enwick, 2013). For example, while Runyoan, Huddleston and Swinney (2006) established that females were ranked high on innovativeness and risk taking compared to men, Lim and Enwick (2013) in a multi-country study (US, Korea, Fiji and Japan), established that significant differences exist on most EO dimensions between genders and across nations. While Kundu and Rani (2004) established that females scored higher than men on EO dimensions, Júnior and Gimerez (2012) detected no differences between the genders when they used the Carland Entrepreneurship Index in Brazil. In a nutshell, while these studies aimed at ascertaining whether genders are significantly different on their reported levels of EO in the various cultural contexts, they did not explore the role the various cultural orientations play on EO by gender. The current study intends to bridge this gap particularly in East Africa where, as the literature indicates the

cultural environment contributes to the gender gap against females. This is in response to a call by Goktan and Gupta (2015) for EO research on gender differences across countries.

Lastly, since most studies on EO have been conducted at firm level, there is a dearth of theoretical and empirical research on entrepreneurial orientation at an individual level of analysis (Kollmann & Kuckertz, 2007), which is unfortunate given that the views and or beliefs of the founder or those at the apex of the organization dictate the direction the firm takes (Dickson & Weaver, 2008). Following this reasoning, Krauss et al. (2005) call for empirical research that embeds individual entrepreneurial orientation in a model in which various relationships can be tested statistically. This research project is in answer to this call.

Having highlighted the main problem areas in EO research, the next section briefly introduces why the impact of values (cultural orientations) and ability perceptions (achievement motivation and learning goal orientation) are deemed relevant to the practical and theoretical problems above. An examination of possible moderators between EO and entrepreneurial intention is presented after this, followed by a brief discourse about gender and entrepreneurial orientation.

#### **1.4 Contextual factors: Culture**

Hofstede (1980, p.25) refers to culture as *“the collective programming of the mind which distinguishes the members of one human group from another”*, i.e. social systems can exist only because people do not behave randomly but are predictable to some degree. This programming *“can be inherited”* (Hofstede, 1980 p.2) or can start early in life, resulting in patterns of behavior that continue over time, thus setting the cultural context. Culture is visualized in a number of ways such as *“symbols, ritual and heroes”* (Hofstede, 1980 p.1). Values are *“broad tendencies to prefer a certain state of affairs over others”* Hofstede (1980, p.19), yet Schwartz (1999 p. 24) defines values *“as conceptions of the desirable that guide the way social actors (e.g. organizational leaders, policy makers, individuals) select actions, evaluate people and events and explain their actions and evaluations”*. A study of values examines individual behavior, while a study of culture, matches societies (Hofstede, 1980), thus whereas one can be both individualistic and collectivist, a country is majorly one of these (Hofstede, 1980). Psychological research demonstrates that values, beliefs and behavior are linked (Freytag & Thurik, 2007); it is prudent to assume that differences in societal cultures in which a given set of values are

embedded also influence behaviors that are exhibited, in addition to the option for self-employment or choosing an employment path (Mueller & Thomas, 2001). Frese and Wang (2005) in their Giessen- Amsterdam entrepreneurship model assert that culture influences many variables that drive entrepreneurship such as knowledge, personality, vision, strategy and the business environment.

#### **1.4.1 The interaction of culture and the environment**

The importance of culture in the economic development of nations is highlighted in many scholarly works and many international change agents are focusing on culture as a resource to be mobilized in the fight against poverty on the African continent (Munene, Schwartz, & Smith, 2000). Similarly, the importance of entrepreneurship in world economies has been explained above, yet not much consideration has been given to the part the socio-cultural atmosphere plays in the development of entrepreneurship ( Hayton, George, & Zahra, 2002; Thornton et al., 2011). Even then, scholars seem to agree that variations in levels of entrepreneurship among nations are better explained by the socio-cultural environment since entrepreneurial activities occur in a social setting (Berger, 1991). Therefore the study of culture is important because differences in behavior in various societies are dictated by culture (Liñán & Chen, 2009). Thomas and Muller (2000, p. 289) posit that “*since entrepreneurship by definition encompasses the initiation of a new venture, frequently outside traditional boundaries, we would expect contextual factors such as culture to have a significant impact*”. In the literature, culture is linked to a number of variables that significantly influence venture creation and performance. Three are considered in the current study namely entrepreneurial experience, fear of failure and modernity. These three are briefly outlined below.

##### **Experience:**

Experience can be defined as “*the experientially acquired knowledge and skills that result in entrepreneurial know how and practical wisdom*” (Corbett, 2007). Experience as a concept can be explained by Upper Echelons Theory (Hambrick & Mason, 1984), according to which theory background characteristics of the manager influence the strategic course of the firm (Sommer & Haug, 2011). The experiences one undergoes are closely linked to the culture in which he/she resides. As Morris, Kuratko, Schindehutte, and Spivack, (2012 p.22) assert “*knowing and doing*

*are interlocked, inseparable and are embedded within the context*". According to Carr and Sequeira (2007), exposure to a prior family business is positively and significantly related to entrepreneurial intentions. Hence prior business experience influences students to become entrepreneurs (Castiglione, Licciardello, Sanchez, Rampullo, & Campione, 2013). Experience is linked to learning goal orientation and achievement motivation in that *"learning and achievement orientation imply seeking feedback and learning from experience as well as showing personal initiative in attempting to learn and achieve"* Krauss et al. (2005 p. 12). Further, researchers concur that prior experience is an important factor in explaining self-efficacy (Baron & Ensley, 2006). In fact, Ajzen and Madden (1986) consider experience to be part of perceived behavioral control (PBC) in the theory of planned behavior (TPB). However, other researchers consider *"an individual's experience with the object of attitude"* (Sommer & Haug, 2011 p.121). Prior experience augments opportunity recognition, and the ability to surmount challenges during the venture creation process (Politis, 2005). However, novice entrepreneurs may not be able to put a given event in proper context (Mitchell et al., 2007), since they may not be able to generalize their experiences accurately (Toft-Kehler, Wennberg, & Kim, 2014). As Morris et al. (2012 p.28) observe: *"Those creating their first venture have little in their backgrounds to prepare them to be entrepreneurs"*. This is most likely the case with young graduate entrepreneurs.

### **Fear of failure**

Culture is a pathogenic agent of fear (Arrindell et al., 2004), meaning that what a nation fears and subsequent actions to stem these fears are all culturally determined. The entrepreneurship literature is full of assertions that *"fear of failure has a significantly negative impact on the probability of becoming an entrepreneur"* (Caliendo, Fossen, & Kritikos, 2009 p.163). In a related argument, Conroy (2003 p.759) contends that fear of failure involves future-oriented apprehension about social evaluation, the threat of appearing incompetent, and the resulting consequences of this social evaluation. Fear of negative social evaluation is a core feature of fear of social anxiety (Clark & Wells, 1995). In light of this observation, cultural views of failure are likely to influence stigmas entrepreneurs face after a failure episode and the career path of self-employment (Vaillant & Lafuente, 2007).

In the current study, fear of failure is regarded as an explanatory (grouping variable), and not an exogenous or endogenous variable. According to Conroy, Willow and Metzler (2002, p.76), *“fear of failure is a factor that can motivate people to reach a high level of performance, or prevent them from actualizing their potential”*. In this case, Conroy et al. assert that fear of failure is related to more negative outcome expectancies, is not related to perceived competencies and is negatively correlated to optimism and hope and this is the view embraced by this study. It was thus important to establish the impact of this variable on start up among the respondents by examining the extent to which it deters them from starting a business by country and for the whole region at large.

### **Modernity**

Modernity is included in the study as an explanatory (grouping) variable and not an exogenous or endogenous variable, to gauge whether students who hold more liberal or modern views are more entrepreneurial than those that are oriented toward a more conservative cultural stance. Gouchi (1976) defines modernity as a syndrome of attitudes and beliefs that include progressivism, secularity, optimism, future-oriented perspectives and a sense of personal efficacy. Other traits of modernity include individual responsibility, social change and new experiences, freedom from regulated hierarchical social norms, as well as promotion of autonomy and the rights of women. People who are modern are receptive to social change, set future goals and objectives, and are optimistic concerning their capacity to deal with present and future challenges (Gough, 1977). Modernity can be referred to as a mental framework which enables one adapt to a constructive stance of social, economic and political development.

### **1.5 Personality variables and entrepreneurship**

Following Schumpeter’s (1911, 1934) clarification of the entrepreneur’s role in economic development, researchers started to look for personality traits uniquely characteristic of the entrepreneur; however, this effort yielded modest success (Brandstätter, 2011), given that it yielded mixed findings. Some studies were able to establish a significant relationship between personality factors and entrepreneurship (Begley & Boyd, 1987), while other studies did not (Brockhaus, 1980). Some researchers even called for a total abandonment of research that

examines personality factors (Gartner, 1988). However, researchers such as Rauch and Frese (2007) argue that it is necessary to examine specific traits and their relationship with business creation and success, instead of examining broad categories such as the big five. This view is supported by Low and MacMillan (1988) who assert that the link between personality traits and business start-up needs to be explicitly conceptualized. For example Rauch and Frese postulate that instead of focusing on conscientiousness, the two components of which as identified by expert judgments are achievement motivation and dependability (Barrick & Mount, 1991; Brandstätter, 2011), it is advisable to focus on achievement motivation which is a task related variable related to entrepreneurship instead of bundling them together, otherwise the true effects will be underestimated with the erroneous conclusion “*that there is a weak relationship between personality traits and entrepreneurial performance*” (Rauch & Frese, 2007 p.358). In fact meta-analyses carried out by various scholars support the importance of personality variables in entrepreneurship (Rauch & Frese, 2007), so the interest in and appreciation of personality research has changed for the better (Brandstätter, 2011). Given this development, including a short but sufficiently reliable measure of the ‘big five’ in any study of individual differences in entrepreneurship, research should be a matter of routine, because there is no doubt that personality traits contribute greatly to the entrepreneurial mind set, entrepreneurial objectives, actions, and achievements (Stewart & Roth, 2007). For this reason, the current study includes the personality variables below.

### **1.5.1 Ability perceptions: Achievement motivation and learning goal orientation**

#### **Achievement motivation**

According to Social Cognitive Theory (Bandura, 1986), self-efficacy is a regulatory mechanism in which people judge their capability to carry out an undertaking and is a key driver of entrepreneurial intention (Ajzen, 1985). The theory posits that psychological factors alter perceptions of self-efficacy, in turn determining actions that an individual takes, for instance which strategies to employ in the face of challenges. In the current study and following Nicholls (1984), achievement motivation is referred to as behavior that demonstrates high ability. Thus achievement motivation is regarded as a measure of ability or actual control, as perceptions of control reflect actual control (Ajzen, 1991) and are suggestive of self-efficacy (Bandura, 1997). Culture figures in everything to do with achievement motivation (Singelis, 2000). First, the

perceived value of “achievement” varies by culture (Trumbull & Rothstein-Fisch, 2011). Second, culture dictates differences in perceptions, thus determining what achievement means in different settings, for example collaborating versus working individually (Salili, 2009). Cultural orientations lead to different values and actions in different cultural contexts (Hofstede, 1980), which suggests that achievement motivation and entrepreneurship are both culturally influenced (Stewart & Roth, 2001). This is consistent with Sagie, Elizur, and Yamauchi (1996) who established that the relative strength of achievement motivation was not identical in the different national samples. According to Barrick and Mount (1991 p.5 ) conscientiousness comprises of “ *personality factors such as persistence, planful, careful, responsible and hardworking which are important attributes for accomplishing work tasks in all jobs*”, therefore achievement motivation as a sub-dimension of conscientiousness, should be an important variable in entrepreneurial activities. As explained above, many studies have been done linking achievement motivation to entrepreneurship with some finding a positive relationship for example Nandy (1973), while others did not (Brockhaus, 1980). This study investigates the achievement motivation–entrepreneurial orientation relationship in cultures other than those from where most entrepreneurship studies have been done.

### **Learning goal orientation**

Learning is a process through which one converts newly acquired experience into permutations of novel and already possessed knowledge (Joy & Kolb, 2009). The capacity to do this is influenced by one’s learning orientation, which is the drive to constantly search for new knowledge (Vande Walle, Brown, Cron, & Slocum, 1999). According to Learning Theory, if an individual acquires new knowledge and is able to incorporate it into already possessed knowledge, then his/her capacity to handle difficult issues and ambiguous situations raises, because an upward revision of the knowledge one has raises his /her ability to come up with better solutions to a problematic situation (Cohen & Levinthal, 1990). Specifically, learning goal orientation (LGO) is a construct that describes the degree to which one endeavors to comprehend a new thing or makes an effort to raise his /her proficiency in doing something (Button, Mathieu, & Zajac, 1996). Nonetheless, with exception of Zhao, Rauch, and Frese (2010) and Baum, Bird, and Singh (2011), many scholars have ignored the LGO dimension and its relationship with EO.

## **1.6 Moderator variables**

Researchers such as Rauch et al., (2009) argue that by simply focusing on the impact of EO on performance, our scope of understanding EO is limited, hence the need to factor in internal and contextual contingent variables in the examination of this relationship. This study therefore puts emphasis on three moderating variables: i.e. knowledge, networks (entrepreneurial competencies), and optimism in order to throw more light on EO and graduate entrepreneurial intentions. The decisions entrepreneurs make are driven by their entrepreneurial competencies, the definition of which is “*underlying characteristics such as generic knowledge and specific knowledge, motives, traits, self-images, social roles and skills which result in venture birth, survival or growth*” (Bird, 1995 p.51). Some researchers (for example McGrath, MacMillan, Yang, & Tsai, 1992) assert that entrepreneurial orientation is associated more with individualistic cultures rather than collective ones. However, Pearson and Chatterjee (2001) posit that both cultural orientations can be successful— what matters are the competencies possessed by a person. If this assertion is correct, then finding the correct combination of these competencies in each context could be the determinant of business success (and not necessarily the cultural orientation). In light of these arguments, the current study takes a close look at the extent to which entrepreneurial competencies and optimism moderate the relationship between EO and intention in East Africa. The sections below briefly introduce the moderating variables.

### **1.6.1 Networks**

To start with, Blesa and Ripollés (2005) assert that the entrepreneur’s network and most importantly the information gained there from influence EO positively culminating in growth of the venture. Besides experiential knowledge, Baron (2000) postulates that networking assists entrepreneurs to obtain more favorable outcomes in their operations. Research shows that networking is a means of raising the required resources, and is thus a core variable in the start-up and development of the firm (Ramachandran & Ramnarayan, 1993).

### **1.6.2 Knowledge**

Knowledge is defined as justified true belief (Becerra-Fernandez & Sabherwal, 2001) and figures highly in entrepreneurship (Sommer & Haug, 2011). The economic value of the entrepreneur’s

personal knowledge (Polanyi, 1962) is a core tenet of the subjectivist theory of entrepreneurship (Penrose, 1959). Experience is an important facet of entrepreneurship, because the knowledge gained there from (experiential knowledge) enables the entrepreneur to properly understand the internal operations and resources of the firm. This type of knowledge is subjective since people confront different situations and thus interpret things differently (Mises, 1998).

### **1.6.3 Optimism**

According to Scheier and Carver (1985), this variable is a predisposition to trust that one will undergo affirmative instead of off-putting encounters in life. Optimists entreat the external view that examines specific causes, while pessimists rely more on the internal view that examines more general aspects (Buchanan & Seligman, 1995 ), hence optimism is a mental attitude that positively evaluates past happenings and affirmative prospects of the future (Leung, Moneta, & McBride-Chang , 2005). Optimism is a characteristic of entrepreneurs (Kahneman, 2011) and is known to positively influence life satisfaction, and indirectly affects a person's self-esteem and ability to relate with others (Leung et al., 2005). Optimistic people view themselves positively than pessimists (Scheier & Carver, 1992), are hopeful and thus have a greater drive to invest in the future (Snyder, 1994), view their limitations as temporary, and are realistic (Scheier, Weintraub, & Carver, 1986). An optimistic bias is culturally determined by whether one has an autonomous or interdependent self-construal, which impacts upon the development of self-enhancement motives (Chang & Asakawa, 2003). Some theorists argue that an interdependent self-construal constrains the development of self-enhancement motives, and for this reason, an optimistic bias is not present or is lacking in collective societies (Kurman, 2003). In light of these assertions, to what extent does an optimistic bias influence entrepreneurial orientation in a collective setting such as the three study countries?

### **1.7 Gender**

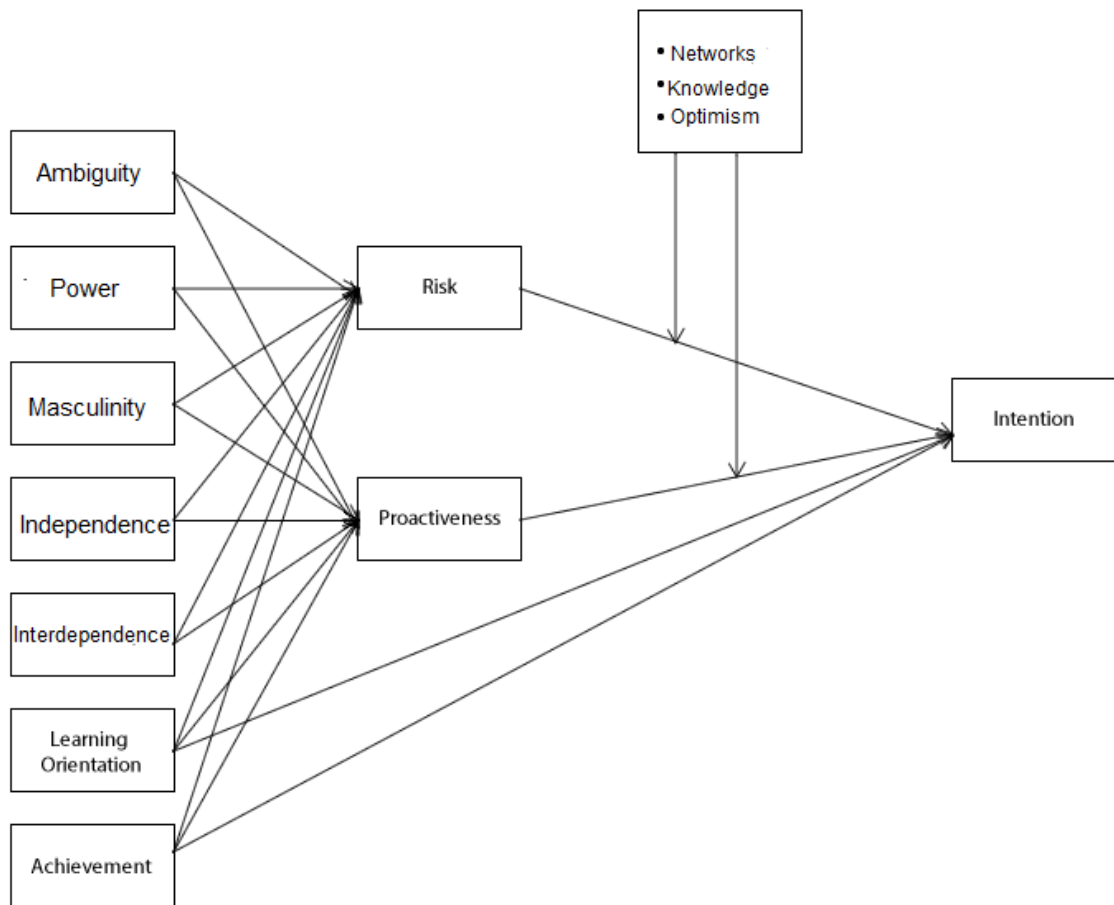
Women are acknowledged as key players in the entrepreneurship arena the world over (Mueller & Dato-on, 2013). It is therefore essential that factors which constrain women entrepreneurial efforts are understood. Unfortunately, relatively less attention has been given to women's propensity towards entrepreneurship (Langowitz & Minniti, 2007). While there is a big variation in the ratio of entrepreneurship for the two genders in many countries (Reynolds, Bygrave,

Autio, & Arenius, 2004), a key concern is that women entrepreneurs are outnumbered by men by a wide margin in many parts of the world.

There are many possible explanations for this scenario, for example Kolvereid, Shane and Westhead (1993) argue that the start-up environment is perceived differently by the two genders. Perceptions reflect the notion that individuals interpret the environment in different ways (Arenius & Minniti, 2005) and include self-perceptions, perceptions of the economic environment including any opportunities for venture start up, and perceptions of the social-cultural context. Entrepreneurship literature relates these social cultural values to the gender gap which constrains women's entrepreneurial efforts, particularly in developing countries (Hagos, 2000). A good example is a study by Langowitz and Minniti (2007) in which they established that national context and culture have an overwhelming impact on the entrepreneurial proclivity of women. Similar arguments have been raised by Santos, Liñán and Roomi (2010), who assert that female entrepreneurial intent and their perception of entrepreneurship were more influenced by the cultural environment compared to men. Taking Uganda as an example, Mirembe and Davis (2001) posit that this country is a patriarchal state in which the female gender is subservient to the male. This subservience is likely to increase the gender gap as it denies women vital resources, thus stifling women's entrepreneurial efforts. Since the nurturance of EO is culturally dependent as suggested by Kollmann and Kuckertz (2007), it is essential to examine the influence of cultural orientation on EO with a gender lens.

### **1.8 The study model**

Following this discourse, the study constructs and seeks to test a culturally based model shown in Figure 1 below. Anchored on Kollmann and Kuckertz (2007), Lee and Peterson (2000), as well Kreiser et al. (2002), who have examined EO in various contexts, the model is comprised of three parts, with the first showing that that cultural orientations, achievement motivation and LGO predict risk taking and proactiveness. The second part of the model shows that proactiveness and risk taking predict intention, while the third part of the model shows that entrepreneurial competencies, namely knowledge and networks as well as optimism, moderate the link between EO and entrepreneurial intentions. This study model is a response to a call by Bruton, Ahlstrom and Obloj (2008), who urge for research that throws more light on to contextual factors that influence entrepreneurial behavior in developing countries.



**Figure 1: The study model**

### 1.8.1 Study objectives

Most research on EO has focused on the firm with an emphasis on firm performance in particular. As a move away from this focus and given the gaps highlighted in the literature, the current study examines the pre-startup phase of the entrepreneurial process and transfers culture from a societal level to an individual level of analysis and the EO construct from a firm level (Lumpkin & Dess, 1996) to an individual level of analysis (Krauss et al., 2005). The decision to start a business may be governed more by the way one perceives the environment

rather than just reality (Krueger & Brazeal, 1994), since actions are often governed by perceptions rather than facts (Timmons & Spinelli, 2007). Given these facts and based on this model, the main objectives of this study are to:

1. Examine the prevalence of start-up experience, fear of failure, modernity and cultural orientation variables among the student population in the three countries.
2. Examine the impact and directionality of cultural orientation variables and achievement motivation/LGO on Risk taking and proactiveness.
3. Examine the nature of the relationship between EO (Proactiveness/Risk taking) and entrepreneurial intention.
4. Establish the extent to which cultural orientations and ability perceptions influence EO and eventually EI by gender and modernity.
5. Examine the level to which entrepreneurial competencies (knowledge and networks) and optimism moderate the relationship between EO and entrepreneurial intentions.

The relationships in objectives two and three are examined at an omnibus level (whole sample) and by country. As Stinchcombe (1965) observes, the pressure from contextual forces is probably highest during venture start-up. In such a situation, what really matters then is the way in which the entrepreneur views the environment (Begley, Tan, & Schoch, 2005).

### **1.8.2 Justification of the study**

Most publications on graduate entrepreneurship originate from the US and other European countries (Krueger, Reilly, & Carsrud, 2000) and examine graduate entrepreneurial activities from a stable economy perspective (Matlay, 2006), thus paying little attention to entrepreneurship in the context of developing states (Bruton et al., 2008). Merely transferring findings of studies conducted in Europe to other countries where the socio - cultural and economic environment differ is by and large problematic (Thomas & Muller, 2000). In addition, quite a number of entrepreneurship studies center on older individuals, yet there is a high likelihood of starting a business venture between the ages of 25 and 44 (Liles, 1974). Consequently much less is understood about how young people view entrepreneurship (Henderson & Robertson, 2000). The current study therefore focuses on EO in young people (i.e. individual level) in a collective country setting.

## **1.9 Chapter summary**

This chapter begins by presenting the role and importance of entrepreneurship in world economies, most particularly in job creation, and the combating of unemployment. The paradox is that while graduate unemployment continues to soar in many countries in sub-Saharan Africa, graduates' intentionality to choose a career of self-employment is low and remains a perturbing research item in this region. This model specification chapter starts by delineating between entrepreneurship and entrepreneurial orientation and also presents the gap left unattended in graduate entrepreneurship research in East Africa, i.e. the impact of contextual factors namely cultural orientations on EO. The chapter also briefly introduces three explanatory variables, namely experience, fear of failure and modernity. Since entrepreneurship is also largely influenced by personality factors such as achievement motivation and LGO, the chapter outlines the rationale for their inclusion in the current study, after which the chapter briefly introduces the moderating variables (knowledge/networks and optimism) of the study. Given that there are notable differences between male and female entrepreneurship worldwide, the chapter makes a case for examining the relationships between gender, cultural values and EO in a collective African setting. Lastly, the chapter presents the study model and ends by enumerating the research objectives and a justification for the study. The next chapter presents a review of the literature, the theoretical underpinnings of the study, as well as the motivation for the different study hypotheses.

## CHAPTER TWO: LITERATURE REVIEW

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### 2.1 Introduction

The literature review of a study plays a key role in the research process when it examines the background of the problem which is being studied, justifies its significance, relates theory to practice and pinpoints knowledge gaps in the study area unattended by other researchers, hence giving the researcher an entry point (Randolph, 2009).

The literature review in the current study is presented in five major parts, the first of which presents the theories on which the study is based, while the second one offers the literature on the influence of values (cultural orientations) and personality variables (achievement motivation and LGO) on entrepreneurial orientation motivating the hypotheses that relate them. The third section focuses on the link between entrepreneurial orientation and entrepreneurial intentions motivating the hypotheses that link them, while the fourth section examines the literature on the moderators namely optimism and entrepreneurial competencies (networks and knowledge). The last part examines the literature on gender and entrepreneurial orientation, as well as some salient facts about the study countries. A summary of the literature review concludes the chapter.

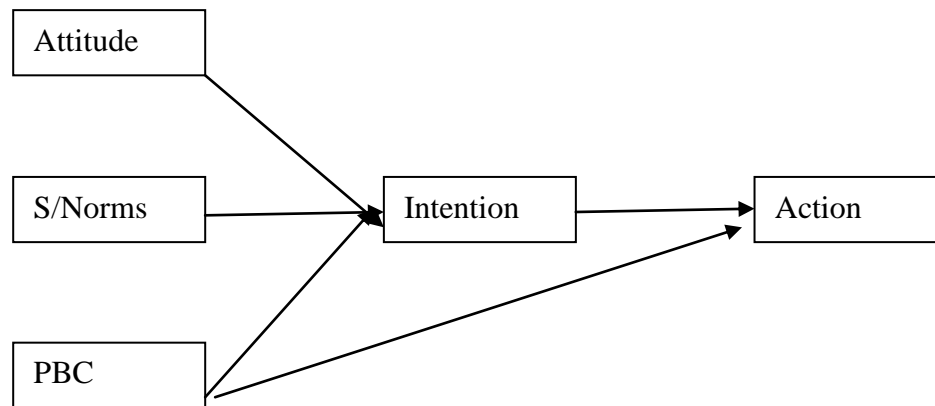
### 2.2 Theoretical Framework

The theoretical framework is the “blueprint” of a study and guides and supports the study (Grant & Osanloo, 2014). According to Eisenhart (1991), the theoretical framework acts as a guide to the entire research effort, based on an authentic theory which provides a viable rationalization of the relationship between the study variables. Further, the theoretical framework is important because it helps to elucidate the research problem (Torraco, 1997). The theoretical framework of this study is premised on three theoretical standpoints, i.e. The Theory of Planned Behavior (Ajzen, 1985), Image Theory (Beach & Mitchell, 1987), and Upper Echelons Theory (Hambrick & Mason, 1984). The link between these theories and the TPB is explained in the sections below.

#### 2.2.1 The Theory of Planned Behavior (TPB)

This theory acknowledges entrepreneurial intentions as a precursor to action (Fishbein & Ajzen, 1975). The model depicted in Figure 2 below holds that attitudes, subjective norms and perceived

behavioral control precede intention, which eventually gives rise to action. These three psychological dimensions are referred to as “motivational antecedents” by Ajzen (1991). If one has a positive attitude toward a given action, those important to him/her approve of this action, and he/she has capacity /resources to effectively carry out the act, then a high intention to effect the action develops. However, the contribution of each motivational antecedent in explaining entrepreneurship is not known before hand (Liñán & Chen, 2009). Put differently, what each of these constructs contributes in intention will be different for each behavior (Ajzen, 1991).



**Figure 2: The Theory of Planned Behavior**

S/Norms =Social norms; PBC= Perceived behavioral control

A contentious issue in the TPB is the lack of consensus on which of the three antecedent variables best predicts intention, with some scholars arguing that (PBC) perceived behavioral control is the best of them all (Nabi et al., 2006), yet many other scholars assert that attitude is the strongest predictor (Schwarz, Wdowiak, Almer-Jarz, & Breiteneker, 2009). In all, although many studies have been conducted on attitude as a predictor, their findings are not in consonance and remain inconclusive (Kim, 2008). To make a case for PBC, it is argued that control is a reflection the ease of execution of the behavior. In other words it is a reflection of one’s control beliefs or ability perceptions (Armitage, & Conner, 2001). Similarly Autio, Keeley, Klofstein, Parker and Hay (2001) argue that, PBC is the summation of one’s real control over the behavior in question, his/her views about this control, as well as his /her expectations regarding the possibility of success of the said behavior. Attitude and subjective norms are assigned only a supportive role, which means that the role of perceived behavioral control is decisive for action

to take place. In the conceptual model of the current study (see Chapter One), ability perceptions represent PBC.

Further, for some authors subjective norms is an insignificant antecedent in the TPB (Autio et al., 2001), hence other scholars have actually dropped it (Peterman & Kennedy, 2003). Consequently the role of subjective norms in the TPB needs further scrutiny (Liñán & Chen, 2009). However Ajzen (1987) argues that subjective norm poorly predicts intention for those whose internal locus of control is above average or for people who are strongly oriented toward a given behavior (Bagozzi & Edwards, 1992). On the other hand, values acceptable in a given society affect the three predictors of intention (Liñán & Chen, 2009), and the impact of the socio-cultural context may be heavier on subjective norms (Ajzen, 2001). In light of this, a section of scholars assert that subjective norms best predict intention in collectivist than individualistic cultures (Liñán & Chen, 2009). Consequently, important others (through subjective norms) are likely to influence one's career preference (Lent, Brown, & Hackett, 1994).

### **Entrepreneurial Intentions**

There is a paucity of knowledge of the factors that impact upon entrepreneurial intentions in a given community. In particular, researchers have not taken much interest in the part played by cultural values on entrepreneurial intentions in various societies (Liñán & Chen, 2009). Gollwitzer (1993) distinguishes between a goal intention and an implementing intention. A goal intention specifies desired end states that may even conflict with each other, to which persons commit themselves. Therefore, possible obstacles to implementation of the goal may not be considered. The level of commitment given to a certain goal intention is governed by the significance assigned to it by the concerned person. Conversely an implementation intention is only formed after deciding upon the strategy to attain the desired range of alternatives. In the current study entrepreneurial intention refers to goal intentions.

### **Entrepreneurship education and entrepreneurial intentions**

According to Hynes (2001), entrepreneurship education is possibly the most important tool of economic development. Alberti (1999) views entrepreneurship education as a means of

equipping people with the concepts, resourcefulness and proficiency that empower them to identify opportunity where others see darkness and to make them nurture the self-confidence and knowledge base that drives them to be proactive where other individuals procrastinate. Contrary to traditional education, regarded as more of a transfer of both knowledge and skillfulness, entrepreneurship education is a means of attaining an attitudinal change at both general and specific levels (Holmgren & From, 2005). At a more general level, the objective of entrepreneurship education is to ensure that society adopts a positive view of entrepreneurship (Cooper, Bottomley, & Gordon, 2004), since entrepreneurial skills and attitudes, for example creativity or proactiveness, can be useful to everyone in society in their daily lives (European Commission, 2002). At a more specific level, the objective entrepreneurship education is to foster an attitudinal change among students with a view to uplifting the numbers of those who view entrepreneurship favorably and can choose it as their career (Black, 2003).

In light of the above, the influence of education on entrepreneurial intent has received substantial interest in entrepreneurship research. However, more work on this topic is still required (Peterman & Kennedy, 2003) given that the results of some past studies are contradictory (Nabi, Liñán, Ertuna & Gurel, 2011). For example while some scholars recognize the importance of education in entrepreneurship, most particularly due to the information and knowledge obtained from it (Cooper, 1993), and that education promotes entrepreneurial intent (Davidsson, 1995; Honig, 2004; Liñán, 2004), other scholars posit that entrepreneurship education and entrepreneurship are not strongly correlated due to the fact that formal education retards the entrepreneurial drive of an individual (Shapero, 1980). This is probably because highly educated individuals have brighter career opportunities and thus have less motivation to take on entrepreneurship (Wu & Wu, 2008). Similarly Shapero (1980) argues that formal education gives rise to an inclination to avoid risk and retards inquisitiveness, a notion similar to that of Laukkanen (2000), who observes that graduates are too analytical, problem-conscious and fear to take risks all of which are deterrents to start-up. Further formal or traditional education is abhorred because it gives rise to conformity and makes students less tolerant of uncertain situations thus rendering them less creative which is a must have ingredient of entrepreneurship (Ronstadt, 1984). Similarly Peterman and Kennedy (2003) posit that formal education discourages entrepreneurial activity since it trains students for the job market and negates

innovativeness while Shapero and Sokol (1982) postulate that business education seems to indicate that small businesses are not an attractive option and are less likely to succeed. To promote an entrepreneurial identity among students, and also foster a change in student attitudes towards entrepreneurship, entrepreneurship education should either take the role of or be a part of traditional education (Holmgren & From, 2005). Rae (2005) moves a step further and clarifies that whereas entrepreneurship education can offer the knowledge skills and other cultural aspects of entrepreneurship, the core of entrepreneurial activity is learnt experientially in business rather than in class. Honig (2004, p.263) concurs with this position and asserts that *“much of what entrepreneurs do is the product of tacit knowledge .....which is most often acquired through learning by experience”* Entrepreneurial learning is defined as *“to recognize and act on opportunities and interacting socially to initiate, organize and manage ventures”* (Rae, 2005 p.324). Bird (2002) adds that this learning must target the individual, be practically oriented drawing on experiences encountered by the learner. Put differently, *“entrepreneurship education must be concerned with learning and facilitating for entrepreneurship, not about it”* (Holmgren & From, 2005 p.385).

### **2.2.2 Image Theory**

Image theory describes how important decisions are made by individual decision makers (Beach & Mitchell, 1987). The central premise of the theory is the self-image (driven by self-concept), which is the personal beliefs, values, ethics, etc., of the individual decision maker. Shavelson, Hubner and Stanton (1976) integrate many definitions of the self-concept from various scholars to define it as one's self-perceptions that are formed through experience with and interpretations of his /her environment. These self-perceptions are influenced by evaluations from important others, reinforcement, and attributions of one's behavior, but they on the other hand influence the way an individual acts, (Marsh, Craven, & Phye, 1997). The self -concept is a multiplicity of identity, described as personal characteristics, feelings, and images (Burke, 1980), as well as rules and social status. In image theory, for a person to accept or drop a plan, the deciding factor is that the plan must be both compatible with the self-image (not violate personal principles) and show promise (feasibility) of attainment. On the other hand, progress toward a goal is halted if the projected image (the anticipated state/goal) is found to be incompatible with

the trajectory image, i.e. agenda for the future (Beach & Mitchell, 1987). The self-concept does, therefore reflect the behavior being exhibited, and also acts as mediator and regulator to this behavior (Markus & Nurius, 1986). Some researchers link motivation directly to the self-concept. Markus and Nurius (1986) present a theory of possible selves defined as self – acknowledgement of one’s perceived potential (feared or desired) that serves to individualize global motives and thus act as a cognitive component of motivation. Possible selves are the ideal people that individuals would like to become in the first place (i.e. role models) they could become or are afraid of becoming (such as the unemployed). The reservoir of possible selves emanates from one’s socio-cultural and historical background, and this is the reason why image theory is considered appropriate for the current study.

Further, in image theory, behavior is driven by the relationship of self and other people, and especially the way individuals perceive themselves as separate from or connected with others. This connectedness is culturally driven. Therefore, culture determines the self, consequent upon which two construals emerge: the independent (individualistic) and the interdependent (collective) construals. The former is characterized by the willingness to be autonomous and to realize and articulate one’s exceptional qualities and abilities (Johnson, 1985) and portraying oneself as a person whose behavior is guided by his or her own will, actions, and feelings rather than referring to other people. On the other hand, the interdependent construal is characterized by connectedness which is the capacity for one to mix harmoniously with other people in society (Leung et al., 2005). Thus, individuals define themselves in relation to others, hence their behavior is contingent upon what individuals feel are the thoughts, views, feelings of others in the relationship. The link between the TPB and image theory is presented next.

### **TPB and Image theory**

The TPB is inextricably linked to image theory, for example many studies such as Callero, Howard, and Piliavin (1987) integrate self-identity with the TPB. Thoits and Virshup (1997) distinguish between various types of identity: Personal identity describes the unique and distinctive characteristics one has, role identity describes the social roles one plays, while social identities link the self with a social group or class. Literature shows that “*performing behaviors*

*that are consistent with one's own self-identity affords the opportunity to express and bolster such an identity"* (Pierro, Mannetti, & Livi, 2003 p. 48). Similarly Self-Congruity Theory in Marketing (Sirgy, 1986) argues that the greater the consonance between consumer self-image and the image of the idealized buyer of a given product, the greater the intention to purchase that product will be. This therefore confirms the link of TPB and image theory since individuals conduct themselves in ways that are in tandem with their own self-images. The next section describes some of the negative emotions that accrue from an interdependent construal which are relevant to graduate entrepreneurship in a collective setting.

### **Loss of face**

This dimension captures shame due to failure (for example, in case the project failed) and the associated stigma thereafter. Theoretically, it is anchored in Earley's (1997) theory of 'face' which is a derivative of Chinese cultural values. Face is a self-evaluation, premised on opinions held by other people in regard to whether one has adhered to the acceptable social norms and standards in a cultural setting (Earley, 1997); consequently face is a self-regulation mechanism linking one to the community where he/she lives, thus influencing behavior. Two kinds of face are identified: one to do with moral character, and the other to do with prestige. The latter is more relevant to entrepreneurship since it is a correlate of social status, achievement and success and is a frequent occurrence in business circles (Hu, 1944). Moreover two key factors are pertinent in understanding the concept of face: gaining or losing face. Firstly while certain actions are taken to aid the promotion of face, others are taken to deter its loss. Great sensations of pride, contentment and confidence emanate from attaining face, on the other hand powerful emotions of shame derive from loss of face. These two sides of face act to influence any action with tangible results such as initiating a business venture (Begley & Tan, 2001), since one's career is a quality that is reflective of one's status in society. Since vocational choice can enable people to gain high social status or accumulate influence and honor to their family, entrepreneurship is likely to be a favorite occupational option if it assures one of gaining such benefits.

Secondly of importance is the prevention of loss of face, thus any possibility of loss of face results in measures that prevent this likelihood (Earley, 1997). A strong sense of shame (arising

out of business failure, for example) is reason enough for loss of face to deter any decision that gives rise to its birth (Redding & Ng, 1982); thus a possibility of failure with a resulting loss of face should be a major deterrent to starting a business (Begley & Tan, 2001). The low social status accorded to entrepreneurship in some societies is likely to have the same effect.

Since collectivists are motivated by socio-oriented goals (for instance connectedness), it is of paramount importance to maintain harmony and save face in society (Joy & Kolb, 2009). On the other hand, people from an individualistic society have a more autonomous orientation and might not easily be influenced by in groups (Hofstede, 1980). The stigma of failure is more acute in collectivist cultures, acting as a deterrent to entrepreneurship (Damaraju, Barney, & Dess, 2010).

### **Fear of upsetting important others**

According to Mitchell and Shepherd (2011), apprehension of upsetting important others focuses on vulnerabilities related to what other people think or feel and therefore reflects the importance of relationships with others, which is a major process regulated by the working self-concept. Given that the commitment of others is key in the exploitation of an opportunity, what other people believe or feel is of importance given that it influences the prospect of getting resources from them (Jelinek & Litterer, 1995). As explained earlier, the strength of the relationship with others is based on self-construal. In collective societies, important others influence the configuring of one's behavior (Markus & Kitayama, 1991). Consequently, action is based on what important others expect of a person. While Mitchell and Shepherd (2011) point to what important others think about one's abilities, the current study focuses on what important others (through power distance) may believe about carrier choice. The current study argues that important others in a collective setting may hinder action that is not in consonance with their views. This happens because the individual is motivated by actions that show relatedness to others, and may not withstand social pressure not to do so (Markus & Kitayama, 1991).

### **Negative social status of entrepreneurship**

In societies where entrepreneurship is accorded a low status, graduates may not start enterprises as a response to their fear of losing face (Spencer & Gomez, 2004). According to Liñán and Chen (2009), social valuation is an expression of the level of admiration of entrepreneurship and

the shame or pride derived from engaging in such an activity. This social evaluation is feared because people in a society are neither neutral nor passive towards the behavior of others in their midst since they evaluate and show approval or disapproval even if the individual's behavior does not affect them directly (Castro, Castro-Nogueira, L., Castro-Nogueira, M. & Toro, 2010). In light of this observation, the way a culture perceives failure is likely to influence stigmas entrepreneurs face after a failure episode and the career path of self-employment (Vaillant & Lafuente, 2007).

Autio et al. (2001) posit that graduates tend to opt for fashionable careers and that student entrepreneurial aspirations are quite sensitive to the image of entrepreneurship portrayed by universities (Autio, Keeley, & Klofstein, 1997). The attractiveness of the idea of starting a business will probably depend on the presence of role models in one's environment and the deference extended to the entrepreneurial career by those in the student's vicinity (Audet, 2004). In developing countries entrepreneurship comes in the form of small businesses and is viewed as a means of subsistence leading to a less favorable disposition (Spencer & Gomez, 2004).

### **2.2.3 Upper Echelons Theory**

This theory holds that *“organizational outcomes- both strategic choices and performance levels, are partially predicted by managerial background characteristics”* (Hambrick & Mason, 1984 p. 193). The central premise of this theory is that people who make decisions (for instance company founders) also have the power to envisage and point toward the firm's strategic direction and degree of performance of the firm (Hambrick & Mason, 1984). This theory is premised on two perspectives, the first being that executives' actions are based on their personal understanding of the strategic choices they face. The second perspective is that these stand points emanate from their experiences, principles and personal characteristics (Hambrick, 2007). Decision makers face many uncertainties and complex circumstances and, due to individual bound rationality, they may not exactly know how to resolve this uncertainty and complexity. Consequently, they interpret circumstances they face with their knowledge of various alternatives, values that define acceptability of alternatives, and their personality traits that influence the motivation to consider alternatives all acting as a filter.

A great number of research projects have been conducted to authenticate this theory (Nishii, Gotte, & Raver, 2007). The focus has been on top management teams as recommended by Hambrick and Mason (1984), given that decision makers confer, exchange ideas, and make decisions as a group. Scholars have also examined the role of the Chief Executive Officer (CEO) through this theoretical lens (Barker & Mueller, 2002). Although the CEO is just another member of the top leadership of the firm in certain cases, CEOs are in a position to single handedly influence the strategic posture that the firm adopts through the various forms of power they wield (reward power, coercive power, legitimate power, etc.). Thus, the CEOs' values, traits, and other personal characteristics may influence decisions regarding strategic action, than the collective attributes of the other people in the top management team. Upper echelons theory is relevant to the current study since in a sole ownership of a firm, the owner (CEO) is an extension of the firm, given that he/she makes all the strategic decisions concerning the firm (Kollmann & Kuckertz, 2007). Thus in the case of a young graduate who wants to set up a business, his/her dispositions, values and demographic characteristics will all influence his/her intentions in the pre start-up period. As an example, Cavazos (2013) ably shows the link between the TPB and upper echelons theory in his study of managers' intentions to run strategic alliances.

## **2.3 Values and their influence on entrepreneurial orientation**

### **2.3.1 Culture and the birth of entrepreneurship**

No universally accepted framework describes culture as a determinant of entrepreneurship, just as no agreed definition of entrepreneurship is found within the scholarly community (Thurik & Dejardin, 2012). Societies are naturally endowed with a variety of physical environments, so members of a given cultural entity must adopt behavior that is suitable for their environment in order for them to be successful in their endeavors. Behavior which is acceptable within a given society coalesces into various cultural norms strands of which impact upon the start-up decision (Thornton et al., 2011). The relationship between culture and start-ups can be explained from three perspectives, as discussed in the next section.

### **2.3.2 Entrepreneurship and the cultural environment: Theoretical perspectives**

Many theories in the entrepreneurship domain account for the entrepreneurship – environment link (Abimbola & Agboola, 2011). For example, Thornton (1999) argues that two perspectives account for this relationship: the supply and the demand perspectives of entrepreneurship. The latter looks downstream at firms and product markets to explain the increase in value creation (Priem, Li, & Carr, 2012) and is not discussed further here. This research project is premised on the supply side perspective which is itself divided into the psychological sub perspective and the socio-cultural sub-perspective. The (aggregate) psychological perspective holds that the economic development of any society depends on an adequate supply of individuals with traits that are compatible with entrepreneurial practices. The more people who espouse such values within a society, the higher the number of people who exhibit entrepreneurial behavior will be (Davidsson, 1995). Hence this perspective focuses on the supply of individuals endowed with entrepreneurial traits. Entrepreneurial activity is a *“dynamic process in which social habits (entrepreneurial memory) are as important as legal or economic factors....thus entrepreneurs act as catalysts of entrepreneurial activity”* (Urban, 2007, p.85). Entrepreneurs act as catalysts due to the ability of human beings to acquire knowledge through observing of phenomena (Bandura, 1997), hence those aspiring to become entrepreneurs can gain knowledge from role models, through experimentation without acquiring model behavior. Bygrave and Minniti (2000) throw more light on this matter by adding that choice is influenced by what other people chose, but does not depend on inclinations alone.

The socio-cultural perspective argues that entrepreneurship is facilitated by the availability of groups and cultures that facilitate its growth. A more recent approach holds that entrepreneurship is not only dependent on traits and individual behavior, but is also influenced by the environmental forces surrounding it (Lee & Peterson, 2000). The socio-cultural theory is premised on an accommodative environment stance, in which prevailing supportive norms within a society may inspire one to be inclined toward start-up behavior.

Similarly, the social legitimation or moral approval view holds that entrepreneurship occurs in economies in which the entrepreneur is highly regarded, entrepreneurship is embedded in education policies, and viable economic measures to boost venture start-ups are put in place

(Etzioni, 1987). The level of legitimation of entrepreneurship in a country influences all aspects of entrepreneurship, including resource allocation, preferences, risk-taking behavior and fear of business failure, among others (Etzioni, 1987). In this view entrepreneurship emanates from institutional and socio cultural forces, while in the aggregate view it is a result of a summation of individual characteristics (Davidsson, 1995).

Lastly, dissatisfaction theory holds that entrepreneurship emerges for purely negative reasons. People have a tendency to engage in an own business after a dissatisfying episode, for example a lack of a viable career in an existing organization (Dyer, 1994). This theory is in consonance with psychological theory, which posits that those individuals who harbor a high intensity of self-efficacy will possibly be activated by events in which they are dissatisfied (for example failure to attain a goal) which motivates them to align outcomes with their value standards (Bandura & Cervone, 1983). Dissatisfaction is a key predictor of job mobility (Vroom, 1982). At a personal level, different types of dissatisfaction are bound to influence job mobility and the possibility of moving into self-employment (Thurik & Dejardin, 2012).

### **2.3.3 Cultural orientation**

Sharma (2010) reviews the literature and posits that little agreement exists on the definition of cultural orientation, given that culture is defined in various ways by different people. According to Roosa, Morgan-Lopez, Cree and Specter (2002), cultural orientation refers to individuals identifying themselves with their own culture and participating in both this culture, plus the dominant culture. Cultural orientation is a multi-dimensional, multi-directional process, through which identification with ones culture and conforming to the dominant culture take place independently and concurrently (Roosa et al., 2002). Cultural orientations are both antecedents and consequences of what a person attaches value to and emanate from personal learning as a result of interaction with the socio context, e.g. family, job environment, and community. Hence cultural orientation is, not inherited but learnt, thus one can develop a new cultural orientation if taken to another society. As Beinhocker (2007, p.368) observes, “*Cultural rules are socially transmitted and learned, and are the rules of thumb for behaving in a given environment.*” Due to the fact that cultural value orientations symbolize what is acceptable in a given society, facets of culture that are not in consonance with them create discomfort; attract disapproval and a

clamor for change (Schwartz, 2006). A key tenet of cultural orientations is that they remain intact for some reasonable period (Hofstede, 2001). They undergo change gradually due to the impact of technology, increasing wealth or association with new cultures, etc. In summary, “*cultural value orientations evolve as societies confront basic issues or problems in regulating human activity*” (Schwartz, 2006 p. 140).....hence “*institutional arrangements and policies, norms, and every day practices express underlying cultural emphases in a given society*” (Schwartz, 2006 p.139). The relationship between these cultural orientations and entrepreneurship is presented next.

### **2.3.4 Cultural orientation and entrepreneurship**

Most of the work done in a bid to comprehend the impact of culture on entrepreneurship is premised on Hofstede’s (1980) five dimensions of culture, namely: collectivism, uncertainty avoidance, power distance, masculinity and long-term orientation. Each of these dimensions reflects a concern universal to almost all cultures, yet the response to each by various communities is not unanimous. Despite the extensive application of these variables, empirical evidence for their relationship with entrepreneurship is weak and often contradictory (Hayton, et al., 2002).

Weber’s (1948) theory that explains entrepreneurship as an outcome of individualistic behavior dominates the supply side view in entrepreneurship theory (Urban, 2007). For example, Gorodnichenko and Roland (2011) argue that since individualism emphasizes personal freedom and achievement, individualistic cultures, unlike collectivist cultures, enable innovation resulting in a higher rate of economic growth for countries with such a cultural orientation. Consequently, McGrath et al.(1992) and other researchers have advanced the proposition that entrepreneurship occurs in societies that value individualistic behavior, depict both a low level of uncertainty avoidance and power distance and exhibit high masculinity. Hayton et al. (2002, p.34) concur with this view and assert: “*Ceteris paribus, the greater the cultural distance from these ideal types, the less the aggregate individual and national levels of entrepreneurship.*” Specifically, entrepreneurs are characterized by low power distance in all societies including even those with a high level of power distance (McGrath et al., 1992).

It is important to note that some researchers contest the role of extreme individualism and masculinity in entrepreneurship. For example, Morris, Davis and Allen (1994) assert that too much individualism slows economic growth, finding that an equilibrium between individualism-collectivism resulted into higher levels of entrepreneurship. Entrepreneurship is highest at moderate levels of the individualism-collectivism nexus, with extreme levels of individualism leading to a zero sum game and marked absence of team playing, culminating in low levels of entrepreneurship (Urban, 2007).

Both individualism and collectivism are, therefore, good for entrepreneurship, depending on context and purpose. While micro-stream researchers posit that “*those who generate variety (founders and corporate entrepreneurs) tend to be individualistic, the macro –stream researchers associate both individualism and collectivism with economic growth and innovation*” (Tiessen, 1997 p.367). Tiessen adds that individualism and collectivism are not polar ends of a scale, i.e. neither critically encourages nor discourages entrepreneurship, what they do is to impact upon the way it is performed. Variety generation may depend on personal initiative and innovativeness, while acquiring of resources may depend on efficient networks such as those found in a collectivist setting, but can be obtained through contracts between individuals. This is but one explanation for the economic growth of Confucian collective Asian states and individualistic Western countries (Tiessen, 1997).

Regarding other cultural orientations, while Dwyer, Mesak and Hsu (2005) find a positive relationship between power distance and innovation, Shane (1993) reports a negative relationship. In short, the correlation between these cultural orientations and entrepreneurship is a matter of debate. Table 1 below presents studies on cultural orientations and entrepreneurial orientation, and demonstrates some of the above controversies, while the next section specifically portrays the relationship between these orientations and entrepreneurship in an African setting.

As shown in table 1 below, cultural orientation variables are the independent variables in the presented studies, while EO is the dependent variable. The current study differs from this arrangement in that entrepreneurial intention is the dependent variable (see study model in figure 1).

**Table 1: Cultural orientation and entrepreneurial orientation studies**

Author(s)	Independent variables	Dependent variables	Context	Findings
Kreiser et al. (2010)	UA, PD Individualism Masculinity, Collectivism	Risk-taking Proactiveness	Business owners in Australia, Sweden, Costa Rica, Norway, Indonesia and Netherlands	UA, PD negatively influences risk-taking UA, individualism and PD negatively influences proactive behavior.
Engelen, Schmidt and Buchsteiner (2015)	Market turbulence, individualism, UA	Entrepreneurial orientation (EO)	Companies N=804 Austria China, Germany, India, Singapore, UK & USA	Market turbulence positively influences EO; individualism marginally but positively influences EO; Uncertainty avoidance is not related to EO
Engelen (2010)	Organizational culture	Risk-taking, Proactiveness, Innovativeness	Company CEOs N=449 in China & Germany	Development culture exerts the strongest influence in both countries
Brettel, Chomik and Flatten (2015)	Organizational Culture	Risk-taking, Proactiveness, Innovativeness	Senior SME Managers in Germany N=298	Group, development and rational cultures positively related EO. A hierarchical culture is negatively related to EO
Mueller and Thomas (2001)	Cultural dimensions and entrepreneurial orientation		4 <sup>th</sup> -year students in 25 universities in 15 countries	An entrepreneurial orientation is more probable in individualistic, low UA societies than in collectivist high UA cultures
Carson, Baker and Lanier (2014)	Long term orientation, UA, PD, Masculinity, Collectivism	Proactiveness	Company sales executives N=147 Australia, Canada, New Zealand, UK, USA	Long-term orientation, UA and Masculinity are positively associated with proactiveness. PD and Collectivism are not related to proactiveness

UA=uncertainty avoidance; PD=Power distance

### **2.3.5 Cultural orientation and Entrepreneurship in Africa**

A number of scholars on Africa argue that the cultural environment in Sub-Saharan Africa is not conducive to the growth of entrepreneurship and may be a barrier to the growth of these nations. Munene et al. (2000) report a widespread black African way of life that accentuates hierarchy, embeddedness and mastery, in which African managers, in concert with their high-power distance orientation, stress a reliance on formal rules and a dependence on their superiors in arriving at decisions. In stark contrast, a European sample exhibited egalitarianism, autonomy, and harmony. Managers in this sample emphasized self-reliance and consultation with subordinates. Entrepreneurship is full of uncertainty and risk (McMullen & Shepherd, 2006), yet in African culture, uncertainty is revered and social order is maintained by shunning needless risks (Onuejeogwu, 1995) and controlling activities that could lead to a disruption of acceptable cultural values (Munene et al., 2000). Thus social norms do give a competitive advantage to some societies, but not others (Urban, 2007). Since EO mediates the relationship between culture and entrepreneurship, a strong EO should foster more entrepreneurship in a given society (Lee & Peterson, 2000). To the extent that culture supports the development of an EO, cultural values and norms should be looked at as catalysts rather than as causative instruments of entrepreneurship (Urban, 2007). Examining the role of EO in promoting start-ups in a South African study, Pretorius and Van Vuuren (2002) posit that South African culture does not permit the growth of a strong EO. This view is also held by Driver, Wood, Segal, and Herrington (2001), who place cultural norms in second position to education in obstructing the development of entrepreneurship in SA. Although Pretorius and Van Vuuren (2002) do not test their assertions empirically, they cite other African scholars as evidence of the notion that African culture hinders the growth of a strong EO. Table 2 below builds on Pretorius and Van Vuuren (2002) to further enlighten African culture and entrepreneurship.

**Table 2: Cultural orientation and entrepreneurial orientation variables in Africa**

Study Dimensions (Sharma, 2010)	Hofstede's dimensions	Conducive to entrepreneurship	African Value Orientation	References for East Africa
Independence	Individualism	Individualism	Collectivism	Bwisa and Ndolo (2011)
Interdependence	Collectivism	Autonomy, bold action, accomplishment	Desirable impressions, Face-saving, conformity	Themba ,Chamme, Phambuka, and Makgosa (1999)* Kinunda-Rutasobya (1999)*
Power	Power Distance	Low Power Distance	High Power Distance	Bwisa and Ndolo (2011)
Ambiguity Intolerance	Uncertainty Avoidance	Low uncertainty Avoidance	High Uncertainty Avoidance	Bwisa and Ndolo (2011)
Masculinity	Masculinity – Femininity	Masculinity (Aggressiveness)	Femininity	Bwisa and Ndolo (2011)

\* Cited by Pretorius and Van Vuuren (2002).

Table 2 above shows that African value orientation does not favor the development of a firm entrepreneurial orientation. This view is also shared by Tshikuku (2001 p.3) who asserts that “*the old civilizations of Sub-Saharan Africa are said to hinder the development of an entrepreneurial and managerial culture*”. Based on these assertions, the central thrust of this study is to establish the degree to which the cultural values in the three East African countries may or may not be supportive of the development of a strong entrepreneurial orientation, to enable students engage in startup activities. Based on the results of the qualitative study and literature review, the next section motivates the study hypotheses by linking each identified cultural orientation variable to both risk-taking and proactiveness.

## 2.4. Cultural orientation and Risk-taking

### 2.4.1. Ambiguity intolerance and risk taking

Uncertainty avoidance is the degree to which communities take deliberate measures to reduce ambiguity (Hofstede, 1980) by use of law, technology and religion, etc. The stronger a society's desire to curb uncertainty, the more the need for rules (Hofstede, 1980). Further, Hofstede argues that a firm theoretical link exists between tolerance of uncertainty and risk taking. Since cultures differ in their avoidance of uncertainty, they create different values for such things as formality and tolerance for ambiguity (Sandhu, Sidique, & Riaz, 2011). For instance, in high uncertainty avoidance cultures, breaking rules is not tolerated, which renders these cultures more resistant to change (House, Hanges, Javidan, Dorfman, & Gupta, 2004). Coping with uncertainty avoidance is partly a non-rational process, i.e. dealing with it is a motivation by security or a motivation by fear (Hofstede, 1980). Since uncertainty avoidance is a search for safety, people in high uncertainty avoidance communities limit themselves to known risks (what is different is dangerous), while those in low uncertainty avoidance societies take risks, including unfamiliar risks (unusual things are of interest). Hence more tolerance for diversity is found in low uncertainty avoidance countries and *"more fear of things foreign in high uncertainty avoidance countries where they seek clarity, structure and purity"* (Hofstede, 1980, p.170).

Joy and Kolb (2009) note that in high UA cultures, there is a high fear of failure and a penchant for undertakings where one is sure of the result, unambiguous instructions and very little risk. In general, individuals with low uncertainty avoidance are better able to influence society at large, since uncertainty avoidance is reminiscent of a desire to venture into hither to unfamiliar waters (Hofstede, 1980). Sharma (2010) presents uncertainty avoidance as two separate constructs, namely: risk avoidance – the level of discomfort with taking risks (Keh & Sun, 2008) – and ambiguity intolerance (AI), the amount of discomfort a person experiences in ambiguous circumstances (De Mooji & Hofstede, 2002). The current study concentrates on the ambiguity intolerance variable, which Budner (1962, p.49) defines as *"the tendency to perceive (interpret) ambiguous situations as sources of threat,"* whereas tolerance for ambiguity is defined as *"the tendency to perceive ambiguous situations as desirable"*. Ambiguous situations are defined as those characterized by novelty and complexity, and are unstructured or cannot

readily be categorized by a person due to insufficient cues. In light of these arguments, ambiguity intolerance should be a hindrance to entrepreneurship because of its impact on risk taking, thus:

*H<sub>1</sub> Ambiguity intolerance will have a negative impact on risk taking*

#### **2.4.2 Power distance and perception of risk**

Hofstede (1980) postulates that the basic underlying variable in power distance is inequality in prestige, wealth, power, etc. It is defined as the level to which a given community acknowledges authority, imbalances in power and differences in status (House et al., 2004). Low power distance communities seek to minimize power distance, while high-power distance societies use it as the basis for social order. Kohn (1969) established that power distance is highly correlated with obedience. Thus, in high-power distance societies, respect for one's parents and the elderly is an important value that lasts as long as parents are alive. According to Takya-Asiedu (1993), critical career decisions are made by parents even before their children go to secondary school. Parents entreat children to follow the traditional career path (Law, Medicine, and Management), which tends to suppress their entrepreneurial spirit. On the other hand, children in low power distance societies are socialized to become equals sooner in life, thus pursuing the notion of autonomy (Hofstede, 1980). Power distance also correlates significantly with uncertainty avoidance  $r=.78$  (Hofstede, 1980). Further, resources in high-power distance cultures are available to only a few, and information is hoarded (House et al., 2004), yet to assess risk one needs information (Norton & Moore, 2006). Geletkanycz (1997) observes that high-power distance tends toward retaining of the status quo. Individuals in high-power distance societies greatly value 'Face', hence they are pressurized to abide by what others expect of them in order to uphold face (Varner & Beamer, 2005).

Sharma (2010) presents Hofstede's power distance factor as two separate constructs, power and social inequity. Power refers to the level of acceptance of imbalances in the exercise of power in a given setting, while social inequity is the degree to which a people regard inequality as a

common occurrence (Taras, Roney, & Steel, 2009). The current study focuses on the former, thus:

*H<sub>2</sub>: Power distance will have a negative impact on risk-taking propensity*

### **2.4.3 Masculinity and perception of risk**

Hofstede (1980) postulates that masculinity is the degree to which power and achievement are modeled as masculine or the extent to which a people exhibit assertiveness, and are forceful in their dealings with others (House et al., 2004). Cultures that are high on masculinity place a large premium on material goods and prestige and individuals exhibit a high need for achievement, while cultures that are low on assertiveness communicate indirectly to save face, try to be in harmony with their environment (House et al., 2004), are less competitive and “*place more emphasis on improving intrinsic aspects of the quality of life such as service to others*” (Hofstede, 1980, p.297). Joy and Kolb (2009) note that in assertive communities, forceful and tough behaviors are the norm. Conversely, societies that are low on assertiveness detest forceful behavior and consider humility, affection and relationships with others as more important (Joy & Kolb, 2009). According to Hofstede (1980, p.164) “*high masculinity and low uncertainty avoidance are both highly correlated with high need for achievement.*” Scholars have advanced the notion that that masculine and feminine tendencies should not be viewed as different ends of a scale, as presented by Hofstede (1980), but could both be autonomous variables of a given cultural outlook (Chang, 2006) and that these two variables may be harbored in different amounts by the same person (Spence, 1993). Given these arguments, Sharma (2010) separates the masculinity dimension into two sovereign constructs, i.e. masculinity and gender equality. Masculinity represents forceful characteristics such as tough talking, self-assurance, plus aggression and while gender equality refers to the extent to which both genders are viewed as equal in their abilities, rights and social responsibilities (Schwartz & Rubel–Lifschitz, 2009). The current study focuses on the masculinity dimension, thus the following hypothesis is advanced:

*H<sub>3</sub>: Masculinity will have a positive impact on risk-taking propensity*

#### **2.4.4 Independence/interdependence and perception of risk**

Collectivism alludes to the level to which people live as a group (Hofstede, 1980). Disparity in views on achievement and aspirations for successful outcomes are a possible outcome of culture or the level of integration into groups, for example Nelson and Shavitt, (2002, p.440) assert that *“the theory of achievement motivation suggests that collectivists are constrained in their motivation to achieve and that achievement behavior is individualistic.”* Further, those with a collectivist orientation tend to be driven by socio-oriented goals, not individualistic achievement oriented goals (Triandis, 1995). Group membership has roles, obligations and duties that go with it and it is essential that harmonious relations are maintained in order for group members not lose face (Joy & Kolb, 2009). Conversely, people from a more individualistic society have a more autonomous orientation, and might not easily be influenced by groups (Hofstede, 1980).

Damaraju et al. (2010) argue that the negative impact of fear of failure is higher in collective than individualistic communities, because the stigma of failure is more acute in collectivist cultures and so acts as a deterrent to entrepreneurial activity. Conversely, some scholars assert that entrepreneurship thrives in collectivist societies because such communities extend social support and resources to entrepreneurs, e.g. family members could offer the much needed capital for one to start a business and also provide some sort of social security just in case the business fails (Zhao et al., 2010). Weber and Hesse (1998) in their cushion hypothesis argue that collectivist societies feel less risk for a given risky endeavor because group members will come to the rescue of a person who experiences a loss after choice of such a risky option, while in individualistic communities an individual who chooses a risky option personally bears the cost in the event that things go wrong. As already explained some studies view individualism and collectivism as opposite ends of each other, which may not be correct (Sharma, 2010), because people have the capacity to house both autonomous and interdependent emotions each of which may be utilized depending on the situation (Markus & Kitayama, 1991). In fact, individualism and collectivism may actually be orthogonal (Oyserman, 2006). In light of this, Sharma (2010) reconceptualizes collectivism and individualism as two negatively correlated constructs, to represent these self-construals (Markus & Kitayama, 1991). The first dimension is

independence viewed as a cultural outlook which refers to adopting an autonomous stance, putting self first, a desire for liberty, competence and the need to achieve. The second is interdependence, which is regarded as a personal cultural orientation which refers to identification with group goals and values, a sense of belongingness, and collective success.

*H<sub>4</sub>: Independence will have a positive impact on risk taking,*

*H<sub>5</sub>: Interdependence will have a negative impact on risk taking,*

## **2.5 Cultural orientation and Proactiveness**

Proactive behavior is referred to as taking steps for the better or crafting new and better circumstances (Crant, 2000). For a firm, proactive behavior is equated to anticipation and searching for fresh opportunities in the market place (Lumpkin & Dess, 1996). According to Rauch and Frese (2000), actions are necessary to start a business; therefore Frese (2009) suggests that entrepreneurs' actions should be the focal point for conceptualizing about entrepreneurship. In their personal initiative theory, Frese and Fay (2001) suggest that being active comprises three aspects. The first is being self-starting, i.e. doing without being told, and is associated with being innovative. The second aspect is long-term proactivity, i.e. having the future in mind and not wait for demand before action is taken. The third aspect is being persistent in the face of barriers and constraints.

Crant (2000) proposes two broad categories of antecedents of proactiveness, i.e. individual differences and contextual factors. Starting with the former, Bateman and Crant (1993) equate a proactive stance to the taking of action by individuals in their environment. Proactive individuals are referred to as those who conquer environmental forces, are on a look out for openings in the market, spring into action, and persist until they realize their objective. Conversely, those who are not proactive are passive and reactive, and tend to become accustomed to the environment instead of attempting to change it. Contextual factors which are the second group of antecedents of proactive behavior include among others the socio-cultural context and uncertainty (Crant, 2000). The current study focuses on both individual and contextual factors as they affect

proactive behavior since proactive behavior is culturally dependent (Claes & Ruiz-Quintanilla, 1998) yet findings on cultural traits and proactiveness have yielded mixed results (Carson et al., 2014). The next section relates each cultural orientation to the proactiveness construct.

### **2.5.1 Ambiguity intolerance and proactiveness**

The central thrust of this dimension is that the future is unknowable and always will be (Hofstede, 1980). Low uncertainty-avoidant cultures hold the notion that conflict and competition can co exist constructively in an environment of fair play, while uncertainty-avoidant cultures, view conflict and competition as dysfunctional and thus need to be avoided (Mueller & Thomas, 2001). Further, in high ambiguity-intolerant cultures, anxiety levels are high, thus there is need to evade attitudes and conduct that promote such anxiety (Hofstede, 1983). Entrepreneurs in low uncertainty avoidance societies will most likely spot more opportunities in the external environment (and hence be more proactive) compared to those in high uncertainty-avoidant cultures (Mueller & Thomas, 2001). In addition, communities that harbor high degrees of ambiguity intolerance are usually resistant to innovation, and prefer a stable environment (Kreiser et al., 2010). Proactive behavior is a characteristic of people who perceive situations in a manner that enables them to take action in a desired direction rather than be passive onlookers who wait for changes to engulf them (Fryer & Payne, 1984). Proactive behaviors have many benefits, which include creation of employment and other developmental efforts (Claes & Ruiz-Quintanilla, 1998), are valuable in the creation of career networks, management of challenging episodes, adjustment and psychological stability (Mirvis & Hall, 1996), all of which are relevant and major variables in an entrepreneurial career. Claes and Ruiz-Quintanilla (1998) posit that high uncertainty avoidance hinders the development of divergent opinions, is a barrier to innovative ideas, self-esteem and belongingness, all of which combine to inhibit proactive behavior, thus:

*H<sub>6</sub>: Ambiguity intolerance will have a negative impact on proactiveness*

### **2.5.2 Power distance and proactiveness**

The major premise on which the power distance variable is based is that people are not equal in life, physically and intellectually and some communities permit these inequalities to develop into inequalities, yet other societies downplay these inequalities as much as possible (Hofstede, 1983). These inequalities put power and resources in the control of those in privileged positions in high power distance cultures, hence the individual is not given an opportunity to do what he/she wants, but is given guidance (by those with the power) to do what is socially right and proper (Joy & Kolb, 2009). Thus people in such cultures lack both the freedom and autonomy to walk independent paths (Kreiser et al., 2010). This should have profound impact on entrepreneurial opportunities and intentions of the less privileged. Busenitz and Lau (1996) posit that power distance promotes entrepreneurial activity. In agreement with this view and based on social cognition theory (Fiske & Taylor, 1991) and expert information-processing theory, experts possess knowledge about certain phenomena that enables them to outplay other people who may not possess such knowledge (Leddo & Abelson, 1986). Mitchell, Smith, Seawright and Morse (2000) propose three types of knowledge scripts. First are arrangement scripts which refer to having and making use of exclusive social contacts (Aldrich & Zimmer, 1986) access to finances and human capital plus other resources that facilitate venture formation (Bull & Willard, 1993). Second are the willingness scripts that emphasize proactive behavior, i.e. a look out for opportunity (Krueger & Brazeal, 1994; Sexton & Bowman, 1985). Third are the ability scripts which refer to among others abilities, experience, and attitudes that enable start-up (Bull & Willard, 1993). These scripts are influenced by cultural norms in particular individualistic behavior and power distance, and Mitchell et al. (2000) propose two situations in which power distance influences entrepreneurial activity, through its action on the said scripts. In the first situation, power distance positively influences arrangement, ability and willingness cognitions for those in positions of power, since it may be easy for them to acquire the necessary resources given that in these societies 'who you know' matters more than capability. In the second situation, the less privileged may view venturing as something which only the elite can do, and hence do not develop the scripts for scanning and evaluation of opportunities. Further, the lower end people may not have the resources /experiences (knowledge since it is the preserve of the elite) that promote the development of venturing scripts as these are the preserve of the elite.

The current study agrees more with the second position, because students (who are the subject of inquiry) are not in positions of power and usually lack resources. As already explained in image theory (Beach & Mitchell, 1987), culture determines the self, rules and social status, connectedness to other people; fear of important others, etc. – all of which can have an impact on the level of inequalities in a society, thus:

*H<sub>7</sub>: Power distance will have a negative impact on proactiveness*

### **2.5.3 Masculinity and proactiveness**

According to Buss (1987), proactive individuals deliberately make changes by either creating new circumstances or making alterations to existing ones. Therefore, proactive behavior is focused on setting effective change goals, and is accomplishment-focused (Bateman & Crant, 1993). Masculine societies encourage proactive behavior (Kreiser et al., 2010) and are driven by money, value status symbols and conspicuous consumption (Hofstede, 2001). Similarly, Claes and Ruiz-Quintanilla (1998) assert that masculinity is associated with challenging work, competition among colleagues, esteem in the eyes of others and performance. Hofstede (1983, p.85) summarizes “*in masculine societies, the traditional masculine social values permeate the whole of society –even the way of thinking by women*”. Such values reflect show-off behavior, being a performer and an achiever. Consequently a masculine cultural orientation is likely to be proactive given their high drive for progress and achievement, which leads to the following hypothesis:

*H<sub>8</sub>: Masculinity will have a positive impact on proactiveness*

### **2.5.4 Independence and proactiveness**

Researchers argue that communities that value social mobility between classes, encourage independent views, detest conformity, and have a desire to accumulate wealth (Sexton & Bowman, 1985) are likely to witness more entrepreneurship as they attach value to sovereignty and proactiveness (Lee & Peterson, 2000). Conversely, the relationship between individualism

and proactiveness has been contentious in the literature, since proactive behavior is exhibited by both collectivist values (Bateman & Crant, 1993) and by individualistically oriented people (Tu et al., 2011). At a cultural and firm level, this could explain the mixed findings between individualistic ideals and proactive conduct. Some researchers find an affirmative association (Shane, 1993), while others establish a negative one (Kreiser et al., 2010). Despite this contention we hypothesize thus:

*H<sub>9</sub>: Independence will have a positive impact on proactiveness*

### **2.5.5 Interdependence and proactiveness**

Studies on proactive behavior in firms have shown that employees with a collective cultural orientation get along very well with superiors and subordinates (Boyacigiller & Adler, 1991), while other studies demonstrate that individuals with collective cultural tendencies not only avoid conflict, but they also have the capacity to engage in constructive debate (Tjosvold, Wu, & Chen, 2010). Since proactive people are good at socializing and networking with others (Carson et al., 2014), collective culturally oriented students are likely to be proactive. This assertion is corroborated by a number of studies carried out at a societal level, as exemplified below.

Inglehart (1998) established that qualities of the Protestant work ethic (prudence, effort and hard work) were negatively correlated with Hofstede's individualism, and Schwartz's (1994a) affective and intellectual autonomy. In line with these findings, Smith and Bond (1998) established that views linked to the Protestant work ethic are greater in collective societies and are associated with hierarchical distance. This is contrary to the situation in individualist and low power distance countries, where self-actualization and quality of life are given priority instead of work and material success (Basabe & Ros, 2005). The presence of Protestant work ethic values in less-developed, high power distance collective societies is in tandem with a high presence of competitive attitudes in these societies (Lynn & Martin, 1995). According to Basabe and Ros (2005), higher competitiveness, internal locus of control and presence of Protestant work ethic values shows that elitist groups (such as students and managers) in poor developing countries harbor these values. The reasoning here is that the scarcity of resources, accompanied by the need to sustain life in an environment of inequality breed strong group cohesion,

introduce an element of competitiveness and stimulation of individual endeavor and reward (Basabe & Ros, 2005), hence:

*H<sub>10</sub>: Interdependence will have a positive impact on proactiveness*

## **2.6 Ability Perceptions**

### **2.6.1 Achievement motivation and entrepreneurial orientation**

Premised on the Theory of Planned Behavior, this section examines the impact of achievement motivation on risk taking and proactiveness, and the influence of achievement motivation on intention (as a correlate of self-efficacy). Self-efficacy theory (Bandura, 1986) and other theories of self-perceptions of ability (Covington, 1992) maintain that self-efficacy beliefs are correlated positively to the level of cognitive engagement in a task (Ames & Archer, 1988). Other studies show a causal link between perceptions of ability and achievement situations (Pajares & Miller, 1994).

Achievement motivation theories have mostly embraced a psychological perspective (Trumbull & Rothstein-Fisch, 2011), linking motivation to personal goals (Dweck, 1986). People may have task goals (with a focus of improving mastery over certain situations) and ability or performance goals with a focus on demonstrating ability. Sagie et al. (1996) found in a five-country study that achievement motivation was stronger in individualistic societies than collective ones because individuals considered success as their personal success. Individuals who harbor a high need for achievement prefer circumstances where they have some element of control over a given process, face low chances of failure, and are able to obtain good feedback on how they are performing (McClelland, 1960). Such people are likely candidates for entrepreneurship since it provides the said preferences better than other career options. Meta-analyses by Collins, Hanges and Locke (2004) find that achievement motivation is correlated with pursuit of an entrepreneurial career and to the accomplishment of entrepreneurial endeavors. Similarly, Stewart and Roth (2007) established that entrepreneurial people exhibit higher achievement motivation and dependability than managers. Given that individuals favor roles that are consistent with their values, it follows that those high-achievement motivation-

oriented students will prefer entrepreneurship. This is collaborated by Florin, Karri and Rossiter (2007) who conclude in a study that the most powerful correlate of entrepreneurial intentions among students was achievement motivation.

*H<sub>11</sub>: Achievement motivation is positively related to risk taking*

*H<sub>12</sub> Achievement motivation is positively related to proactiveness*

*H<sub>13</sub> Achievement motivation is positively related to intention*

## **Achievement motivation and LGO**

Achievement motivation and LGO are closely related. Research shows that need for achievement is an important dispositional antecedent of both mastery (LGO) and performance approach orientations (Fryer & Elliot, 2007). This assertion is strengthened by the fact that achievement striving, a sub component of conscientiousness (see chapter 1) leads to high levels of LGO (Van Yperen, 2006). Further, “*people with high self-efficacy, who are confident in their abilities should be more open to increasing their knowledge*” (Bipp, Steinmayr, & Spinath, 2008 p.1459). The section below outlines the relationship between LGO and entrepreneurial intentions.

### **2.6.2 Learning goal Orientation and Entrepreneurial orientation**

Work on goal orientation was initiated by Dweck (1986), who conceptualized the broader goals pursued by people as a personality dimension. He argues that individuals have goal orientations, i.e. they utilize a mental framework to put meaning to and react to achievement situations. Research has established that goal orientation is linked to one’s notion of ability (Dweck & Leggett, 1988) and is composed of two dispositional goal orientations, i.e. a learning goal orientation and a performance goal orientation. People with the former have an incremental view of their ability, i.e. ability is a quality that they can develop by means of hard work. They take effort to be a path to success, a means for activating their ability in order to accomplish tasks. Further, amid turbulent competitive environments, Learning Goal-Oriented people continue to pursue challenging goals, try different strategies and are persistent (Dweck, 1986). On the other hand, people who exhibit a performance goal orientation tend to hold an entity

theory of ability (Bell & Kozlowski, 2002), which holds that their ability is a fixed and an uncontrollable personal trait, and are preoccupied with getting a favorable evaluation of their competencies, thus a difficult task is viewed as a threat due to its huge potential for failure which would demonstrate their inability. Therefore, these people often refrain from any attempt to implement a task, account for inability in negative terms and their interest in the given task declines.

The role of a learning orientation in influencing career choice is likely to be high in careers embedded in uncertainty, like entrepreneurship (De Clercq, Honig, & Martin, 2013). The literature shows that people with a learning goal orientation have a high risk-taking propensity, endeavor to master tasks and specific challenges, and, in this way, accept short-term setbacks as part of the learning process in mastering their tasks (Elliot & McGregor, 1999). Since meta-analyses affirm significant positive association between achievement motivation and learning goal orientation (Payne, Youngcourt, & Beaubien, 2007), then:

*H<sub>14</sub>: Learning goal orientation is positively related to risk taking*

*H<sub>15</sub>: Learning goal orientation is positively related to proactiveness*

*H<sub>16</sub>: Learning goal orientation is positively related to intention*

## **2.7 Section two of the study model**

### **2.7.1 Entrepreneurial orientation and entrepreneurial intentions**

Miller (1983) is credited for introducing the EO concept. An examination of the literature reveals several disagreements in terms of its nature, dimensionality, nomological network within which it exists, appropriate definitions (Covin & Lumpkin, 2011) as well as divergent views on level of analysis (Krauss et al., 2005). Therefore the next section explains why EO is regarded as an individual level construct in the current study.

### 2.7.2 Entrepreneurial orientation as an individual level construct

Most researchers contend that EO is a firm level occurrence (Lumpkin & Dess, 1996). Conversely other researchers posit that entrepreneurship is impossible in the absence of the entrepreneur and that it is useful to study entrepreneurship at the individual level (for example using a trait-based approach) since in a strict sense, entrepreneurship is a concept operational at the individual level (Wennekers & Thurik, 1999). Entrepreneurial orientation could be rooted in the Austrian school of thought, which is based on Hayek's (1942) concept of methodological individualism where societal occurrences emanate from the motivation and deeds of individuals. In this view, Schumpeter (1934) utilizes a personal level of analysis to describe entrepreneurs as economic champions whose main occupation is to come up with new combinations of resources, during which they stand at the center of the whole process.

In agreement with these and other authors, this study is anchored on the individual level of analysis for several reasons. First, research in strategic management has often been classified into the two broad categories, i.e. research dealing with content and research dealing with the process by which strategy is created (Rajagopalan, Rasheed, & Datta, 1993). According to Frese et al. (2002), as long as researchers are primarily interested in strategy content, such as cost strategy, differentiation, etc., they do not need to consider psychological issues (individual level analysis). Conversely, once the strategy process becomes important, then psychological issues need to be put into consideration because process issues are concerned with how entrepreneurial actions are regulated.

Second, Frese et al. (2002) argue that the main actor in a micro business is usually the founder/owner. This person is the one who sets up the business and thus dominates its processes. Researchers affirm the importance of the founder because he/she determines the venture's strategy, cultural values (Schein, 1983), and mission. The fundamental role of the in charge in an organization is exemplified when, Wiklund (1999, p.41) eliminates firms from his study if the in charge was deposed: *"It seems perilous to attribute outcomes of a firm to an individual no longer working there."* Consistent with this view, numerous entrepreneurship studies view the firm as an extension of the founder (Lumpkin & Dess, 1996), and making the characteristics

of the entrepreneurs the predictors of the firm's performance (Bruderl & Preisendorfer, 2000). Practically, many SMEs are owned and operated by individual owners or are operated by a single decision maker. In this case, the firm's EO is matched with that of an individual and considering the pre-nascent stage of the venture, it is obvious that most of the cognitive processes (such as reasoning and planning) during this stage is the work of the individual entrepreneur (Kollmann & Kuckertz, 2007). This position is similar to that of Frese et al. (2002), who posit that in the beginning of any business, the entrepreneur identifies the first employees and hence the success of the firm depends on his/ her actions. Even if entrepreneurial teams are considered, it can be assumed that the numerous teams are initiated and led by an entrepreneur, who may be equivalent to the firm at some point in time (Kollmann & Kuckertz, 2007). Lastly, a number of studies of small firms depend on the views of a single respondent who speaks on behalf of the entire organization (Chandler & Hanks, 1993). All these justify the use of upper echelons theory in the current study.

Third, the widely used entrepreneurial orientation scale (Covin & Slevin, 1986) focusing on three dimensions risk-taking, innovation and proactiveness is based on responses by mostly founder managers and chief executives (Zahra, Jennings, & Kuratko, 1999). Krauss et al. (2005, p.4) argue that "*while not emphasized explicitly, this measure is actually a psychological assessment of individual entrepreneurial orientation*". Miller and Friesen (1982) link a firm's innovation and risk taking to the profiles of the top managers, their goals and temperaments. In agreement with this position, Basso, Fayolle, and Bouchard (2009) observe that the characteristics of the firm's orientation and its intensity are measured by an analysis of its executive's behavior. They add (p.317): "*It is the angle of inclination of the top managers that describes a firm's orientation.*"

Fourth, Krauss et al. (2005) argue that the criteria for measuring firm level EO have not been met in many studies. For example, to gauge how entrepreneurial firms behave, observations must be made at a number of levels within the firm coupled with amalgamation of individual data at an organization level and establishing whether managers at different levels agree with the findings (Klein & Kozlowski, 2000), which is not the case in many studies. Having made a case

for EO as an individual construct, the study proceeds to link EO and entrepreneurial intention in the next sections.

### **2.7.3 Proactiveness and Entrepreneurial intention**

Proactivity is fundamental since it is more to do with the execution phase of entrepreneurship (Lumpkin & Dess, 1996). At firm level, Becherer and Maurer (1999) established that Chief Executive Officer proactive scores were correlated with aggressiveness when firms scanned the environment for opportunities and made bold market decisions. Analyzing the data further, they showed that proactivity was correlated with starting a business instead of acquiring an existing one, as well as with and with the number of firms set up.

At an individual level of analysis, Crant (1996) showed an affirmative association between a proactive personality and intention to start a business. Other important individual level predictor variables related to proactiveness include knowledge, skills and ability (Frese & Fay, 2001). Proactive people are good at networking and socializing with other people because they realize the importance of collaboration in achieving positive work outcomes because to them, collaboration is a means to achieving their goals (Carson, et al., 2014), hence:

*H<sub>17</sub>: Proactiveness will be positively associated with entrepreneurial intention*

### **2.7.4 Risk taking and entrepreneurial intention**

Meta-analyses by Zhao et al. (2010) focusing on entrepreneurial intentions and by Stewart and Roth (2007) matching entrepreneurs to managers, examine risk-taking in different contexts and varying dimensions, yet both concur that risk-taking is a key variable for entrepreneurial action to take place. Rauch, Wiklund, Frese, and Lumpkin (2004) affirm this position, when they find an affirmative link between risk-taking and entrepreneurship. Nonetheless, whereas risk-taking is possibly an internal attribute, risk behavior is a probable consequence of the circumstances in which entrepreneurship takes place or on the perceptions of the environment (Sitkin & Weingart, 1995), among other things.

*H<sub>18</sub>: Risk taking will be positively associated with entrepreneurial intention*

## **2.8 Section three of the study model :Moderator variables**

This section discusses the moderating role of entrepreneurial competencies (knowledge and networks) as well as optimism on the relationship between EO variables and entrepreneurial intentions.

### **2.8.1 Entrepreneurial competencies**

Entrepreneurial competencies are embedded in the Resource Based view of the firm (Penrose, 1959), which recognizes that managers may have both entrepreneurial and managerial competencies but at different levels. The resource based view holds that “*competitive advantage derives from the resources and capabilities a firm holds, that are valuable, rare, imperfectly imitable, and are not substitutable*” (Barney, Wright, & Ketchen, 2001 p.625).....“*these include entrepreneurial alertness, entrepreneurial knowledge and ability to coordinate resources*” (p.628). Brophy and Kiely (2002 p.167) define competencies as “*Skills, knowledge, behavior and attitudes required to perform a role effectively*”. More specifically, entrepreneurial competence is defined as “*the ability to identify and pursue entrepreneurial opportunities within a specific position and context*” (Lans, van Galen, Versteegen, Biemans, & Mulder, 2014 p.39). A major facet of competencies is that “*they facilitate the accomplishment of goals and objectives*” (Ahmad, 2007 p.21).

Given that many studies have been done on entrepreneurial competencies in different contexts, the list of competencies generated by this research effort is quite large, hence various models of competencies are found in the literature. This study is anchored on the Man (2001) model that is composed of seven dimensions of entrepreneurial competencies, although only learning and relational competencies are considered in this study. This is because learning is related to knowledge and experience, while experience is one of the background factors of the perceived behavioral control dimension (PBC) in the Theory of Planned Behavior (Ajzen, 1985). On the

other hand, networking is associated with both self-construals in image theory, and is also associated with the female gender. The characteristics of the entrepreneurial competencies in the current study are presented in Table 3 below:

**Table 3: Description of study competencies**

Behavioral definition	Example of behavior
<b>Relationship Competencies:</b>	
Competencies related with person-to-person or individual-to-group interactions, such as building a context of cooperation and trust, using contacts and connections, persuasive ability, communication and interpersonal skills (Man, Lau, & Chan, 2001).	Building relationships and networks, communicate, negotiate and manage conflict effectively.
<b>Learning competencies:</b>	
Competencies related to the ability to learn from various means, learn proactively, keep up to date in the related field, and apply learned skills and knowledge into actual practices (Man, 2001).	Learn from past mistakes, failure, own experience, and from other people, apply learned theories and knowledge into real situations.

**Source: Man (2001)**

The choice of Man’s model for this study is premised on the fact that *“Man’s model is one of the most comprehensive of the entrepreneurial competency models.....behaviors identified in most other studies could be categorized according to competency areas defined by Man”* (Ahmad, 2007 p.28).

### 2.8.2 Relationship competencies

Social capital refers to “*assets in networks*” (Lin, 1999 p.28) and is largely influenced by the culture of a society. The notion behind social capital is “*invest in social relationships with expected returns*” (Lin, 1999 p.30). The entrepreneur must “*have a sizeable social capital in terms of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit*”(Nahapiet & Ghoshal, 1998 p. 243). A major facet of social capital is relational capital, consisting of elements such as trust, collaboration, reciprocity, coordination and team orientation that are characteristic of different individuals. Social capital and networks are premised on the notion that socio exchanges are socially embedded (Granovetter, 1985). In this social embeddedness perspective, entrepreneurship and the resources that go with it are influenced by social norms and values (Thornton et al., 2011).

Networking is strongly correlated with a proactive entrepreneurial orientation (Morrison, 2002). In the first place, entrepreneurs make use of informal networks (family, friends) to assist them in various activities, thus opportunities will come to those who are well positioned within such networks (Aldrich & Zimmer, 1986). For example, Khavul, Bruton and Wood (2009) established that entrepreneurs in East Africa rely on strong family ties to establish their businesses. According to Timmons and Spinelli (2007), accuracy in social perception, skills in impression management, persuasion and social adaptability are key variables in the success of a given enterprise. Secondly, Blesa and Ripollés, (2005) assert that personal networking and particularly the knowledge obtained from these networks do influence EO and growth of the enterprise. For example, constructing relationships and networks in business is a sure way of controlling risks in unstable circumstances (Ahmad, 2007).

*H<sub>19</sub>: Networks will positively moderate the relationship between proactiveness on one hand and entrepreneurial intention on the other*

### **Networking and risk:**

A number of studies support the view that networking helps firms to mitigate risk (Kiprotich, Kimosop, Kemboi, Chepkwony, & Kemboi, 2015). In particular Lawal, Adegbuyi, Iyiola, Ayoade, and Taiwo (2018, p.11) in a study of Nigerian SMEs state “*Considering the fact that risk-taking and informal networks are integral components of the informal institutional environment, the ability of SME managers to accept and manage risks in addition to seizing opportunities arising from informal networks could guarantee successful performance in the face of uncertainties*’

Similarly Danso, Adomako, Damoah , and Uddin (2016 p.174) established that “ *the relationship between entrepreneurs’ risk-taking propensity and the performance of their firms is more positive for those with high, as opposed to low, business network ties*”, hence:

*H<sub>20</sub>: Networks will positively moderate the relationship between risk taking on one hand and entrepreneurial intention on the other*

### **2.8.3 Learning competencies: Knowledge and opportunity identification**

Knowledge in the current study is based on the Knowledge Based View (Conner & Prahalad, 1996), which is an extension of the Resource Based View of the firm (Barney et al., 2001; Penrose, 1959). The Knowledge Based View holds that knowledge is a primary resource in the quest by the entrepreneur to obtain successful entrepreneurial outcomes, especially in the start-up phase of the venture (Sullivan & Marvel, 2011).

Knowledge can be gained from engagement in the practice of certain behaviors and from studying. This means that are many more sources and types of knowledge available than just personal practice (Sommer & Haug, 2011). Kogut and Zander (1992) delineate between information (a reference to what something means) and know-how. Knowledge can also be viewed as tacit or explicit, with the former referring to knowledge that can be expressed in numbers and can be shared, while the latter refers to knowledge that is not easily shared, such as insights, intuition and hunches among others.

The link between entrepreneurial orientation and knowledge is an issue on which many scholars are agreed. Wiklund and Shepherd (2003) urge that future opportunities can be found by combining entrepreneurial orientation and knowledge management. To start with, prior information, such as work experience or education hastens the entrepreneurs' capacity to understand and apply information such that only those who possess this knowledge can apply it (Roberts, 1991). The possession of such knowledge makes entrepreneurs able to identify opportunities not envisioned by other people (Venkataraman, 1997). Thus, while opportunity recognition and development is the cornerstone of entrepreneurship (Pech & Cameron, 2006), only a few people will have access to knowledge that can enable the discovery of this opportunity (Shane, 2000).

Three major dimensions of prior knowledge facilitate the discovery of an opportunity. These are prior knowledge of markets, prior knowledge of ways to serve markets, and prior knowledge of customers' problems (Shane, 2000). This research project is premised on prior knowledge of markets. Generally, the more individuals consciously know about a certain behavior, the higher their likelihood of performing that behavior, which is why entrepreneurial knowledge is an important entrepreneurial resource (Barney et al., 2001). Taking the start-up process as an example, McMullen and Shepherd (2006) posit that entrepreneurs and non-entrepreneurs differ in the possession of applicable knowledge that reduces perceived uncertainty to a point where entrepreneurs believe they have identified a viable opportunity.

Evidence exists to back up the proposition that an element of experience in the decision making process influences behavior (Norton & Moore, 2006). People learn from experience, just as knowledge can be acquired from observation (Minniti & Bygrave, 2001). Experience (as a form of prior knowledge) is one means by which people ready themselves for start-up, and Ajzen and Madden (1986) consider past behavior and experience to be part of perceived behavioral control in the TPB. Krueger (1993) established that experience had a positive effect on intention and that a relationship exists between the level of experience which an individual holds and intention. Taken together, these findings indicate that exposure to different types of experience could have an impact on the likelihood of performing a behavior, especially if the experiences were positive (Sommer & Haug, 2011). Many entrepreneurs prepare their paths by gaining experience from

their self-employed parents or through job experiences (Timmons & Spinelli, 2007). In light of this discussion, it is hypothesized thus:

*H<sub>21</sub>: Prior knowledge of markets will positively moderate the relationship between risk taking on one hand and entrepreneurial intention on the other*

*H<sub>22</sub>: Prior knowledge of markets will positively moderate the relationship between proactiveness on one hand and entrepreneurial intention on the other*

#### **2.8.4 Optimism**

This variable is based on Value Expectancy Theory (Lewin as cited in Wingfield, Tonks, & Klauda, 2009) which begins with the notion that behavior is targeted at achieving certain goals in life (Carver & Scheier, 1998). Rose and Sherman (2007) refer to expectancies as our beliefs about the future, while Higgins (2007) refers to value as the relative worth of a commodity and recognizes value as a motivational force and not just a belief (Wingfield et al., 2009).

Optimism is a potential moderator of the link between entrepreneurial orientation variables and entrepreneurial intentions. Scheier and Carver (1985) define optimism as a tendency to accept as true that one will experience positive as opposed to negative life events. According to Kahneman (2011), having an optimistic bias in life is both a blessing and a risk because optimistic people, like inventors and entrepreneurs, make decisions that have an impact on the lives of others. Optimistic people have confidence that sustains a positive effect, enabling them to acquire resources from other people, raise the morale of their workers, and enhance the chances of prevailing. Optimists entreat the external view that examines specific causes, while pessimists rely more on the internal view that examines more general causes (Buchanan & Seligman, 1995). Optimism has a direct affirmative link on life satisfaction, and indirectly influences a fostering of relationships through self-esteem (Leung et al., 2005). An optimistic temperament encourages persistence in the face of obstacles (Kahneman, 2011) and is thus an important virtue in the domain of entrepreneurship. It is expected that students who are optimistic will most likely have strong entrepreneurial orientations.

*H<sub>23</sub>: Optimism will positively moderate the relationship between risk taking and intention*

*H<sub>24</sub>: Optimism will positively moderate the relationship between proactiveness and intention*

## **2.9 Explanatory variables**

This section presents the explanatory variables of this study, which include experience, fear of failure, modernity and gender. All these are neither exogenous variables nor endogenous variables in this study, but are grouping variables that together help to explain differences in variables that are related to entrepreneurial behavior among the study population. Experience, fear of failure and modernity are briefly outlined in chapter 1, while country historic background, Hofstede's cultural rankings, economic indicators and gender indicators by country are provided in Table 4 below. Motivation of the study hypotheses by gender follows in the section there after.

### **2.9.1 Historical background, cultural rankings and economic indicators of the study countries**

The three study countries (Kenya, Tanzania, and Uganda) are the original members of the East African Community (EAC), which broke down in 1977 for mainly political reasons. Kenya and Tanzania speak mainly the Swahili language and though not the official language in Uganda, Swahili is also spoken in some sections of Ugandan society.

Economic and human development aspects of the three countries differ in some respects (United Nations Development Program [UNDP] 2016). Table 4 below indicates that Kenya is the regional powerhouse with a GDP per capita (current US \$, 2016) of 1445.4, followed by Tanzania \$879.2 and Uganda \$615.3. With regard to ease of doing business, Tanzania has the most conducive environment (despite its former anti-entrepreneurship stance) with a score of 132, followed by Uganda 115, and lastly Kenya 92. However, in terms of ease of starting a business, Uganda scores highest 165, followed by Tanzania and lastly Kenya 116. Regarding human development, Kenya is ranked among the medium-developed countries with a score of 0.555, while Tanzania and Uganda are ranked as low-developed countries with a score of 0.531 and 0.493 respectively. However, when it comes to gender inequality scores (the lower the better), Uganda scores best of the three countries with 0.522, followed by Tanzania 0.544 and

lastly Kenya 0.565. These high scores mean that gender inequality is a problem faced by women in all the three countries.

Thus the economic indicators depict Kenya as the more economically developed country of the three. It is important to note that as economic growth rises, the conditions that support entrepreneurship also do improve (Wilken, 1979). On the other hand, “societies *that are stagnating economically offer limited market incentives, and the level of capital accumulation is too small to enable potential entrepreneurs take advantage of the limited opportunities that exist*” (Lee & Peterson, 2000 p.407).

**Table 4: Country socio-economic indicators**

Indicator	Kenya	Tanzania	Uganda
GDP Per capita (current US\$) 2016 <sup>1</sup>	1445.4	879.2	615.3
Human Development index (2015) <sup>2</sup>	0.555	0.531	0.493
Gender Inequality Index <sup>3</sup>	0.565	0.544	0.522
Country Rank (Gender inequality)	135	129	121
Ease of doing business index <sup>4</sup>	92	132	115
Ease of starting a business rank	116	135	165
Power distance <sup>5</sup>	64	64	-
Individualism <sup>5</sup>	27	27	-
Masculinity <sup>5</sup>	41	41	-
Uncertainty Avoidance <sup>5</sup>	51	51	-

Source: UNDP: Human Development Report 2016

**Notes:**

1. GDP per capita (Current US dollars 2016) <http://data.worldbank.org>
2. Human Development Index

3. Gender Inequality Index: A composite measure reflecting inequality in achievement between men and women in three dimensions, reproductive health, empowerment and the labor market. It ranges 0-1, with 0 meaning that there is no inequality, while 1 means there is 100% inequality.
4. Economies are ranked on their ease of doing business 1-190. A high rank shows the regulatory environment is more favorable to startup and operating of an enterprise ([www.doingbusiness.org](http://www.doingbusiness.org)). The rankings and economies are benchmarked to June 2016.
5. Hofstede's website [www.geert-hofstede.com](http://www.geert-hofstede.com)

Culture is related to the social/political history of a society (Hofstede, 1980). As per the table above, Kenya and Tanzania are rated the same on Hofstede's four dimensions, namely power distance, individualism, masculinity, and uncertainty avoidance. Thus, although Uganda is not rated, by implication it is taken to be the same as these two countries. Generally, these three countries can be taken to be collective, high power distance and high uncertainty-avoidant societies. The table also depicts some gender related coefficients, which help to throw light on female entrepreneurial endeavors as explained below.

## **2.9 Gender, culture and EO**

The difference between sex (rooted in biology) and gender (role ascriptions through culture and social norms) is of paramount importance in the social sciences (Ahl, 2006). While sex refers to whether one is male or female at birth, gender refers to actions of people when they assign connotations to male and female (Bruni, Gherardi, & Poggio, 2004). Put differently, gender is something that "we do" (Gherardi, 1994) and can consequently un-do and re-do (Butler, 2004). Bruni et al. (2004) offer an ethnographic account of gender as an entrepreneurial practice, and entrepreneurship as a gender practice.

Cultural values give rise to gender roles and stereotypes which are used as a basis for determining occupations that are considered suitable for each sex (Shinnar, Giacomini, & Janssen, 2012). Gender stereotypes are the widely held views about the elements that define a given sex (Eagly, Wood, & Dickman, 2000) and are both descriptive (espousing what men and women really are) and prescriptive, outlining norms and behaviors that are acceptable for each sex (Heilman, 2001). Thus gender stereotyping leads to assigning jobs that are deemed suitable for each sex i.e. feminine or masculine (Heilman, 1983) and in this way contributes to the gender gap or inequality between males and females in various respects. Research shows that

entrepreneurial intent is greatly influenced by how each gender perceives itself rather than by the sex of the person (Gupta, Turban, Wasti, & Sikdar, 2009). In fact as already stated, Santos et al., (2010) postulate that female students' entrepreneurial intent and perceptions were more greatly influenced by their socio cultural environment compared to male students. The next section highlights the impact of cultural orientation variables on risk taking and proactiveness by gender.

### **2.9.1 Gender, ambiguity intolerance and risk taking/proactiveness.**

Do the two genders have the same level of ambiguity intolerance? In a study in Slovenia on gender, Bertoneclj and Kovac (2009) find no gender difference in opportunity identification, risk taking innovation or in the capacity to develop plans and abide by guidelines. Consequently females are as endowed with the foregone attributes as are men, and whether they apply them could be dependent upon economic and socio-cultural contexts. Similarly, Hofstede (2001) argues that, since men and women face the same rule orientation, then there should be no difference between these two genders on the impact of uncertainty avoidance, hence:

*H<sub>25</sub>: There will be no significant difference between males and females on the relationship between ambiguity intolerance and proactiveness*

*H<sub>26</sub> There will be no significant difference between males and females on the relationship between ambiguity intolerance and risk taking*

### **2.9.2 Gender, power distance and risk taking**

In his cultural values theory, Schwartz (1994b) proposes two types of individualism and two types of collectivism. With regard to individualism, the first dimension he proposes is mastery, which promotes self-enhancement and is characterized by among others, assertiveness, competence, and risk-taking, while the second dimension is social change (intellectual and affective autonomy), which gives priority to the thoughts and ideas of others. On the other hand, collectivism is divided into egalitarian commitment which socializes people to voluntarily

cooperate with others and to be concerned with their welfare, while conservatism aims at maintaining the status quo. In their study comparing different cultural theories, Basabe and Ros (2005) conclude in line with Schwartz's (1994a) theory that power distance is positively related to conservatism and negatively correlated with affective and intellectual autonomy. Given the inherent inequality between men and women, particularly in collective societies such as the study countries, power distance will most probably impact negatively on women's risk taking and proactiveness. This assertion is supported by Glick (2006), who finds a positive correlation between power distance and gender inequality, arguing that countries rated high on power distance also exhibit high gender inequality. In such countries, not only does gender inequality exist, but it is also legitimized and enforced. This gender inequality is likely to translate into a difficult environment and suppress women entrepreneurship, hence:

*H<sub>27</sub>: The impact of power distance on proactiveness will be positive for male students and negative for female students*

*H<sub>28</sub>: The impact of power distance on risk taking will be positive for male students and negative for female students*

### **2.9.3 Gender, interdependence and risk taking/proactiveness**

It is widely believed that characteristics that are suitable for the business world are deemed masculine (Heilman, 2001), while entrepreneurship itself is culturally encoded as masculine (Bruni et al., 2004). In high-masculinity societies, gender roles are quite distinct, depicting a gap between men and women's values (Hofstede & McCrae, 2004). The current study significantly notes that a more traditional gender-role ideology is endorsed in the study countries (Mirembe & Davis, 2001). Theoretically, women naturally value social goals such as relationships, being of help to other people or the communal label (Eagley, 2009) while men are ego-oriented and assertive or the agentic label. Simply put, "*men deal with facts, women deal with feelings*" (Hofstede, 1980 p.299). Williams and Best (1990) in a 14-country study established that more liberal gender role attitudes should be found in individualistic and economically developed societies, rather than in collective under-developed societies. In this regard, a more

interdependent sense of self should place an emphasis on traditional conceptions of men as masculine (strong, assertive) and women as feminine (passive, dependent).

*H<sub>29</sub>: Males and females differ significantly on the impact of interdependence on proactiveness, with males scoring higher than females*

*H<sub>30</sub>: Males and females differ significantly on the impact of interdependence on risk taking, with males scoring higher than females*

#### **2.9.4 Gender, Independence and risk taking/proactiveness**

In a study on male/female emotions, Fischer and Manstead (2000) established that gender differences in duration of emotion did not vary as a function of individualism. Archer and Waterman (1988) carried out a study to examine whether the genders express psychological individualism dimensions comparably (i.e. personal identity, self-actualization, internal locus of control, and principal moral reasoning). Their study found no basis for the assertion that gender differences exist. In line with these findings, Hofstede (2001) argues that no classified variations in individualism between females and males exist, hence:

*H<sub>31</sub>: There will be no significant difference between males and females on the relationship between independence and proactiveness.*

*H<sub>32</sub>: There will be no significant difference between males and females on the relationship between independence and risk taking.*

#### **2.9.5 Gender, EO and Entrepreneurial intention**

The literature on gender shows that men and women are dissimilar in the way they perceive risk (Gustafson, 1998). Sexton and Bowman-Upton (1990), for example, established that male entrepreneurs were more energetic and risk-taking compared to females. Becker and Nachtigall (1994) indicate that risks being socially constructed may be differently perceived by men and

women. This difference is because gender roles are the basis for developing beliefs of which behavior is appropriate for each sex (Ratajack, 2011). In summary, gender perceptions in risk-taking reflect differences in activities and social roles, as well as unequal power relations. According to role congruity theory (Eagly & Karau, 2002), assertiveness is negatively associated with female entrepreneurship. In light of this discussion, the following hypotheses are put forth:

*H<sub>33</sub>: The relationship between risk taking and intention will be significantly higher in males than in females*

*H<sub>34</sub>: The relationship between proactiveness and intention will be significantly higher in males than in females*

### **2.9.7 Gender and perceptions of ability**

The dual impact model (Abele, 2000) is an attempt to clarify gender differences in career-related processes. It argues that one's sex gives rise to a gendered self-conceptualization emanating from gender roles ascribed by society which in turn impacts upon cognitive variables that are correlated with career choice e.g. self-efficacy, expectations and goals. As explained in chapter 1 and following Nicholls (1984), achievement motivation is referred to as behavior that demonstrates high ability in this study, and is highly correlated with self-efficacy and perceived behavioral control. Bandura (1997) refers to self-efficacy as the powerful belief in one's skills and capacity to embark on a project and complete it successfully. It is a feeling of self-efficacy rather than mere ability that drives people toward entrepreneurship (Markman, Balkin, & Baron, 2002). Similarly, Thebaud (2015) argues that gender status beliefs (widely shared cultural beliefs that confer on men great ability at things that matter in society) affect the way people evaluate themselves, that is the biased feedback emanating from gender status beliefs, may discourage women from opting for an entrepreneurial career as this negative feedback places females in a disadvantaged position in the attempt to gain support from different stakeholders. Langowitz and Minniti (2007) established that females evaluate themselves and their business atmosphere as less supportive as opposed to males, hence:

*H<sub>35</sub>: The relationship between achievement motivation and proactiveness will be significantly higher in males than in females*

*H<sub>36</sub>: The relationship between achievement motivation and risk taking will be significantly higher in males than in females*

*H<sub>37</sub>: The relationship between achievement motivation and entrepreneurial intention will be significantly higher in males than in females*

### **2.9.9 Chapter Summary**

The literature review chapter is divided into five sections. The first section is a presentation of the theoretical framework on which the study is based, namely, the Theory of Planned Behavior (TPB), Image Theory and Upper Echelons Theory. Based on the TPB, entrepreneurial orientation variables (risk taking and proactiveness) represent attitudes, while self-efficacy is represented by achievement motivation and LGO. Entrepreneurial orientation is unexplainable without placing it in a given context; thus the second section of this chapter presents a relationship between cultural orientation variables and risk taking/proactiveness, while the third section presents the literature on EO and entrepreneurial intentions. The fourth section presents the literature on the moderators (knowledge, networks and Optimism), while the last section presents the literature on gender and some facts about the study countries. The next chapter presents the research paradigm and research design, as well as the research methodology that flows from this paradigm.

## CHAPTER THREE: RESEARCH METHODOLOGY

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### 3.1 Introduction

This chapter presents the methodology used to conduct the study, which, as much as possible, took cognizance of the problems of methodological issues in cross-cultural research raised by Van de Vijver and Leung (2000 p.34), who demonstrate the extent to which “*methodological tools can overcome the poor cumulative nature of cross cultural research*”. This methodology chapter is divided into two major sections. The first section presents the steps taken to collect the data and includes study scope, research design, sampling design, data collection and measures, while the second section presents the data analysis strategy employed in this study. Last to be presented is a chapter summary.

### Section one of Chapter Three

#### 3.2 Scope of the study

##### 3.2.1 Choice of countries

This section specifies the choice of countries included in the current study, and why some countries in the East African Community were left out. The study was originally scheduled to be carried out in the entire East African community namely Burundi, Kenya, Rwanda, Tanzania and Uganda, with exception of Southern Sudan, which is a new member. Security concerns also weighed heavily against this new member being included in the study. Burundi was also left out of the study for two reasons. First, it was not possible to visit this country due to the political atmosphere prevalent there at that time. Second, the language barrier was a major hindrance (Burundi is French-speaking), which meant translating the study instrument into that language, as this would increase costs. While an effort was made to visit Rwanda School of Finance and Banking in Kigali (now part of the University of Rwanda), it was not possible to include this country in the study due to the long and bureaucratic process of obtaining clearance to conduct the research. This left the researcher with only three countries, namely Kenya, Tanzania and Uganda, the original members of the East African community. Introductory letters were acquired from the University of Cape Town, to selected universities in all these three countries.

### **3.2.2 Choice of universities**

Two major considerations were the basis for the choice of the study universities in these three countries. The first was that these universities had to have participated in the Student Training and Entrepreneurship Program (STEP) evaluated by Gielnik et al. (2015), which is a research collaboration in graduate entrepreneurship between Leuphana University in Germany and a number of universities in Africa. This program imparted skills and experience into the participating students. The second criterion was that the university should at least have experience and supportive structures in the teaching of entrepreneurship. Based on these criteria, two public universities were identified in Kenya, namely the University of Nairobi and Kenyatta University. While the researcher made several visits to Kenyatta University seeking permission to collect data from its students, permission took too long to obtain and the effort was abandoned. The study therefore zeroed in on the University of Nairobi. In Tanzania, the University of Dar es Salaam (a member of the STEP consortium) was chosen, as well as Kampala International University (KIU) Gongolamboto, Dar es Salaam, which has considerable experience in the teaching of entrepreneurship. In Uganda the study included Kyambogo University (a public university) and Uganda Christian University (a private university), both of which are members of the STEP consortium. Kyambogo was chosen rather than Makerere University (the largest public university in the country and also a member of the STEP consortium) due to proximity and ease of access issues.

### **3.3 Research paradigm and research design**

A paradigm is a set of beliefs, assumptions or world views that guide research activities (Lincoln & Guba, 2005). *“These assumptions are related to the nature of reality (ontological issue), the relationship of the researcher to what is being studied (epistemological issue), the role of values in a study (the axiological issue) and the process of research (the methodological issue)* (Creswell, 1998 p.74). Paradigms create new world views and have a fundamental impact on the way in which a study is conducted (Morgan, 2014). The current study is premised on a pragmatic paradigm, which permits the use of both qualitative and quantitative phases in one study, and is based on an inter subjectivity perspective (Morgan, 2007). Pragmatism provides a different world view to positivism and constructivism, putting emphasis on the problem to be investigated

and the consequences of that effort (Feilzer, 2010). According to Rahi (2017 p.1) “*Pragmatism is not affiliated to any system or philosophy...researchers are free to use both quantitative and qualitative approaches that are essential to find the best techniques and procedures of research that solve the problem statement*”. Following this view Kivunja and Kuyini (2017 p.35) postulate that “*a pragmatic paradigm advocates a relational epistemology (i.e. relationships in research are best determined by what the researcher deems appropriate to that particular study), a non-singular reality ontology (that there is no single reality and all individuals have their own and unique interpretations of reality), a mixed methods methodology (a combination of quantitative and qualitative research methods), and a value-laden axiology (conducting research that benefits people)*. Specifically, the study employed a sequential exploratory research design. “*To be considered a mixed study, the findings must be mixed: a qualitative study is conducted to inform a quantitative phase, sequentially*” (Burke & Onwuegbuzie, 2004 p. 20).

According Saunders, Lewis and Thornhill (2016 p.171) “*mixed methods research is both interactive and iterative where one phase subsequently informs and directs the next phase of data collection and analysis*”, and has gained considerable acceptance in the last two decades (Schafft & Biddle, 2015). According to Burke and Onwuegbuzie (2004 p.17), “*in many situations, researchers can put together insights and procedures from both approaches to produce a superior product*”.

### **Methodological and theoretical implications:**

Kivunja and Kuyini (2017, p.36) assert that “*the methodological implications of paradigm choice permeate the research question/s, participants’ selection, data collection instruments and collection procedures, as well as data analysis*”. This study utilized both qualitative and methodological approaches, based on theories drawn from both perspectives. The next sections provide details of each of the study phases.

### 3.3.1 Phase one and two of the study:

In phase one, a qualitative study was done to enable the researcher gain a firm grasp of the study context and concepts, through a review of the literature and holding of non-structured interviews at Uganda Christian University with key stake holders who included entrepreneurship educators (3), parents (2) and students (25). These 30 respondents were purposively selected on the assumption that they had the knowledge and experience to discuss the subject matter. For students it was required that one was a third year BEPP (Bachelor of Entrepreneurship and Project Planning) student, while Lecturers were those who are in senior positions by tenure in the Faculty of Business. As espoused by Cooper and Schindler (2014 p.153) “ ... *each interview was customized to each participant*”. In particular, these people were requested to give their opinion as to why many graduates choose to spend time looking for non-existent or difficult-to-get jobs rather than start a business, however small (see appendix 4). A large array of opinions was given in answer to this question. Following Creswell (1998 p. 144), this voluminous data was organized into categories, and then classified into themes. “*Classifying pertains to taking the text or qualitative information apart, looking for categories, themes or dimensions of information*”. This exercise yielded six themes namely cultural context, fear of failure, knowledge/skills, entrepreneurial orientation, self-efficacy and government support (see Table 17).

As suggested by Creswell (2003), themes from this qualitative study were used to develop and refine the study instrument (identify the relevant dimensions of each theme and their measures). Similarly, Saunders et al., (2016 p.171) demonstrate that individual in-depth (unstructured) interviews “*help to inform the content of the questionnaire*”. This exercise was followed by a cross-sectional survey in phase two, in which various dimensions of the identified themes were incorporated in a questionnaire and administered to final-year business students in the selected universities in the three East African countries.

### **3.3.2 Pre-testing of instruments**

The pretesting of the instruments was carried out to ensure that the respondents understood the wording in the questionnaire, and to iron out any misconceptions that may have accrued due to the way the questions were constructed in the questionnaire. Instruments were pretested at Uganda (Uganda Christian University, 30 students). Following this exercise, permission for conducting the study was sought at four levels in the three countries as explained below.

### **3.3.3 Permission to conduct the study**

This entails all the activities to ensure the study gaining the necessary clearance from the authorities at country level and university level, teaching staff and students in the various universities.

1. Registration and clearance from the National Science Council/Commission of Tanzania that is COSTECH. In Kenya, and Uganda the researcher went straight to the chosen universities.

2.Registration and seeking permission from the Research Authorities at university level in each study country, i.e. the Office of the Vice-Chancellor for Research at the University of Dar es Salaam (UDSM), the office of the Deputy Vice-Chancellor (Research) at the University of Nairobi(UON), Offices of the Dean, Faculty of Business, Uganda Christian University (UCU), and the Dean, Faculty of Arts and Social Sciences which houses the Department of Economics and Statistics at Kyambogo University (KU). For Kampala International University KIU (Dar es Salaam Branch, Gongolamboto), permission was sought from the office of the Deputy Vice-Chancellor (Academic Affairs).

3. Seeking and gaining consent and support from the lecturers in the different universities who would help in administering the questionnaires to the students.

4. Seeking consent from the students who are the respondents in this study. In particular, final-year Business Faculty students (undergraduates) and students from all business programs were targeted.

### **3.3.4 Respondents:**

The respondents in this study were final-year business students in all the study universities. The use of student samples in this study is appropriate for three reasons, the first being that students are themselves the focus of the research: why graduate entrepreneurial intentions are low. The second reason is that college student samples are appropriate if used to replicate similar prior studies in which student samples have been used (Peterson & Merunka, 2014). Just as in the current study, Lim and Envick (2013) conducted research about entrepreneurial orientation in four countries, using student convenience samples. Thirdly, college student samples are usually homogenous on variables such as age and education which enhances research validity. This homogeneity reduces variability in measurement thus increasing the chances of rejecting a null hypothesis of no difference (Lynch, 1983), making it possible to identify lapses in theory if the theory was false (Lucas, 2003). Consolidating research findings from one convenience sample to another confirms inter-sample homogeneity. For example, Lalwani (2009) employed five separate student convenience samples to carry out five different experiments. Hence homogeneity enables sample comparison and thus rationalizes the utilization of student samples in cross-cultural research (Aaker & Sengupta, 2000).

## **3.4 Sampling design**

### **3.4.1 Sample size and statistical power**

A major issue in structural equation modeling (SEM) is the issue of sample size, because it has an impact on statistical power and precision of a model's parameter estimates (Brown, 2006). Sample size refers to the number of cases (participants) required to ensure a satisfactory level of precision and statistical power of the models' parameter estimates, plus indices of overall model fit. Brown (2006) defines statistical power as one minus the probability of a Type II error, and Cohen (1992) suggests 0.8 as that the cut-off level for acceptable statistical power, which refers to an 80% chance of rejecting a false null hypothesis (meaning that the risk of a type II error is only 20%). Satorra and Saris (1985) propose a method for calculating statistical power for multi-indicator SEM models and the sample size required to attain that power. Brown (2006, p.419)

argues that “*this method is superior to the general rules of thumb (e.g. ratio of cases to freed parameters), because it is a model based quantitative approach*”. In this method, specification of a SEM model produces a non-zero model  $\chi^2$  value which is also the non-centrality parameter (NCP) value, lambda ( $\lambda$ ) of the non-central distribution, i.e. distribution of  $\chi^2$  when the null hypothesis is false. This  $\chi^2$  value is used as the NCP to calculate the power to detect model misspecification at different sample sizes. NCPs and power estimates for some sample sizes are presented in Table 5 below.

**Table 5: NCP, statistical power and sample size**

N	NCP	Power
100	6.3724	.713
125	7.9816	.807
150	9.5908	.872
200	12.8091	.947

**Source: Brown (2006: p.419)**

The table above shows that minimum acceptable power level of 0.8 is associated with a sample size of 125. Thus the current study opted for a minimum sample size of 200 to yield a statistical power of 0.947.

### 3.4.2 Sampling

This study utilized a non –probability sampling design. First, professors were sought and requested to assist in data collection in each identified university included in the study. Following Van de Vijver and Leung (2000), the study pays adequate attention to issues of sampling by following recommendations that are standard in cross-national survey research, such that sample differences do not confound differences in the study populations. In the current study, convenience sampling was employed due to time and resource constraints, i.e. the difficulty of getting permission to conduct the study as enumerated above, as well as the high cost of sustaining a research team in each country. The use of convenience sampling is widespread in many studies the world over. For example, the Journal of Business Research (2009), the Journal of Consumer Research (2009) and the International Journal of Research in

Marketing (2009) together published over 60 articles containing 131 studies that formulated and tested hypotheses using student convenience samples (Peterson & Merunka, 2014).

In spite of wide spread concerns regarding the use of student convenience samples for testing theory, Peterson and Merunka, (2014 p. 1036) “*could not find any study that offered convincing empirical evidence regarding the negative consequences for research conclusions drawn from them*”. Studies that utilize convenience samples if meticulously planned, can generate useful data once measures are put in place to check uncertainty and bias (Skowronek & Duerr, 2009) by first controlling and assessing the representativeness of the sample or making sure that it is as representative of the population as possible. In a similar vein, Cooper and Schindler (2014, p.359) assert that although convenience samples have no controls to ensure precision, “*it may still be a useful procedure*” ... since results from them “*may present evidence that is so overwhelming that a more sophisticated sampling procedure is unnecessary*”.

Secondly, increasing diversity of the sample improves data from a convenience sample. In this study, data was collected from final-year Business students in all the study countries. Where possible, “core” courses such as Research Methods where students from different courses come together to attend a lecture, were used as this would increase variability in the sample. Another way to increase variability in the sample was to ensure a large sample size.

Peterson and Merunka (2014) argue that a major problem with convenience samples may be their lack of reproducibility, i.e. whether under similar conditions the findings replicate. Therefore, to ensure that results from convenience samples are dependable, there is a need to replicate such studies. This is because the chances of making a Type 1 error are very high if the study is based on just one convenience sample. Peterson and Merunka affirm that replications are a sure way of reducing any uncertainty which arises out of a particular set of research results or sample, yet calls for replications often go unheeded. The most important necessity of science is replicability (Epstein, 1980). Therefore, scholars must carry out numerous replications of their studies, and those of other studies, paying special attention to studies that employ convenience samples of college students, even if the study is intended to test theory and in spite of the homogeneous nature of such samples. In light of these arguments, the current study is replicated in three

countries (five universities) rather than use a single convenience sample from one university in a single country.

### 3.4.3 Sample multivariate normality

The current study used skewness and kurtosis approaches to examine multivariate normality (Mecklin & Mundfrom, 2005). In order to test for normality, the data was examined in two ways. First histograms were constructed for each variable (Presented in Appendix 1), and these show that the data did not depart widely from normal. Given that all distributions of real data are skewed, what is important is by how much, thus the variables were tested for both skewness and kurtosis. Skewness shows the symmetry of the distribution, with a value of zero indicating a normal distribution, while kurtosis refers to the flatness of a distribution (negative values) or its peakedness (positive values). Both skewness and kurtosis are deemed acceptable for parametric tests if their values fall within the -2 to +2 range (George & Mallery, 2010). Table 20 below shows that the study variables are within acceptable skewness and kurtosis range, thus the data is presumed acceptable for statistical inference.

**Table 6: Normality tests**

Variable	Mean	SD	Skewness	Kurtosis
Independence	3.98	.728	-1.09	1.39
Interdependence	4.21	.685	-1.48	3.24
Power Distance	2.94	.893	.198	-.35
Ambiguity Intolerance	3.33	.830	-.611	.105
Masculinity	3.63	.783	-.631	.348
Proactiveness	3.99	.734	-1.02	1.17
Risk taking	3.81	.731	-.598	.519
Knowledge	3.65	.857	-.666	.091
Networks	3.69	.805	-.628	.204
Achievement motivation	3.94	.803	-1.02	.642
Learning goal orientation	3.87	.770	-.736	.390
Modernity	3.76	.876	-.745	.100
Goal intentions	3.87	.855	-1.28	1.83

Source: Primary data

## **Normality and SEM**

In the estimation of parameter estimates during SEM, maximum likelihood (ML) was used as the fitting function/estimator. Research shows that ML is robust to minor departures from non-normality (Chou & Bentler, 1995). Due to the fact that the data slightly departed from normal, robust ML was employed since ML is a “*very well-behaved estimator across different levels of non-normality*” (Brown, 2006 p.379).

## **3.5 Common Method Bias**

Common method bias exists in a study “*when some of the differential covariance among items (or constructs) is due to the measurement approach rather than the latent factor*” (Brown, 2006, p.159). Bias in this case means that an observed relationship deviates from the true relationship. Generally, there are two major detrimental effects of method bias that researchers can encounter, the first being biases of the reliability and validity of a latent construct (MacKenzie & Podsakoff, 2012), and secondly, biases of the relationship between two variables. Research shows that method bias is capable of inflating, deflating or even having no effect on estimates of a relationship between two variables (Podsakoff, MacKenzie, Lee, N.P., & Podsakoff, 2003). Bias in parameter estimates can lead to committing Type 1 (concluding that a relationship exists when it does not) or Type 11 error (concluding that a relationship does not exist, when it does). Major causes of method bias include item characteristics such as including items in the questionnaire that elicit social/desirable responding as well as ambiguous or vague items. The second major cause is rater characteristic, for example when the same source provides ratings for the predictor and criterion variables (same source effects). Podsakoff et al. (2003) recommend procedural remedies which should be part of the study design, rather than “post hoc” statistical remedies. This view is echoed by Jordan and Troth (2020 p.7) who assert that “*...the use of method and research design solutions prior to data collection in applied settings offers a higher quality solution*”.

A number of procedural remedies included in the study design include obtaining the predictor and criterion measures from different sources (see Measures section below) assuring respondents of confidentiality and anonymity and that there are no correct or wrong answers as well as improving item content by reducing ambiguity. Some other statistical methods used to detect

CMB (independent variable technique, unmeasured latent actor technique) have inherent problems (Jordan & Troth, 2020). In the case of the CFA marker variable technique (Fuller, Simmering, Atinc, G., Atinc, Y., & Babin, 2016) the problem is that “*it is hard to find an adequate measure that meets the requirements of this test*” (Jordan & Troth, 2020 p.10). Therefore in terms of statistical remedies, the less complicated Harman’s One Factor test was carried out. Although described as weak by some researchers (Chang, van Witteloostuijn, & Eden, 2010), this test can still be useful if combined with other procedural measures (Minbashian, Birney, & Bowman, 2019). Using Monte Carlo simulated data, Fuller et al. (2016) attempt to establish the efficacy of Harman’s one factor test, i.e. whether this test can detect common method variance (CMV) at biasing levels. Findings indicate that Harman’s test fails to detect upward CMB only when CMV is 70% or higher. “*While the true level of CMV in data cannot be known, prior published estimates of CMV fall well below*” 70% (p.6). Fuller et al add on the same page “*.....the finding of false positives contradicts the criticism that Harman’s test lacks the sensitivity to detect CMV in most data*”.

### **3.5.1 Harman’s one factor test:**

Harman’s one-factor test of common method bias was employed in three steps in this study, following Webb (2009). First, all the items for the five cultural orientation variables were loaded on one factor using un-rotated Principal Components Analysis. If a significant amount of common method variance existed, then this general factor should account for the majority of the variance in the solution (Podsakoff et al., 2003). The findings of this exercise indicate that the one-factor solution explained only 16.3% of the variance, which is far less than the recommended 50%. In the second step, a un-rotated factor analysis of these cultural variables produced a six-factor solution and the first factor in this solution indicates a variance of 16.50. (Table 7). In the third step, all 13 the variables in the study comprised of 48 items (cultural orientation 5, entrepreneurial orientation 2, ability perceptions 2 moderators 3 and intentions) were loaded onto a single factor in a un-rotated principal components analysis (PCA). The single factor explained only 15.95% of the variance, while an un-rotated factor analysis of these dimensions produced a 14 -factor solution (not shown), each with Eigen values >1. While these results do not preclude the existence of common method variance, it nevertheless shows that common method bias was minimal, and was therefore not likely to confound the study results.

**Table 7: Un-rotated matrix of cultural orientation variables**

	Component					
	1	2	3	4	5	6
IND1	.364	.149	.017	-.598	.184	-.042
IND2	.367	.252	.135	-.477	.125	-.034
IND3	.357	.186	.076	-.470	.335	.273
IND4	.323	.419	.078	-.282	.149	-.302
INT1	.297	.498	.229	.271	.097	.384
INT2	.273	.520	.195	.460	.070	.195
INT3	.372	.358	.304	.432	.063	-.211
INT4	.371	.240	.339	.124	.050	-.296
POW1	.459	-.450	.225	-.024	.120	.309
POW2	.460	-.385	.272	.241	.270	-.027
POW3	.380	-.624	.327	.083	.098	.168
POW4	.424	-.460	.236	.047	.222	-.199
AMB1	.391	-.193	-.273	-.027	-.232	.475
AMB2	.458	-.078	-.492	.062	.057	-.030
AMB3	.358	-.024	-.565	.313	.137	-.147
AMB4	.414	-.025	-.616	.014	.200	-.024
AMB5	.508	.070	-.438	.140	.098	-.158
MAS1	.484	.269	-.059	.014	-.334	.203
MAS2	.472	.019	.091	-.110	-.624	.017
MAS3	.396	-.322	.150	-.049	-.351	-.413
MAS4	.495	.078	.037	-.111	-.410	-.065

\*Six factors with Eigen values > 1 were extracted: The Eigen values (% of variance explained in parenthesis) are: 3.46 (16.53); 2.18 (10.39); 1.85 (8.84); 1.58 (7.56); 1.26 (6.04); 1.14 (5.42). IND=Independence, INT=Interdependence, MAS= Masculinity, POW= Power distance, AMB=Ambiguity intolerance

### 3.6 Measures

Measures with robust psychometric properties and adequately covering the behavior domain of interest were employed in this study, in order to avoid sub-optimal mapping of constructs “*which may be a reason for seemingly conflicting results reported by different researchers*” (Van de Vijver & Leung, 2000, p.36). According to Van de Vijver and Tanzer (2004) incomplete

mapping of all pertinent features of a given construct may result into construct bias, just as would poor sampling emanating from very short data collection instruments, which do not adequately cover the construct under study or the subject matter under investigation (Embretson, 1983). Therefore care was taken to ensure that relevant domains of constructs are captured by the items and that the study instrument is not too short. Following this safeguard, items were incorporated into a questionnaire which is presented in Appendix 3. This instrument consisted of seven sections. The first section collected data on demographic variables, course, marital status and country of origin. The second section collected data on explanatory variables (experience, fear of failure, and modernity). The third section collected data on entrepreneurial goal intentions, while the fourth addressed cultural variables. The fifth covered entrepreneurial orientation variables, while the sixth section covered the moderators. The last section addressed personal /ability perception variables. In the next sections, descriptions of the measures and their sources as well as number of items in each dimension are presented.

### **3.6.1 Explanatory variables**

Four explanatory variables were included in the study, namely experience, fear of failure, modernity and gender. Experience was measured with the question, “Have you had any start-up experience or started a business before?” The answer to these two questions was a Yes or No in each case. Fear of failure was measured in response to the question, “Would fear of failure prevent you from starting a business?” (Ahmad, Xavier, & Bakar, 2014). The response had to be either yes or no. Since formal education exerts a modernizing influence on the youth, value orientations such as modernity have a very strong influence on students. Modernity items such as “independence from family” and “openness to ideas” were measured using a five-point scale: 1=strongly disagree to 5=strongly agree, from Amer and Yourtz (1971). Males were coded 1, while females were coded 2. The countries were coded such that Kenya=1, Tanzania=2, and Uganda=3.

### **3.6.2 Cultural orientation**

The measurement of cultural values is a controversial and complex subject (Chirkov, Lynch, & Niwa, 2005) as evidenced by the intense debates concerning the advantages and disadvantages of

the various methods of measuring them. König , Steinmetz, Frese, Rauch and Wang (2010) argue that to avoid committing an ecological fallacy, cultural research that is oriented towards an individual level of analysis should employ cultural orientation scales, and that these should preferably be scenario-based. This view is supported by Peng, Nisbett and Wong (1997) who also argue that the scenario method is the most criterion-valid method of measuring cultural orientations. Nevertheless, Peng et al.(1997) do not claim that that rating or ranking methods cannot have cross-cultural validity, nor that well-constructed scenario scales will always give more valid results than other methods. Another problem with scenario-based scales is their availability. For instance, König et al. (2010) develop scenario-based scales of business owners based on the GLOBE dimensions (House et al., 2004), hence they are not applicable in the case of other subjects such as students.

In light of these arguments, cultural orientation in this study was measured using the Sharma (2010) 40-item, 10-dimension personal cultural orientation scale. The following five dimensions were chosen (number of items in brackets): ambiguity intolerance (5); power distance (4), masculinity (4), independence (4) and interdependence (4). The other five dimensions namely, social inequality, risk aversion, gender inequality, tradition and prudence were dropped because little importance was attached to them in the qualitative discussions. Dimensions from the Sharma scale were used for a number of reasons. First, the scale has strong psychometric properties, as all its subscales met the Cronbach's alpha 0.7 reliability cut-off (Nunnally & Bernstein, 1994). Second, some of the scales of personal cultural orientation lack evidence of content and construct validity, as well as evidence of cross-cultural measurement equivalence (Sharma, 2010). Third, some of the cultural orientation scales were based on Hofstede's conceptualization of cultural dimensions as opposite ends of each other or as being on a continuum (Sharma, 2010). In the current study, Sharma's scale measures are anchored on Likert scales ranging from 1=strongly disagree to 5=strongly agree. Since it is a relatively new scale in an East African context, it had to be cross-validated through confirmatory factor analysis as suggested by Van de Vijver and Leung (2000).

### **3.6.3 Entrepreneurial orientation**

Entrepreneurial orientation was measured with the 10-item Bolton and Lane (2012) individual entrepreneurial orientation questionnaire. This scale has three subscales, namely innovativeness (four items), risk-taking (three items), and proactiveness (three items). Using factor analysis, Bolton and Lane established that the three subscales had an internally consistent set of items with acceptable content and face validity. They also proved the construct validity of the subscales, as an analysis of the correlations among items of the subscales and between them and other measures of entrepreneurial propensity showed that they all correlated well. The three subscales have acceptable reliability, since their Cronbach's alpha met the Nunnally and Bernstein (1994) cut-off of 0.7. Items in this scale were anchored on a five-point Likert scale ranging from 1=strongly disagree to 5=strongly agree. In the current study, only risk taking and proactiveness were considered.

### **3.6.4 Entrepreneurial intentions**

Following the successful Student Training in Entrepreneurship Promotion (STEP) program conducted in Uganda (Gielnik, Frese, Kahara-Kawuki, Wasswa Katono, Kyejjusa, Ngoma... & Oyugi, 2015), permission was sought from the STEP consortium to use some of their scales. Thus entrepreneurial intentions was measured with 4 dichotomous items and 5 likert based items asking the question, "Within the next 12 months do you intend to ..." followed by specific start-up activities derived from Davidsson and Honig (2003). The specific start-up activities were: "Do you intend to organize a start-up team or look for partners?"; "Do you intend to do market research for your business idea?"; "Do you intend to work on a business plan for your business idea?"; "Do you intend to save money for starting a business?"; "Do you intend to register your business or obtain a trade license?" Gielnik et al. (2015) measured goal intentions at two different times in their study. Cronbach's alpha was 0.83 at Time T1, and 0.77 at Time T2 thus the scale is robust. The scales was anchored on Likert scales ranging from 1=No intention, 2= Little intention, 3=Not sure, 4=High intention, 5=Very high intention.

### **3.6.5 Moderating variables**

The study has three moderating variables, namely networks, prior knowledge and optimism. They were measured as follows:

#### **Networks**

Networks were measured with three items adapted by the STEP team from Claes and Ruiz-Quintanilla (1998), i.e. “I have contacts with many people who are self-employed”, “I have a good network of people who know a lot about starting and running a business”, “I know many people who can provide me with help or advice if I started a business”. These items were adapted to make them fit in the entrepreneurial context, and to make them easy to understand. The fourth network item, “I personally know a lot of people who started a business in the last two years”, is from the Global Entrepreneurship Monitor (GEM) project. Reynolds et al. (2005) describe the GEM project although they do not present all the items. These network items were anchored on Likert scales ranging from 1=strongly disagree to 5=strongly agree.

#### **Prior knowledge**

Prior knowledge was measured using the scale from Marvel and Lumpkin (2007). This scale is composed of four dimensions, namely knowledge about ways to serve markets, knowledge about customer problems, knowledge about markets, and knowledge about technology. Using factor analysis, Marvel and Lumpkin established that four of the five items used to measure each dimension of prior knowledge achieved a factor loading of 0.4 or above, and were thus considered as measures of their intended constructs. Further, following each of the items in these dimensions, Marvel and Lumpkin posed two Likert-type questions, one addressing the importance and the other addressing the amount of prior knowledge in relation to a perceived opportunity. The response scales for both importance and amount of knowledge were found to be reliable for each dimension, with Cronbach’s alpha ranging from 0.68-.089, thus meeting the 0.7 cut-off (Nunnally & Bernstein, 1994). To form the knowledge dimension in the current study, two items were picked from the ‘ways to serve markets’ dimension, i.e. “I have knowledge of ways to make the product/service I intend to produce” and “I have knowledge of products/services similar to the one I intend to produce”. Another two items were picked from the ‘customer problems’ dimension, i.e. “I have knowledge of different customer problems

within this industry in which I intend to operate” and “I have had close interaction with customers in this industry in which I intend to operate”. The reason for combining these two dimensions is that Marvel and Lumpkin (2007) found a correlation of 0.57 between these two, hence they are almost similar. These items were anchored on a scale of 1= strongly disagree to 5=strongly agree.

## **Optimism**

This dimension was measured with five items from the revised Life Orientation Test (LOT-R) (Scheier, Carver, & Bridges, 1994) validated by Leung et al. (2005). This scale is made up by 10 items, three of which comprise the optimism subscale, while another three are reverse-coded and measure the pessimism subscale. The remaining four items are filler items that are not coded. The current study utilized the three optimism items, plus one pessimism item which was reverse-coded to enable the four items to be averaged into a single dimension. In a study of Chinese Hong Kong undergraduates, Lai, Cheung, Lee, and Yu (1998) found that the pessimism subscale was psychometrically inferior to the optimism subscale which had a Cronbach’s alpha of 0.7. Leung et al. (2005) found that after removal of the pessimism scale Cronbach’s alpha for their study went up to 0.69. These optimism items were anchored on Likert scales ranging from 1=strongly disagree to 5=strongly agree.

## **3.7 Ability perception variables**

### **3.7.1 Achievement motivation**

This dimension was measured with the achievement subscale of the Entrepreneurial Attitude Orientation scale (Robinson, Stimpson, Huefner, & Hunt, 1991), which is based on attitude theory as an explanation for entrepreneurship rather than personality traits or demographic approaches. The scale is based on the tripartite model of attitude, which argues that there are three types of reactions to everything and that attitude is a combination of all three (Shaver, 1987). First is the cognitive component which is concerned with beliefs and thoughts about an object, second is the affective component which refers to positive or negative feelings about that object, and third is the conative or behavioral component which consists of behavioral dispositions or intentions toward that object. The Entrepreneurial Attitude Orientation scale was

specifically developed for the entrepreneurship domain, and has four subscales, namely achievement (in business), self-esteem, personal control and innovation. The current study utilized six items out of a total of 24 from the achievement subscale, which is referred to as “*concrete results associated with start-up and growth of a business venture*” (Robinson et al., 1991, p.19). Cronbach’s alpha for the achievement subscale was 0.84, well above the recommended 0.7 cut-off (Nunnally & Bernstein, 1994). This dimension was measured with six items anchored on a five-point Likert scale ranging from 1=strongly disagree to 5=strongly agree. An example of these is: “I make it a point to improve my performance every day.”

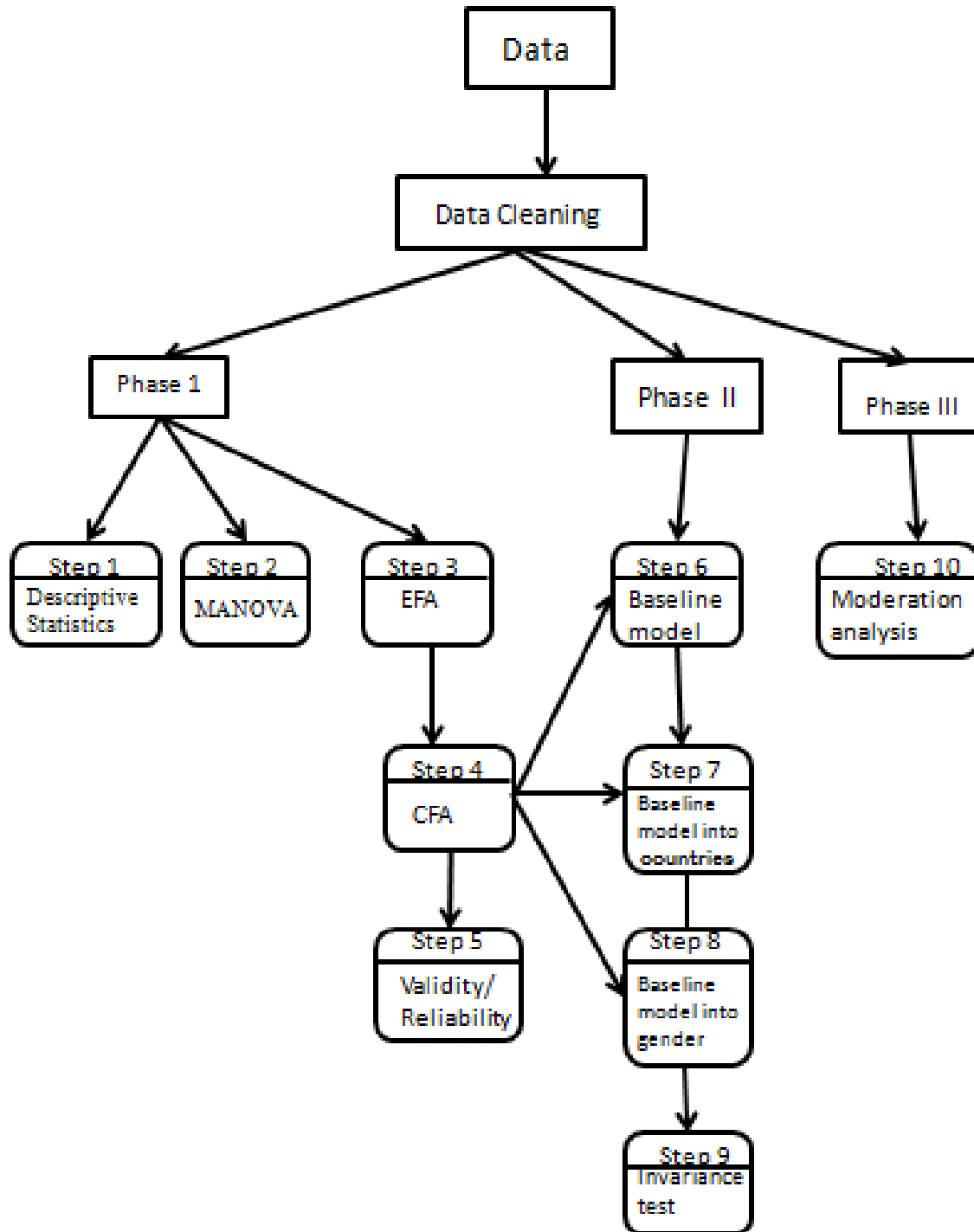
### **3.7.2 Learning goal orientation**

This dimension was measured with five items from Brett and Vande Walle (1999) anchored on a five-point Likert scale ranging from 1=strongly disagree to 5=strongly agree. An example of the items is: “I am willing to select a challenging work assignment that I can learn a lot from”. Brett and Vande Walle (1999) reported that the LGO dimension had adequate convergent validity and a reliability level of 0.78. In a study of web-based information systems, Mun and Hwang (2003) use the same five measures of LGO from Brett and Vande Walle (1999), just as the current study did. Yi and Hwang established that these items had strong convergent and discriminant validity, with high factor loadings  $> 0.707$  as well as internal consistency (similar to Cronbach’s alpha) of 0.88.

## **Section Two of Chapter Three**

### **3.8 Data collection and analysis**

Following the qualitative phase of the study, data collection in the second phase was done by administering the study questionnaire to the students during class by the professors. Quantitative data analysis in this study was done in three major phases: A preliminary analysis phase (phase 1), a hypothesis-testing phase (phase 2) and moderation analysis (Phase 3), summarized in the flow diagram below in Figure 3 and in Tables 8, 9 and 10.



**Figure 3: Data analysis flow diagram for quantitative phase**

Key: EFA=Exploratory factor analysis, CFA= Confirmatory factor analysis

**Table 8: Preliminary data analysis plan (phase 1)**

<b>STEP</b>	<b>Objective of the analysis</b>	<b>Analysis Level</b>	<b>Method</b>
1	Preliminary analysis to generate descriptive statistics, tests of multivariate normality and common method bias verification.	Whole sample	Averages, frequencies, percentages, PCA
2	Examine status of experience, fear of failure, modernity and CO variables in the national samples: Generation of descriptive statistics for all study variables	Within countries	t-tests/MANOVA
3	Establish psychometric properties of all study variables	Whole sample	Exploratory factor analysis
4	Examine validity (construct validity, discriminant validity) and reliability for all study instruments (alpha and composite reliability, CR).	Whole sample	Calculate alpha, Composite reliability and Average variance extracted (AVE)
5	Confirm the dimensionality of the measures (Validating the measurement models).	Whole sample	Confirmatory factor analysis (CFA)

The table above indicates the steps that were taken in the preliminary data analysis phase. This phase included the data-cleaning exercise, generation of frequencies and percentages for the demographic data, as well as normality tests (step 1), followed by T-tests and a MANOVA in step 2. In step 3, separate factor analyses were conducted for all the study dimensions, i.e. cultural orientation variables, EO variables and ability perception variables (learning goal orientation and achievement motivation). In step 4, validity and reliability of the study measures were examined, while in step 5, CFA models were constructed for cultural orientation, entrepreneurial orientation and ability perception variables. It should be noted that the whole sample level is the same as the omnibus level.

**Table 9: Steps in hypothesis testing (phase 2)**

STEP	Objective of the analysis	Exogenous	Endogenous	Analysis Level	Method
6	Examine the impact of cultural orientation/ability perceptions on EO and entrepreneurial intention by fitting a structural model in the combined data set	Ambiguity intolerance, interdependence, independence, power distance, masculinity, LGO and nAch.	Risk Proactiveness	Omnibus level	SEM: Path analysis with latent variables
7	Examine the impact of cultural orientation/ability perceptions on EO and entrepreneurial intention by fitting a structural model in each country data set	Ambiguity intolerance, interdependence, independence, power distance, masculinity and ability perceptions	Risk Proactiveness	Country	SEM: Path analysis with latent variables
8	Establish extent to which cultural dimensions/ability perceptions predict EO and entrepreneurial intention by fitting a structural model in each gender/modernity data sets.	Ambiguity intolerance, interdependence, independence, power distance, masculinity and ability perceptions	Risk Proactiveness	Omnibus	SEM: Path analysis with latent variables
9	Invariance tests between both gender and modernity models	N/A	N/A	Omnibus Level	$\chi^2$ difference tests

The table above shows the steps taken in hypotheses testing. Step 6 involved fitting the baseline model in the whole (omnibus) sample, while step 7 fitted the baseline model into each country data set. In step 8 the baseline model was fitted into gender (male and female) and modernity (Low and high) data sets respectively. Step 9 carried out the invariance tests between the gender and modernity models.

**Table 10 : Moderation analysis plan**

Step	Objective	Predictor	Moderator	Criterion	Method
10	Establish the extent to which knowledge, networks and optimism moderate the relationship between EO and Intention.	Risk taking/ proactiveness	Networks	Intention	Process Macro
	Establish the extent to which knowledge, networks and optimism moderate the relationship between EO and Intention.	Risk taking/ proactiveness	Knowledge	Intention	Process Macro
	Establish the extent to which knowledge, networks and optimism moderate the relationship between EO and Intention.	Risk taking/ proactiveness	Optimism	Intention	Process Macro

The table above shows that phase 3, which is step 10 of the data analysis exercise, deals with the extent to which knowledge, networks and optimism moderate the relationship between risk taking and proactiveness on one hand and intention on the other, while the section below narrates what each phase and steps therein entail:

### **3.8.1 Step 1**

As explained in the caption to Table 6, data analysis began with a screening of the data for cleanliness (scrubbing input errors), missing data, outliers and construction of histograms and normality curves, as well as common method bias verification. This was followed by generation of descriptive statistics by country, gender and between variables by calculation of averages, percentages and frequencies.

**3.8.2 Step 2:** To examine the prevalence of fear of failure and modernity among the study countries, t- tests were conducted using them (fear of failure and modernity) as grouping variables. Respondents were also divided into those who had experience and those who did not have any. Lastly a MANOVA was used to establish the prevalence of cultural orientation variables by country.

### **3.8.3 Step 3: Exploratory factor analysis (EFA)**

Following normality and common method variance tests, the study embarked on EFA (using SPSS) to examine the factor structure of the study dimensions as well as their reliability and validity. The results of this effort are presented in four separate tables. Tables 11, 12, 13 and 14 present the factor analysis results for cultural orientation variables, entrepreneurial orientation variables, ability perception variables and moderating variables respectively. Table 15 presents the CFA fit indices for the validation of the above factor analysis results. Each of the factor analysis tables presents a factor loading for the factor analysis, Cronbach's alpha for each dimension, as well as its composite reliability (CR). Lastly, the tables also show the average variance explained (AVE) and  $\sqrt{\text{AVE}}$  as explained in Chapter Three.

To examine the factor structure of each of the study dimensions, exploratory factor analysis (EFA) was carried out using SPSS. In order to permit cross-validation of the study dimensions the whole sample (omnibus) data set was divided into two parts: the first part for exploratory factor analysis (EFA), i.e. Ugandan data (N=415), and the second part for confirmatory factor analysis (CFA), i.e. Kenyan and Tanzanian data combined (N=671). Byrne, Shavelson and Muthén (1989) make a case for cross-validation using an independent sample. The same data set should not be used for both EFA and CFA because of model tendency to produce a good fit for the data that created it. In the sections below the steps in which exploratory factor analysis was done for each dimension are described.

#### **1. EFA for cultural orientation variables**

Each of the cultural orientation variables (independence, interdependence, power, ambiguity intolerance and masculinity) was measured with four items, thus the factor analytic model had 20 items in total. Principal Components Analysis by promax rotation and Kaiser Normalization

was carried out (by the software), first automatically constructing a Pearson correlation matrix among each pair of the 20 items in the model. Oblique factors (thus use of promax rather than orthogonal rotation) were preferred for epistemological reasons because the items converge into an uncomplicated structure and also conform more to psychological theory than do orthogonal factors (Kline, 2005). Bartlett's test of sphericity was employed to test the null hypothesis that the resulting 20 x 20 correlation matrix was an identity matrix (i.e. all diagonal coefficients are equal to one, and off-diagonal coefficients are zero: with those that are not zero occurring due to chance). This hypothesis was rejected ( $\chi^2 = 3165.147$   $df=253$ ,  $p=0.000$ ). The Kaiser Meyer-Olkin (KMO) measure of sampling adequacy indicated a coefficient of 0.63 (the closer to 1.0 the better). Rejection of this hypothesis ( $p<.001$ ) and a KMO value close to 0.7 indicated that factor analysis was suitable and could be performed i.e. these two tests meant that the items had adequate common variance and acceptable factorability (Tabachnick & Fidell, 2007).

Following the rotation, the pattern matrix was examined (rather than the structure matrix) due to the fact that its coefficients are standardized regression weights which reflect the autonomous input of each item to the variance of the factor on which it loads (Russell, 2002). Convergent validity is realized once the items load on their factors as they are supposed to i.e. with no cross loadings. A factor loading of  $>0.5$ , that is explaining 25% of an item's variance, was the minimum acceptable loading because Hair, Anderson, Tatham, and Black (1998) postulate that that an item is significantly loaded on its factor, when its factor loading  $> 0.5$ , meaning that nomological validity has been achieved. The cut-off Eigen value for each factor was 1, given that a viable factor should explain one unit of variance or that is Eigen value  $>1$  (Kaiser, 1974). The basis for a factor solution to be acceptable was that it should explain not less than 50% of the total variance (Floyd & Widaman, 1995). Reliability of the different factors was evaluated by using the recommendations of Nunnally and Bernstein (1994) and using composite reliability (CR) because sometimes alpha underestimates reliability. Five factors were extracted as expected, and items that had loading  $< 0.5$  or were suppressed while those that cross-loaded were ignored. For the cultural orientation variables, the resultant EFA solution explained 58.33% of the variance in the model and is presented in Table 11 below.

**Table 11: EFA of cultural orientation variables**

Factor and items	Eigen Value	Loading EFA	AVE	√AVE	Alpha	CR
<b>Independence</b>						
A1. I would rather depend on myself than others	1.32	0.86	0.51	0.72	0.62	0.76
A2. My personal identity, independent of others, is important to me		0.54				
A3. I rely on myself most of the time, rarely on others		0.70				
<b>Masculinity</b>						
D1. Women are generally more caring than men	1.13	0.80	0.51	0.71	0.60	0.75
D2. Men are generally physically stronger than women		0.66				
D4. Women are generally more modest than men		0.67				
<b>Interdependence</b>						
A5. The well-being of my group members is important to me	1.76	0.66	0.40	0.63	0.64	0.70
A6. I feel good when I cooperate with my group members		0.64				
A7. It is my duty to take care of my family members whatever it takes		0.50				
A8. Family members should stick together, even if they do not agree		0.52				
<b>Power</b>						
B1. I easily conform to the wishes of someone in a higher position than mine	2.35	-	0.41	0.64	0.74	0.70
B2. It is difficult for me to refuse a request if someone senior calls me		0.60				
B3. I tend to follow orders without asking any questions		0.700				
B4. I find it hard to disagree with authority figures		0.620				
<b>Ambiguity Intolerance</b>						
C5. I find it difficult to function without clear directions and instructions	2.80	0.69	0.61	0.78	0.700	0.81
C6. I prefer specific instructions to bound guidelines		0.84				
C7. I tend to get anxious easily when I don't know an outcome		0.76				
C8. I feel stressful when I cannot predict consequences		0.62				

Source: Primary data

### 3. EFA for entrepreneurial orientation variables

Similarly, the exercise above was repeated for the Entrepreneurial Orientation variables (risk taking measured with 3 items, proactiveness 3 items and innovativeness 4 items), thus the model

had 10 items in total. Bartlett’s test of sphericity was carried out for the resultant 10x10 correlation matrix. The null hypothesis was rejected ( $\chi^2 = 399.33$   $df=15$ ,  $p=0.000$ ), meaning that factor analysis could proceed. The Kaiser Meyer-Olkin (KMO) measure of sampling adequacy indicated a coefficient of 0.70. Items loaded as expected with no cross loadings. Three factors were extracted as expected; items that had loading < 0.5 or were suppressed, while those that cross-loaded were ignored. The resultant solution explained 58.36 of the variance in the model and is presented in Table 12 below.

**Table 12: EFA of entrepreneurial orientation variables**

Factor and Items	Eigen Value	Loading EFA	AVE	$\sqrt{AVE}$	Alpha	CR
<b>Risk</b>						
A0. I like to take bold action by venturing into the unknown	2.28	0.72	0.54	0.73	0.60	0.79
B0. I am willing to invest a lot of time and/or money on something that might yield a high return		0.64				
C0. I tend to act “boldly” in situations where risk is involved		0.84				
<b>Proactiveness</b>						
K0. I usually act in anticipation of future problems, needs or changes	1.49	-	0.69	0.83	0.63	0.82
L0. I tend to plan ahead on projects		0.87				
M3. I prefer to “step-up” and get things going on projects rather than sit and wait for someone else to do it		0.78				

Source: Primary data

#### 4. EFA for ability perceptions variables

The factor structure of the ability perceptions (achievement motivation measured with six items) was also examined by constructing a Pearson correlation matrix among each pair of the nine items in the model. Bartlett’s test of sphericity for this 9x9 matrix rejected the null hypothesis ( $\chi^2 = 1789.872$   $df=45$   $p=0.000$ ) with a (KMO) measure of 0.818, which is interpreted as meritorious

(Kaiser, 1974). The resultant solution explained 57.39% of the variance in the model and is presented in Table 13 together with AVE, alpha and CR for the extracted factors. All items had loadings >0.5, with no cross-loading.

**Table 13: EFA of achievement motivation and learning goal orientation**

Factor and Items	Eigen Value	Loading EFA	AVE	$\sqrt{\text{AVE}}$	Alpha	CR
<b>Learning Goal Orientation</b>						
<b>T1.</b> I am willing to select a challenging work assignment that I can learn from	1.34	-	0.48	0.69	0.84	0.85
<b>T2.</b> I often look for opportunities to develop new skills and knowledge		-				
<b>T3.</b> I enjoy challenging and difficult tasks where I will learn new skills		0.84				
<b>T4.</b> For me, developing my work ability is important to take risks		0.77				
<b>T5.</b> I prefer work in situations that require a high level of ability and talent		0.80				
<b>Achievement motivation</b>						
<b>R1.</b> I spend considerable time making my performance an example for excellence	4.40	0.86	0.53	0.72	0.80	0.83
<b>R2.</b> I do every job as well as possible		0.71				
<b>R3.</b> I feel proud when I look at the results I have achieved in my activities		0.61				
<b>R4.</b> I get a sense of pride when I do a good job on my projects.		0.54				
<b>R5.</b> I feel good when I have worked hard to improve my performance.		0.69				
<b>R6.</b> I make it a point to improve my performance every day		-				
		0.72				

**Source: Primary data**

#### 4. EFA for moderating variables (Knowledge, Networks, Optimism)

Lastly, the factor structure of the moderating variables was examined and is presented in the table 14 below:

**Table 14 : EFA of Moderating Variables**

Factor and Items	Eigen Value	Loading EFA	AVE	$\sqrt{\text{AVE}}$	Alpha	CR
<b>Knowledge</b>						
<b>H1.</b> I have knowledge of ways to make the product/ service I intend to produce	3.93	0.81	0.67	0.82	0.83	0.89
<b>H2.</b> I have knowledge of products /services similar to the one I intend to produce		0.82				
<b>H3.</b> I have knowledge of different customer problems within this industry in which Intend to operate		0.79				
<b>H4.</b> I have had close interaction with customers in this industry in which I intend to operate		0.84				
<b>Networks</b>						
<b>L2.</b> I have many contacts with people who are self-employed.		0.59	0.58	0.76	0.76	0.80
<b>L3.</b> I have a good network of people who know a lot about starting and running a business.		0.82				
<b>L4.</b> I know many people who could provide me with help or advice if I started a business		0.84				
<b>Optimism</b>						
<b>K1.</b> In uncertain times, I usually expect the best	1.29	0.53	0.50	0.70	0.64	0.79
<b>K2.</b> I'm always optimistic about my future		0.73				
<b>K3.</b> I hardly ever expect things to go my way.		0.82				
<b>K4.</b> I don't get upset too easily.		0.70				

Source: Primary data

The table shows that each dimension was measured with four items, so the model had a total of 12 items. Bartlett's test of sphericity for this 12x12 matrix rejected the null hypothesis, ( $\chi^2 = 1709.579$   $df=66$   $p=0.000$ ) with a (KMO) measure of 0.736. The final solution explained 58.73% of the variance. All items had factor loadings >0.5, except the item "I personally know a lot of people who started a business in the last two years", which was therefore suppressed.

### 3.8.4 Step 4: Discriminant validity, internal consistency (reliability) and composite reliability (CR)

Discriminant validity measures the degree to which extracted latent factors are autonomous entities: The correlation between them should not be so high, so as to give the impression that they represent a similar underlying construct (Siekpe, 2005). Discriminant validity was evaluated by close scrutiny of the factor correlation matrix and average variance extracted (AVE) for each of the factors above. The formulas for AVE and CR are presented below:

**AVE** =  $\Sigma \lambda_i^2 / \{ \Sigma \lambda_i^2 + \Sigma (1 - \lambda_i^2) \}$ , where  $\Sigma \lambda_i^2$  is the sum of the squared loadings, while  $\Sigma (1 - \lambda_i^2)$  is the sum of the residual variances (Reinartz, Kraft, & Hoyer, 2003) ..... (1)

**CR** =  $(\Sigma \lambda_i)^2 / \{ (\Sigma \lambda_i)^2 + \Sigma (1 - \lambda_i^2) \}$ , where  $(\Sigma \lambda_i)^2$  is the sum of the factor loadings squared, while  $\Sigma (1 - \lambda_i^2)$  is the sum of the residual variances (Raykov, 1997).....(2)

The reliability of the generated factors was assessed using both Cronbach's alpha and CR, since alpha tends to underestimate reliability. The AVE should exceed a value of 0.5; however, 0.4 is acceptable if the composite reliability (CR) of a measure is >0.6, i.e. the convergent validity of the measure is adequate (Fornell & Lacker, 1981). The four tables above show that all factors have Eigen values >1 (Kaiser, 1974), and all factor loadings are significant since they meet the 0.5 cut-off point (those < 0.5 were suppressed), which means that the item explains at least 50% of the variance in the dimension on which it is loaded. Convergent validity was achieved since all the items load on the dimensions on which they are expected to load. Discriminant validity is achieved since items do not correlate highly as explained by Siekpe (2005). All items at least attain an AVE minimum score of 0.4 which is acceptable (Fornell & Lacker, 1981). The  $\sqrt{\text{AVE}}$  exceeds the coefficients in the rows and columns in the correlation matrix (not shown).

Cronbach's alpha cut-off of 0.7 is met for most of the dimensions (Nunnally & Bernstein, 1994), while those that do not make it attain at least 0.6 which is acceptable (Malhotra & Birks, 2007). Since alpha tends to under-estimate reliability, composite reliability is calculated for each dimension and meets the 0.7 cut-off.

### **3.8.5 Step 5: Confirmatory Factor Analysis (Cross validation) of study dimensions.**

Some measures employed in cross-cultural research are hardly validated prior to their use in contexts that are different from those in which they were developed (Schertzer, Laufer, Silvera, & McBride, 2008) since multi-item measures made for a given context do not become universally reliable and valid (Veloutsou, Gilbert, Moutinho, & Good, 2005). In light of this Churchill and Peter (1984) suggest that measures designed for a given society needs to be investigated before administration in other contexts. Based on these assertions, a cross-validation of the study instruments, through confirmatory factor analysis was necessary.

### **4.2.9 The CFA process**

Cross-validation was done using confirmatory factor analysis Lisrel 8.8 (Jöreskog & Sörbom, 2007), using robust maximum likelihood estimation as the fitting function and raw data to draw path diagrams of the congeneric measurement models (N=671). These models specify the number of factors, the relationship between the indicators and the latent factors, as well as the correlations among these factors (Brown, 2006). Items with the highest factor loading in the exploratory factor analysis solution were used as the marker variables (Brown, 2006). The factors were allowed to correlate, and a number of fit statistics (explained below) examined to evaluate model fit. The measurement models fit statistics are presented in Table 15, while factor loadings of these models are presented in Appendix 2.

### **Confirmatory factor analysis results (CFA)**

Table 28 below shows the fit indices for the measurement models of each of the study dimensions. Although the chi-square value was significant for each model (since it is sensitive to sample size), all the models were identified and fit the data well, since the cut-off points for the other fit indices were met. The sources of the cut-off points are presented below the table.

**Table 15: Fit indices of Measurement Models (MM)**

Indices	$\chi^2/df$	RMSEA	AGFI	GFI	CFI
Recommended Values	<3 <sup>a</sup> <5 <sup>f</sup>	<0.05 <sup>b</sup> <0.06 <sup>c</sup> <0.08 <sup>d</sup>	>0.90 <sup>e</sup>	>0.90 <sup>e</sup>	>0.9 <sup>e</sup>
Cultural Orientation Model	678.30/155	0.057 (0.052-0.061)*	0.971	0.947	0.983
Entrepreneurial Orientation model	29.68/5	0.068 (0.046-0.093)	0.980	0.987	0.997
Ability Perceptions Model	148.18/31	0.060 (0.05-0.07)	0.997	0.993	0.997

<sup>a</sup> [Bollen, 1989], [Hair et al.,1998], [Jöreskog & Sörbom , 1993]

<sup>b</sup> [Browne & Cudeck, 1993]

<sup>c</sup> [Hu & Bentler, 1999]

<sup>d</sup> [Byrne, 1998] <sup>e</sup> [Hair et al.,1998], [Jöreskog & Sörbom, 1993] \* Confidence intervals in parentheses

### Fit Indices

To evaluate the measurement models above, the fitting function used to derive them is discussed first in the section below, followed by a brief narration of each fit index.

### Fitting function: Robust Maximum likelihood estimation (ML)

The purpose of a CFA is to calculate parameter estimates of a measurement model (i.e. factor loadings, factor variances and covariances, indicator error variances and error covariances) that produce a predicted variance–covariance matrix (symbolized as  $\Sigma$ ), that is similar to the sample variance–covariance matrix (symbolized as  $S$ ) as much as possible (Brown, 2006). This is done through an iterative process using a mathematical fitting function to minimize the difference between  $\Sigma$  and  $S$ . While there are many fitting functions for this purpose in SEM, this study utilized robust ML which is a full information estimator that has advantageous statistical properties, such as the provision of standard errors (SE) for each model parameter estimate. These can be used for statistical significance testing, and in determining the precision of these estimates, for example providing confidence intervals (Brown, 2006). Some assumptions of

robust ML are that (a) the sample size is large (asymptotic), (b) the indicators have been measured on a continuous scale (approximate interval level data), and (c) the distribution of the indicators is multivariate normal (Brown, 2006). Robust ML was used in this study because of its ability to tolerate non-normality.

Due to the plethora of fit indices, Kline (2005) recommends that a researcher should report the  $\chi^2$  test, RMSEA and its confidence interval, CFI and SRMR, while Hu and Bentler (1999) propose a two-index reporting strategy in Table 16 below. This study adopts these two recommendations besides reporting the AGFI.

**Table 16: Hu and Bentler (1999) two-index presentation strategy**

	<b>Fit index combination</b>	<b>Combination Rules</b>
1	Tucker Lewis Index (TLI) and SRMR	TLI of 0.96 or higher and SRMR of 0.9 or lower
2	RMSEA and SRMR	RMSEA of 0.06 or lower and SRMR of 0.9 or lower
3	CFI and SRMR	CFI of 0.96 or higher and SRMR of 0.09 or lower

The section below gives a brief description of the fit indices chosen for this study:

### **1. Absolute fit indices**

These are indices that help the researcher to determine how well a given model fits the data (Hooper, Coughlan, & Mullen, 2008) and also indicate which model has better fit. They include model chi-square, RMSEA, AGFI, GFI, RMR and SRMR.

#### **a) Model chi-square:**

The classic goodness-of-fit index is the model  $\chi^2$ . A statistically significant value of  $\chi^2$  means that  $S \neq \Sigma$  (Brown, 2006), i.e. chi square examines the magnitude of the discrepancy between the sample matrix (S) and the covariance matrix ( $\Sigma$ ) (Hu & Bentler, 1999). A good model ought to

provide a non-significant p value at the 0.05 level of significance; therefore chi-square is often referred to as a “badness of fit” measure (Kline, 2005). Chi –square has a number of limitations that impair its use:

- i) It assumes multivariate normality, thus extreme deviations from normality could result in a poor fit even if the model was well specified.
- ii) Given that chi-square is more of a statistical significance test (Hooper et al., 2008), it is sensitive to sample size. For this reason, chi-square nearly always rejects the model when sample size is large (Jöreskog & Sorbom 1993).
- iii) In case of small samples, chi-square loses power and may not be able to discriminate between good and bad fitting models (Kenny & McCoach, 2003).

#### **b) Root Mean Square of Approximation (RMSEA):**

RMSEA indicates how well the model with unknown but optimally chosen parameter estimates would fit the population covariance matrix (Byrne, 1998). A major advantage of RMSEA is that a confidence interval is calculated and reported with it (MacCallum, Browne, & Sugawara, 1996), and this is possible due to the known distribution values of the statistic, thus permitting a null hypothesis (poor fit) to be tested more accurately (McQuitty, 2004). Browne and Cudeck (1993) propose that RMSEA values  $<.08$  suggest adequate model fit, RMSEA values  $<.05$  have good model fit, and that models with RMSEA values  $\geq 0.1$  should be rejected.

#### **c) Goodness of Fit Static (AGF) and Adjusted Goodness of Fit Static (AGFI):**

Developed by Jöreskog and Sörbom (1993) as an alternative to the chi-square test, AGF is calculation of the proportion of variance explained by the estimated population covariance matrix (Tabachnick & Fidell, 2007), which indicates how close the model is to replicating the observed covariance matrix (Diamantopoulos & Siguaw, 2000). The AGFI adjusts GFI based upon degrees of freedom, with more saturated models reducing it (Tabachnick & Fidell, 2007). Acceptable values of AGFI range from 0-1, with values of 0.9 or higher indicating acceptable fit.

#### **d) Root Mean Square Residual (RMR) and Standardized Root Mean Square Residual (RMSR):**

These two indices represent the square root of the difference between the residuals of the sample covariance matrix and the predicted (hypothesized) covariance matrix (Hooper et al., 2008). The RMR calculation is based on item scales, yet in some studies questionnaire some items are based on a Likert scale ranging from 1-5 or 1-7. Thus interpretation of RMR becomes problematic (Kline, 2005). Methodologists resolved this problem by calculation of the SRMR, whose acceptable values range from 0-1, with better-fitting models having a SRMR <0.05 (Byrne, 1998). Nevertheless, values of up to 0.08 are acceptable (Hooper et al., 2008).

## **2. Comparative fit indices**

These indices are also known as relative fit indices (McDonald & Ho, 2002), and do not use the model chi-square in evaluation of fit, but compare the chi-square value to a baseline model. An example of these indices is the comparative fit index, (CFI). Developed by Bentler (1990), CFI rectifies the sample size problem and performs well even where sample sizes are small (Tabachnick & Fidell, 2007). The CFI assumes that all latent variables are uncorrelated (null model/independence model), and compares the sample covariance matrix with this null model. CFI values = 0.90 are indicative of reasonable fit (Hair et al., 1998), while values  $\geq 0.95$  are indicative of good fit (Hu & Bentler, 1999).

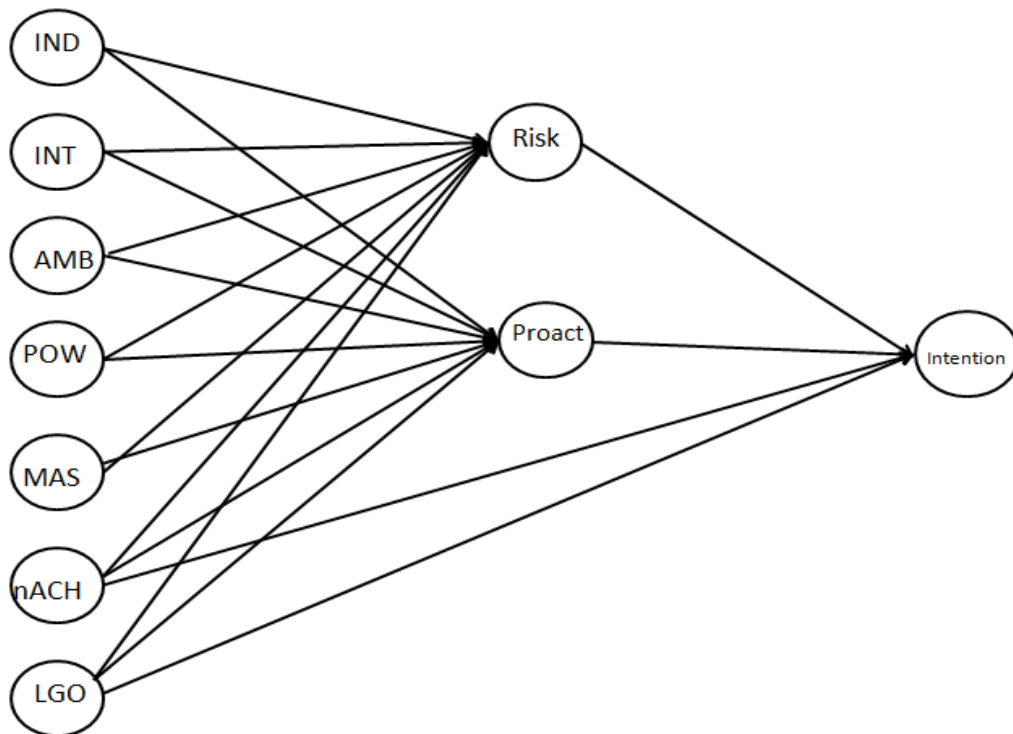
### **Phase 2: Hypothesis testing**

Following exploratory and confirmatory factor analysis of the study dimensions, hypothesis testing commenced using AMOS 23 based on maximum likelihood estimation (ML) as the fitting function.

#### **3.8.6 Step 6: Estimating the baseline model (for the combined/omnibus data)**

In this step using the whole sample, i.e. the combined data for the three countries, a CFA congeneric measurement model is constructed first, followed by a correlation matrix of the

variables and estimation of a baseline structural model, which specifies how the latent factors are related to each other. The conceptual diagram for this baseline model is presented in Figure 4 below and shows that cultural orientation variables, achievement motivation and learning goal orientation are all exogenous variables that impact upon two endogenous variables, namely risk taking and proactiveness. These two endogenous variables then impact upon entrepreneurial intention. Since the two perceived ability dimensions, i.e. learning goal orientation and achievement motivation, are correlates of self-efficacy or perceived behavioral control in the theory of planned behavior, each of them is hypothesized to directly influence intention, hence the arrows from each of them to intention.



**Figure 4: Study baseline model**

IND = Independence; INT=Interdependence; AMB = Ambiguity intolerance; POW = Power;

MAS = Masculinity; nAch = Achievement motivation; LGO= Learning goal orientation; RISK = Risk taking;

PROACT = Proactiveness.

### **3.8.7 Step 7: Fitting the baseline model into the countries data sets**

In this step, the baseline model was fitted into the various country data sets. Following the procedure used in the whole sample, for each country a measurement model was first constructed, then construction of the correlation matrix of the study variables, followed by fitting of the baseline model into each country data set.

### **3.8.8 Step 8: Fitting the baseline model into the genders and modernity data sets**

In this step, the whole sample data set was divided into two by gender. The whole sample data set was also divided into two using modernity as the grouping variable, to form low and high modernity data sets. The baseline model was then fitted into each gender and modernity data set, as per procedure used in the whole sample and country data sets. In order to understand whether the different groups perceived the study items in the same way, invariance tests had to be done as described in the section below.

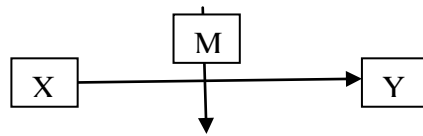
### **3.9.9 Step 9: Configural invariance test**

Invariance tests were carried out between the male and female measurement models, as well as between low and high modernity measurement modes. Measurement equivalence or conceptual equivalence (Poortinga & Malpass, 1986) refers to the extent to which the content of each dimension is perceived and interpreted in the same way across study samples. According to these authors, the establishment of measurement equivalence is a precondition for conducting substantive group comparisons in which socialization factors have a prominent impact. Configural invariance is the lowest form of measurement equivalence (Steenkamp & Baumgartner, 1998), i.e. the measurement model for the latent concept has the same factor structure across groups, which means that the latent construct can be meaningfully discussed across groups. Given that configural invariance is a prerequisite for further equivalence testing, it is regarded as the baseline (Vandenberg & Lance, 2000). Metric or construct invariance supposes that factor loadings are equal across groups, while scalar invariance holds if in addition to factor loadings, the intercepts of the indicators in the measurement model are also equal across groups. In each case, the difference between models was ascertained through the  $\chi^2$  difference test.

### 3.8.10 Step 10: Phase 3: Moderation analysis

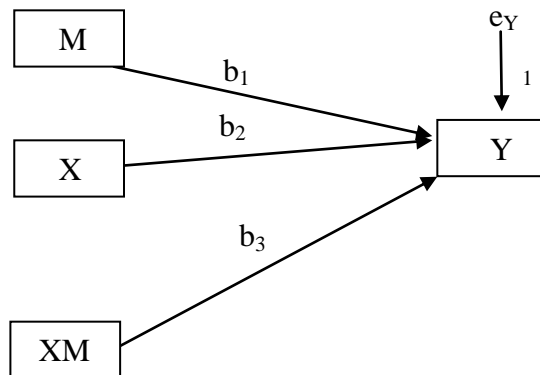
#### Testing for moderation effects

To examine the extent to which the relationship between EO and entrepreneurial intention is moderated by knowledge, networking or optimism, the Process macro in SPSS (Hayes, 2013) was used, based on template 1 of Hayes' models. SPSS automatically standardizes all variables to make interpretations easier afterwards and to avoid multicollinearity. Template 1 is a simple moderation model with a single moderator influencing the size of X's effect (EO) on Y (intention). To examine the contingent effect of the moderators on the relationship between EO and Intention a composite dimension was formed for each of the variables to be employed in moderation analysis and then fitted into the model. The conceptual and statistical models are presented diagrammatically below:



**Figure 5: Moderation conceptual model**

Source: Template 1 Hayes (2013)



**Figure 6: Moderation statistical model**

Source: Template 1 Hayes (2013)

*Conditional effect of X on Y:  $Y=b_1+b_3M$ ;*

$e_Y$ = error term

X= Risk taking/Proactiveness (Entrepreneurial orientation)

M= Knowledge, Networking/Optimism (moderators)

Y= Entrepreneurial intentions

Moderator effects were then interpreted in line with recommendations and guidelines by Baron, Frazier and Tix (2004).

### **3.9 Chapter Summary**

This chapter presents the methodology that was used to conduct the study. The chapter begins by presenting the rationale for the choice of countries and universities included in the study as well as a description of the procedure used to gain permission to conduct the study in the different countries and universities. This is followed by a presentation of the research paradigm, research and sampling designs, the data collection method employed results of normality tests, plus a description of steps taken to take care of common method bias. This is followed by EFA results, indicating that convergent and discriminant validity were achieved, and that the measures used in this study were robust as reliability and AVE cut off points were met. CFA results are presented next, and they indicate that measurement models fitted the data well. Next, the chapter presents a description of the study measures, followed by the three-phase data analysis plan in form of a flow diagram, and a summary of the same in table form. The chapter ends with a description of invariance tests, the baseline structural model as well as a presentation of the moderation conceptual model. The next chapter presents the major findings of the study, starting with objective one to objective five.

## CHAPTER FOUR: RESULTS

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### 4.1 Introduction

This chapter presents the results of the qualitative and quantitative analyses which were done in order to fulfill the objectives of the study. Section 4.2 presents the results of the qualitative phase (Table 17) in an effort to understand why students do not start a business upon graduation. Thereafter the sections that follow present results of the quantitative phase.

### 4.2 Qualitative results

**Table 17: Themes and factors barring students from starting a business**

Theme	Factors
Cultural context	Obedience to parents/parental influence Inability to make autonomous decisions Fear of taking less tested/unknown paths Loss of face as a result of engaging in a despised career Negative social valuation of entrepreneurship Mind sets that value salaried employment High expectations of getting jobs in prestigious institutions Social beliefs against some forms of business Inadequate peer and family support Poor saving culture by graduates Cultural barriers to female endeavors exist
Fear of failure	Fear of bringing up a new idea due to criticism Harsh judgment in case of failure Fear of competition from already established similar businesses
Knowledge/experience	Lack of viable business ideas Lack of knowledge and skills to generate a competitive business Lack of business experience Have much more class theories than practical work Limited market research/information Lack of exposure to family businesses Limited exposure due a general lack of role models
Entrepreneurial orientation	Inability to embark on businesses that involve risk Lack of creativity and innovativeness Poor personal initiative
Self-efficacy	Entrepreneurship education is more theoretical than practical Lack of confidence to start and sustain a business Graduates leave university with limited practical skills Low level of self esteem Discouragement from by peers leading to loss of confidence
Government support	Inadequate government support to graduate youth High interest rates in financial institutions Lack of starting capital Unfavorable economic conditions

Source: Primary data

The table above shows the factors (issues raised by the respondents) on the right side of the table, and the six themes into which they have been classified on the left. The last theme was dropped from the study since non graduates who have started a business have faced the same conditions as Walter et al. (2004) assert (see section 1.2.1 section on Uganda). In general, some of the factors raised for the cultural context are reminiscent of the cultural dimensions suggested by Hofstede. For example “*obedience to parents and parental influence*” has a strong relationship with power distance as espoused by Takya-Asiedu (1993) in section 2.4.2 and filial piety (see section 5.2.8).

The statement “*fear of taking less tested/unknown paths*” alludes to uncertainty avoidance or ambiguity intolerance. On the other hand, “*inability to make autonomous decisions*” is a characteristic of the interdependence construal in image theory (as opposed to independence). Negative social valuations of entrepreneurship, pride and issues of face saving were raised in the interviews and have been cited in the literature review (section 2.2.2) on image theory. In fact one student said... “*I can’t stoop so low ...that career (entrepreneurship) is for academic failures*”. Another one said “*Many graduates fear to go back to the village to carry out agriculture yet they went to school, hence they are discouraged from start-up*”. In this section “*inadequate peer and family support*” has connotations for social capital as one needs to network before he/she can count on such support. Finally for this section, “*high expectations of getting jobs in prestigious institutions*” as well as “*mind sets that value salaried employment*” is suggestive of an attitudinal problem of the students, as decried by Muwema (2011) in section 5.6.1. Lastly the interviews raised issues of gender in entrepreneurship and the disadvantaged position of female students by stating that “*cultural barriers to female endeavors exist*” as discussed in section 2.9.2.

Similarly Fear of failure which is the second theme is an important issue in the minds of the student; in particular the statement “*harsh judgment in the case of failure*” seems to allude to the high stigma of failure in collective societies which is a deterrent to entrepreneurial activities as envisaged by Damaraju et al. (2010) in section 5.6.1. Knowledge/experience, EO and self-efficacy (lack of skills and confidence) are all interrelated issues that featured prominently in the conversations. Of particular importance is the skills deficit, lack of knowledge about markets and a general lack of experience as presented in section 2.8.3. Specifically of concern to this study

was the statement “*entrepreneurship education is more theoretical than practical*”, meaning that there are concerns about the quality of entrepreneurship education, and the products it puts forth.

### **4.3 Introduction to Quantitative study results.**

Based on the study model and the study objectives (Chapter One) as well as the data analysis flow diagram/plan (Chapter Three), the quantitative results are presented chronologically in four sections in the order in which the data analysis phases were done, as indicated in Table 18.

Section (4.4) is a preliminary analysis (phase one of the data analysis plan), which presents the descriptive data of respondents followed by results on start-up activities, intention results, and actions taken by respondents. This is followed by results from objective one of the study, which was to examine the prevalence of experience, fear of failure, modernity (explanatory variables) and multivariate analysis of variance (MANOVA) results which show the prevalence of cultural orientation variables in the region. Section (4.5) presents results of the second phase of the data analysis strategy and addresses the second objective of the study which was to examine the impact of cultural orientation variables and ability perception variables on EO. The third objective of the study, which was to establish the impact of EO on entrepreneurial intention, is also addressed in this section. Section (4.6) addresses objective four of the study, which aimed at examining the impact of the cultural orientation variables and ability perceptions on EO and entrepreneurial intention by gender (male and female groups) and modernity (low and high modernity).

The last section of this chapter (4.7) presents results for phase three of the data analysis plan and addresses objective five of the study, which was to examine the extent to which networks, knowledge, (entrepreneurial competencies) and optimism moderate the relationship between EO on one hand, and entrepreneurial intention on the other as per the study model. A chapter summary concludes the chapter.

**Table 18: Summary of presentation of findings**

	<b>Objective of the analysis</b>	<b>Results Presented</b>
Section 4.4	<p><b>Generate descriptive statistics</b></p> <p><b>Research objective 1:</b> Establish the prevalence of the explanatory and cultural variables of the study.</p>	<p><b>Descriptive statistics</b> Bio data, course, start up activities, etc. Experience, Fear of Failure, Modernity and Cultural orientations MANOVA results.</p>
Section 4.5	<p><b>Research objective 2 &amp; 3</b> 2.Establish impact of Cultural orientation (CO) on (EO) 3.Establish impact of EO on entrepreneurial intentions</p>	<p><b>Hypotheses Testing: Measurement models</b> CFA for whole sample (omnibus) and country data sets</p> <p><b>Structural models</b> Whole sample</p> <p>Country 1 (Kenya) Model</p> <p>Country 2 (Tanzania) Model</p> <p>Country 3 (Uganda) Model</p>
Section 4.6	<p>Examine reported levels of EO by gender</p> <p><b>Research objective 4:</b>Test the baseline model by gender and modernity</p>	<p>T-tests between genders</p> <p><b>Hypothesis testing</b> Male and female structural models Low and high modernity structural models Invariance tests between gender and modernity models</p>
Section 4.7	<p><b>Research Objective 5</b> Examine moderating role of entrepreneurial competencies/ optimism on the relationship between EO and intention</p>	<p><b>Hypothesis testing /Moderation</b> Knowledge as a moderator Networks as a moderator Optimism as a moderator</p>

#### **4.4 Descriptive statistics**

The descriptive statistics presented in this section include sex of respondents, age, marital status and course; start-up activities, intentions of respondents and actions taken by respondents.

**4.4.1 Sex of respondents:** The sex of the respondents in this study is presented in Table 19 below, which shows that males composed the biggest percentage of respondents overall 56.5 percent (N=614) compared to females 42.4 percent (N=460). Kenya had more females respondents (N=107) than male (N=97) in her sample, while both Tanzania and Uganda had more males than females in their samples.

**Table 19: Sex of respondents by country**

	Male		Female		Total N
	N	%	N	%	
Kenya (KE)	97	47.5	107	52.5	204
Tanzania (TZ)	279	59.7	188	40.3	467
Uganda (UG)	238	57.7	165	39.8	403*
Combined (KE,TZ, UG)	614	56.5	460	42.4	1074

\* 12 students did not indicate their sex

Source: Primary data

#### 4.4.2 Age, marital status / course

The ages, marital status of respondents of the three countries are presented in the table below.

**Table 20: Age, marital status and course**

Variable	Kenya N=204		Tanzania N=467		Uganda N=415		
	N	%	N	%	N	%	
Age	18-25	204	100	373	79.9	375	90.4
	26-35	-	-	91	19.5	22	5.3
	>36	-	-	3	2	-	-
	Not reported					18	4.3
Marital Status	Yes	53	26	165	35.3	16	3.9
	No	151	74	302		395	95.2
	Not reported					4	1.0
Course	BBA	42	20.6	285	61.0	151	36.4
	BCom	151	74.0	127	27.2	-	
	BPLM	8	3.9	55	11.8	52	12.5
	BA Econ	2					
	BEPP					88	21.2
	BEM					124	29.8

**Key:** BBA=Bachelor of Business Administration, BCom= Bachelor of Commerce, BPLM= Bachelor of Procurement and Logistics Management, BA Econ= Bachelor of Arts in Economics, BEPP= Bachelor of Entrepreneurship and Project Planning, BEM= Bachelor of Economics and Management.

In terms of age, Table 20 above shows that most of the respondents in the three countries were young people between 18-25. Further, most of them were not married in Kenya (26%) and Uganda (3.9%), yet a substantial number of the respondents in Tanzania were married (36.4%). On inquiry about this matter, it was explained that the age for marriage consent in Tanzania is lower than that in the two sister countries. Lastly, the table shows that all the respondents were offering business courses in the three countries, with BBA being the major course in Tanzania (61%) and Uganda (36.4%). In Kenya, the majority of students offered B.Com (74%).

#### 4.4.3 Start-up activities:

Respondents were requested to indicate on a dichotomous scale (yes/no) whether they intended to start a business, and also indicate whether they had a business idea. Their responses are presented in the table below.

**Table 21: Start-up activities by respondents**

Question/Item	Kenya N= 204		Tanzania N=467		Uganda N= 415	
	Yes	No	Yes	No	Yes	No
Do you intend to start a business within the next 12 months?	91.2	8.8	77.2	27.6	78.8	19.3
If your answer is Yes to G1, do you currently have a business idea for starting a business (i.e., an idea for a product or service that you could offer)?	63.7	36.3	72.4	27.4	77.6	17.8
In case you have this business idea, have you taken some action about it?	56.9	43.1	69.6	29.8	68.2	26.5

Table 21 above shows that Kenya has the highest percentage of students who harbor an intention to start a business (91.2) followed by Uganda (78.8) and Tanzania (77.2).

#### 4.4.4 Intention statements (likert based):

The dichotomous intention question in the table above, was followed by a likert based one (1= no intention and 5 very high intention) (see section 3.6.4). In this case, respondents were asked to state their intentionality for starting a business, followed by some start-up questions from Davidsson and Honig (2003). The means and standard deviations of their responses are presented in Table 22 below. An evaluation of these means reveals that entrepreneurial intention was actually low.

**Table 22: Means of intention statements using whole sample**

Intention statement	Mean	SD
Intend to organize a start-up team	3.92	1.14
Intend to do market research	3.65	1.25
Intend to work on a business plan	3.98	1.06
Intend to register the business	3.95	1.09
Intend to obtain a trade license	3.83	1.16

Source: Primary data (N=1086).

The table above shows that all the means were  $> 3$  (neutral position) but were  $< 4$  (high intentions). Therefore while these students harbor the intention to start a business, these intentions are categorized as low. As a follow up of their intentions, the study examined the actions taken by the students toward start-up. Table 23 presents their responses which rhymes with their low level of intentions.

#### 4.4.5 Actions taken by respondents

**Table 23: Action taken by respondents**

Indicate any action you have taken about your proposed business idea	Kenya N=204	Tanzania N= 467	Uganda* N=301
	%	%	%
a) Written a business plan	10	25.9	22.6
b) Done market research	29.4	26.3	18.6
c) Saved money to start the business	17.6	16.9	25.2
d) Registered the business	1.0	2.1	4.7
d) Organized a start-up team,	4.4	1.7	10.3
e) No action	36.8	26.6	33

Source: Primary data

\*Some respondents did not answer these questions; hence the analysis is based on 301 people.

Table 23 shows that a significant number of the respondents in each country had taken no action or are not proactive. For example in Kenya 37% had taken no action, compared to 27% in Tanzania and 33% in Uganda.

#### 4.4.6 Objective 1 of the study:

This section presents the findings from objective 1 of the study which was to examine the prevalence of business experience, fear of failure, modernity and cultural orientation variables.

##### 1. Business experience

In order to ascertain whether the respondents had any business experience, two questions were presented to them in the questionnaire, i.e. “Have you had any start-up experience before?” and “Did any of your parents own a business?” The answers to these two questions are presented in the table 24 below:

**Table 24: Start-up experience**

	Kenya N=204				Tanzania N=467				Uganda N=415			
	Yes	%	No	%	Yes	%	No	%	Yes	%	No	%
Have you had any start up experience before?	132	64.1	74	35.9	293	63	172	37	304	73.3	106	25.5
Did any of your parents own a business?	147	71.4	59	28.6	362	77.8	103	22.2	364	87.7	51	12.3

Source: Primary data

Table 24 above shows that in the three countries combined, over 50% of the respondents had some sort of start-up experience. Similarly, over 70% of the respondents in these countries said that at least one of their parents owned a business. The percentage of parents who ostensibly owned a business was highest in Uganda (87.7%).

## 2. Fear of failure

Fear of failure was gauged with a single question: “Would fear of failure prevent you from starting a business?” to which respondents were to answer Yes or No. Using fear of failure as the grouping variable, t-tests were carried out between the Yes group and the No group for all the study countries for the above item. The rationale for this was to ascertain whether students who exhibited fear of failure were different in terms of the study dimensions from those who did not exhibit this trait since fear of failure has been described as a major deterrent to entrepreneurship by the Global Entrepreneurship Monitor (GEM) (Kelley et al., 2011). The results are presented in Tables 25 for Kenya, 26 for Tanzania and 27 for Uganda.

### Fear of failure among respondents in Kenya:

The Kenyan table shows that there are no significant differences between the two groups on the cultural orientation variables (independence, interdependence, power distance, ambiguity intolerance, masculinity) and other variables such as networking, optimism and entrepreneurial intention. However, the two groups are different in terms of entrepreneurial orientation variables (risk taking and proactiveness), ability perceptions (learning goal orientation and achievement motivation), and modernity, with the “No” group exhibiting higher means and thus more entrepreneurial proclivity in each case.

**Table 25: Fear of failure among Kenyan students**

Variable	Yes (N=49)		No (N=155)		Sig
	Mean	SD	Mean	SD	
Independence	4.04	.725	4.08	.850	.719
Interdependence	4.37	.660	4.47	.620	.310
Power Distance	2.58	.739	2.66	.856	.546
A/Intolerance	3.05	.818	3.30	.829	.061
Masculinity	3.53	.722	.329	.780	.059
Proactiveness	3.91	0.79	4.18	0.60	.000
Risk taking	3.49	0.74	3.74	0.63	.000
L/Orientation	3.77	.916	4.21	.784	.000
Knowledge	4.65	1.54	5.26	1.23	.005
Networks	3.84	.748	3.81	.860	.839
Optimism	3.39	.687	3.58	.717	.088
nACH	3.86	.965	4.22	.784	.007
Goal Intentions	3.96	.906	4.08	.899	.406
Modernity	3.80	.617	4.04	.780	.044

Source: Primary data

### Fear of failure among Tanzanian students

The table below shows the prevalence of fear of failure among Tanzanian students. The table shows that just as in Kenya, there were no significant differences between the ‘Yes’ group and the ‘No’ group on all the cultural orientation dimensions as well as optimism and entrepreneurial intention. However, the two groups differed significantly on EO, ability perceptions, knowledge, networks and modernity with the no group having higher means.

**Table 26: Fear of failure among Tanzanian students**

Variable	Yes (N=156)		No (N=311)		Sig
	Mean	SD	Mean	SD	
Independence	3.80	.613	3.91	.779	.144
Interdependence	4.28	.559	4.30	.558	.659
Power Distance	2.80	.821	2.93	.899	.111
A/Intolerance	3.30	.756	3.32	.773	.790
Masculinity	3.64	.773	3.75	.634	.154
Proactiveness	3.91	.799	4.18	.602	.000
Risk taking	3.49	.748	3.74	.634	.000
L/Orientation	5.82	1.32	5.77	1.14	.000
Knowledge	4.65	1.39	5.15	1.26	.000
Networks	4.79	1.21	5.13	1.36	.000
Optimism	3.91	.753	3.94	.668	.699
nACH	5.42	1.30	5.86	1.01	.000
Goal Intentions	3.76	.805	3.82	.931	.459
Modernity	5.17	1.45	5.43	1.19	.000

Source: Primary data

### 3. Fear of failure among Ugandan students

The Ugandan table below paints a slightly different picture. There are significant differences between the two groups on some cultural orientation variables such as independence, power distance and masculinity, with the ‘Yes’ group exhibiting higher means in each case.

**Table 27: Fear of failure among Ugandan students**

Variable	Yes (N=133)		No (N=282)		Sig
	Mean	SD	Mean	SD	
Independence	4.15	.670	4.00	.655	.042
Interdependence	4.12	.672	4.15	.648	.624
Power Distance	3.50	.823	3.05	1.19	.000
A/Intolerance	3.63	1.40	3.55	.713	.444
Masculinity	4.03	1.40	3.55	.713	.000
Proactiveness	3.69	.743	3.93	.773	.003
Risk taking	3.85	.713	3.89	.751	.604
L/Orientation	4.35	1.30	5.36	1.02	.000
Knowledge	4.84	1.49	5.18	1.26	.000
Networks	4.62	1.23	5.22	1.41	.000
Optimism	3.65	.836	3.58	.726	.416
nACH	4.24	1.28	5.52	1.05	.000
Goal Intentions	3.84	.907	3.83	.726	.969
Modernity	3.86	1.36	5.36	1.27	.000

Source: Primary data

It is particularly noteworthy that this ‘Yes’ group has a higher mean on power distance than the ‘No’ group. On the other hand, the two groups differ significantly on proactiveness, knowledge, networks, ability perceptions and modernity with the ‘No’ group exhibiting higher means in each case.

Taken together, of the entire population of students in this study (N=1086), a third of them (338) or 31% indicated that fear of failure would deter them from starting a business. Generally, the three tables show that there is a significant difference between the ‘low fear of failure’ group (No) and the ‘high fear of failure’ group (Yes) on variables that are important in the entrepreneurship domain in all the three countries. In particular, Kenya has the lowest power distance in both groups and also the lowest number of the ‘No’ group (24.0%) followed by, Uganda (24.8 %) and Tanzania (33%). Uganda has the highest level of power distance in both groups. The findings imply that fear of failure is a significant factor of those that hinder graduates from entrepreneurial activity.

### 3. Modernity

A composite measure was formed for the modernity dimension by averaging all the modernity items and then low and high groups formed out of this dimension for all the study countries. T-tests were then carried out between the two groups. The rationale was to ascertain whether the more modern group (those with a more flexible attitude) would be different from the less flexible

ones (those who are bound to cultural norms) in terms of the study dimensions. Table 19 below presents the findings of these tests.

The table below shows that the more modern orientation has significantly higher means on some variables as expected from theory. The means for independence, masculinity, proactiveness, risk taking, knowledge, networking, optimism, achievement motivation and learning goal orientation are all significantly higher in the more modern group than in the low modern group in all the study countries. Modern oriented people are supposed to be more autonomous, masculine and risk taking as they are tending toward individualism. The question is, can they get the support they need from others in a collective interdependent community?

**Table 28: Modernity value in the study countries**

Dimension	KENYA			TANZANIA			UGANDA		
	Low N=72	High N=132	Sig.	Low N=47	High N=406	Sig.	Low N=62	High N=330	Sig.
Independence	3.95 (.778)*	4.13 (.838)	.130	3.82 (.661)	3.92 (.712)	.391	3.77 (1.04)	4.09 (.572)	.001
Interdependence	4.38 (.639)	4.48 (.625)	.264	4.21 (.595)	4.32 (.555)	.243	3.78 (1.08)	4.21 (.543)	.000
Power distance	2.59 (.950)	2.67 (.757)	.502	2.90 (.896)	2.88 (.910)	.887	3.24 (.751)	3.18 (1.18)	.699
A/Intolerance	3.37 (.794)	3.17 (.845)	.088	2.98 (.896)	3.36 (.762)	.002	3.51 (.673)	3.58 (1.00)	.576
Intention	3.63 (1.11)	4.29 (.654)	.000	3.38 (1.12)	3.86 (.845)	.001	3.66 (.979)	3.93 (.640)	.005
Masculinity	3.39 (.654)	3.17 (.845)	.509	3.77 (.934)	3.73 (.743)	.722	3.45 (.879)	3.83 (.675)	.000
Proactiveness	3.86 (.764)	4.17 (.698)	.003	3.73 (.786)	4.17 (.667)	.000	3.15 (.989)	4.01 (.633)	.000
Risk	3.78 (.655)	4.16 (.744)	.000	3.52 (.839)	3.71 (.650)	.074	3.53 (1.01)	3.95 (.674)	.000
Knowledge	3.20 (.863)	4.04 (.733)	.000	3.54 (.905)	5.13 (1.29)	.000	4.02 (1.62)	5.33 (1.16)	.000
Network	3.30 (.649)	4.10 (.785)	.000	3.62 (1.15)	5.22 (1.24)	.000	3.65 (1.41)	5.35 (1.16)	.000
Optimism	3.27 (.701)	3.68 (.680)	.050	3.79 (.981)	3.97 (.655)	.092	3.16 (.850)	3.68 (.742)	.000
nAch	3.56 (1.05)	4.44 (.402)	.000	4.09 (1.54)	5.92 (.912)	.000	3.69 (1.30)	5.59 (1.04)	.000

\* Standard deviation in parentheses

Taking individual countries into account, Kenya which is the economic powerhouse of East Africa and hence more modern (see Table 4 on country economic indicators) scores higher than Uganda and Tanzania on intention, proactiveness, risk taking and networking. Kenya also has the lowest power distance scores in both groups compared to Tanzania and Uganda.

#### 4.4.7 Prevalence of Cultural orientation variables

MANOVA (which assumes that the data is normal) was carried out in order to gauge the prevalence of cultural orientation variables and risk taking in the three countries. Descriptive statistics for these variables per country are presented in Table 29, i.e. the means of each variable per country, while Table 30 presents multiple comparisons of these variables in all three countries. The rationale for this analysis is to ascertain the level to which these countries are similar in terms of these variables or ascertain the extent to which each country may be harboring different levels of each of these five variables.

**Table 29: Descriptive statistics of study variables by country**

	Country	Mean	SD	N
INDEPENDENT	1	4.0765	.82042	206
	2	3.8774	.72981	465
	3	4.0542	.66286	415
	Total	3.9827	.72868	1086
RISK	1	4.0324	.73550	206
	2	3.6631	.68526	465
	3	3.8831	.74130	415
	Total	3.8172	.73030	1086
POWER	1	2.6468	.82896	206
	2	2.8962	.87584	465
	3	3.1427	.89801	415
	Total	2.9431	.89355	1086
MASCULINITY	1	3.3507	.77175	206
	2	3.6371	.81002	465
	3	3.7849	.71790	415
	Total	3.3893	.78339	1086
AMBIGUITY	1	3.2427	.83188	206
	2	3.3183	.77205	465
	3	3.5412	.81057	415
	Total	3.3891	.80711	1086
INTERDEPENDENT	1	4.4490	.63087	206
	2	4.2968	.55742	465
	3	4.1452	.67242	415
	Total	4.2677	.62685	1086

Source: Primary data

**Table 30: Multiple comparisons**

Variable	COUNTRY (I)	COUNTRY(J)	Difference (I- J)	Error	Sig	95% confidence interval	
						Lower	Upper
INDEPENDENT	1	2	.1990*	.06056	.003	.0569	.3412
		3	.0222	.06167	.931	-1.225	.1670
	2	1	-.1990*	.6056	.003	-.3412	-.0569
		3	-.1768*	.4886	.001	-.2915	-.0621
	3	1	-.0222	.06167	.931	-.1670	.1225
		2	-.1768*	.4886	.001	.0621	.2915
RISK	1	2	.3693*	.05998	.000	.2285	.5101
		3	.1492*	.06108	.039	.0059	.2926
	2	1	-.3693*	.05998	.000	-.5101	-.2285
		3	-.2200*	.04840	.000	-.3336	-.1065
	3	1	-.1492*	.06108	.039	-.2926	-.0059
		2	-.2200*	.04840	.000	-.1065	-.3336
POWER	1	2	-.2494*	.07330	.002	-.4214	-.0774
		3	-.4959*	.07464	.000	-.6711	-.3207
	2	1	-.2494*	.07330	.002	.0774	-.4214
		3	-.2465*	.05914	.000	-.3853	-.1077
	3	1	-.4959*	.07464	.000	.3207	.6711
		2	-.2465*	.05914	.000	.1077	.3853
MASCULINITY	1	2	-.2864*	.06434	.000	-.4374	-.1354
		3	-.4342*	.06551	.000	-.5880	-.2805
	2	1	-.2864*	.06434	.000	.1354	.4374
		3	-.1478*	.05191	.012	-.2697	-.0260
	3	1	.4342	.06683	.495	-.2324	.0813
		2	.1478*	.06805	.000	-.4582	-.1388
AMBIGUITY	1	2	-.0756	.06683	.495	-.2324	.0813
		3	-.2985*	.06805	.000	-.4582	-.1388
	2	1	-.0756	.06683	.495	-.2324	.0183
		3	-.2229*	.05392	.000	-.3495	-.0964
	3	1	.2985*	.06805	.000	.1388	.4582
		2	.2229*	.05392	.000	.0964	.3495
INTERDEPENDENT	1	2	-.1199	.06057	.118	-.2621	.0223
		3	.1621*	.06168	.024	.0174	.3069
	2	1	.1199	.06057	.118	-.0223	.2621
		3	.2821*	.04887	.000	.1674	.3968
	3	1	-.3038*	.05263	.000	-.4274	-.1803
		2	-.1516*	.04170	.001	-.2495	-.0537

Source: Primary data

Table 29 shows that Kenya scores higher than the other two countries on independence (4.07), interdependence (4.44) and risk taking (4.03). Kenya scores least on power distance (2.6), which is good for entrepreneurship, as argued by McGrath et al. (1992) and also scores least on ambiguity intolerance (3.24), compared to the other two. Uganda scores higher than the other two on masculinity (3.78).

Further, table 30 shows that although the Kenyan sample scores highest on independence, there is no significant difference between it and the Ugandan sample on this variable ( $p > .05$ ), while there is a significant difference between the Kenyan sample and the Tanzanian one on this variable ( $p < .005$ ). The three country samples significantly differ from each other on risk taking ( $p > .005$ ) in each case, with the Kenyan sample having more prevalence of this variable. Kenya, being the country with the highest intentionality (see Table 21), also scores best (lowest) on power distance, which is consistent with theory, that is low power distance is a special characteristic of entrepreneurs, regardless of whether the culture is low or high on power distance (McGrath et al., 1992, p.119). All the country samples significantly differ from each other on power distance ( $p < .005$ ) in each case, just as they also significantly differ on masculinity. Kenyan and Tanzanian samples do not significantly differ on ambiguity intolerance ( $p > .05$ ); however, the Ugandan sample, which scores highest on this variable, is significantly different from those two country samples ( $p < .005$ ). Kenya and Tanzania are not significantly different from each other on interdependence ( $p > .05$ ), but Uganda, which scores the lowest on this variable, is significantly different from them ( $p < .005$ ). In short, Kenya is more collective, yet more entrepreneurial.

## **4.5 Hypothesis testing**

### **4.5.1 Introduction**

This section presents the results for objectives two and three which were to examine the impact of cultural orientation variables and ability perceptions on EO, (objective two) and also examine the impact of EO on entrepreneurial intention (objective three). The section begins by presenting the model evaluation criteria used in this study and later presents the whole sample measurement

model and structural model, as well as the individual country measurement models and structural models.

#### **4.5.2 Model evaluation criteria**

A model meeting the basic fit statistics (absolute and comparative) enumerated in Chapter Three does not necessarily guarantee the acceptability of the parameter estimates (Brown, 2006). Therefore, some of the criteria used to examine the acceptability of SEM solutions employed in the current study are enumerated below, followed by a presentation of the results of the omnibus (whole sample) and the individual country models.

Model evaluation is done by examining the direction, magnitude and significance of the parameter estimates (Brown, 2006). The following steps were followed during model evaluation in this study:

**Step 1:** The magnitude of the standard errors (SE) of the parameter estimates was examined to see if it were appropriate, or problematically too large or too small. Standard errors represent how much sampling error is operating in the model's parameter estimates (Brown, 2006), i.e. how closely the model's parameter estimates approximate the true population parameters. While small SEs may imply precision in the estimate of the parameter estimates, z values cannot be computed if  $SE=0$  (See below). Conversely, very large SEs are indicative of inaccurate parameter estimates (large confidence intervals) and are thus associated with low power to detect the parameter estimates as statistically different from zero (Brown, 2006).

**Step 2:** Parameter estimates were examined to see whether they are statistically significant (Brown, 2006). The statistical significance of a freely estimated parameter is indicated by its z statistic, calculated by dividing the unstandardized parameter estimate by its standard error (two tailed).  $Z \pm 1.96$  or greater are considered to be statistically significant, while  $z < 1.96$  are statistically not significant, and thus the parameter is considered unnecessary to the solution (Brown, 2006). Squared z values (Wald Test) provide an estimate of how much the model would increase if the freed parameter was removed.

**Step 3:** Parameter estimates were examined to see whether their values were within acceptable range (for example, completely standardized factor correlations  $> 1.0$  or negative error indicators) known as Heywood cases (Brown, 2006). These are indicative of problems with model matrices (non-positive definite matrices) or model misspecification.

**Step 4:** Whether the direction of the parameter estimates is in accordance with prediction, i.e. indicators are positively related to their constructs.

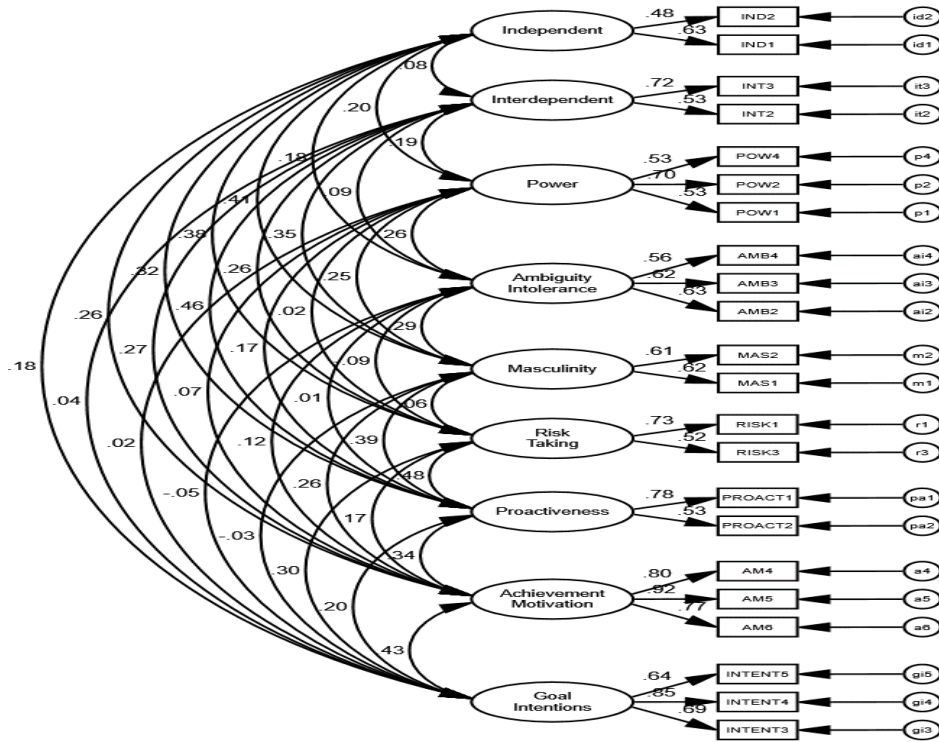
**Step 5:** While it is important to demonstrate that the specified model reproduces the relationships in the input data very well, it is equally important to ensure that the resulting parameter estimates are of a magnitude that is substantially meaningful (Brown, 2006), i.e. the size of the factor loadings should be examined to see whether indicators can be regarded reasonable measures of their constructs. In a completely standardized solution, factor loadings of  $>0.3$  are used as cut off to operationally define a salient factor loading (Brown, 2006). In a congeneric CFA model, for example (without any cross-loadings), the completely standardized factor loading can be interpreted as the correlation between the indicator and its factor, and squaring that completely standardized factor loading provides an estimate of the variance of the indicator which is explained by the latent factor (communality). In the context of psychometric research, the squared factor loading can be regarded as an estimate of the indicator's reliability, i.e. the proportion of the indicator's variance that is estimated to be true score variance (Brown, 2006).

**Step 6:** Generally, the size of the factor correlations is indicative of their discriminant validity. Small or statistically insignificant variances are not considered to be a problem as they provide evidence of the discriminant validity of the latent constructs. Nevertheless, in the event that factor correlations approach 1.0, then there is strong reason to question the discriminant validity of these factors, i.e. they should not correlate so highly as to seem to be measuring the same thing (Siekpe, 2005). Factor correlations  $> 0.8$  are cut off for defining poor discriminant validity.

### **4.5.3 Best-fitting measurement model for the whole sample**

The whole sample (Kenya, Tanzania and Uganda) measurement model was estimated first, followed by the structural model. A diagram showing this baseline model is already presented in Chapter Three, Figure 4. This baseline model is what will be estimated for the individual countries, gender and modernity data sets in order to test the various hypotheses. Figure 7 below presents the CFA measurement model for this baseline model, followed by the structural model itself. This figure shows a path diagram of an 9 factor (latent) model composed of independence, interdependence, power, ambiguity intolerance, masculinity, achievement motivation, risk taking, proactiveness and entrepreneurial intentions. The model also shows how these latent factors are related to each other (analogous to oblique rotation in an EFA), how the various indicators are related to the latent factors and the relationships among the indicator errors (Brown, 2006).

In this CFA model, goal learning orientation (LGO) was highly correlated with achievement motivation,  $r = .82$ ,  $p < .001$ , thus goal learning orientation was dropped. Further, some items were dropped either because their standardized factor loadings were below .40 (Hair, Black, Babin & Anderson (2010) standardized factor loadings should be .70 or higher or because they were highly correlated with other items (per the modification indices (Byrne, 2010)). Figure 7 below presents the CFA model for the whole sample.



**Figure 7: Standardized coefficients for the best-fitting measurement model for the whole sample**

**Table 31: Omnibus (whole sample) CFA**

Model	Goodness of fit statistics						
	$\chi^2$	Df	P	CFI	AGFI	SRMR	RMSEA*
Omnibus	733.89	173	0.000	0.90	0.92	0.04	0.06

\* 90% CI [.05, .06], p=.029

Table 31 above shows that the model actually fits the data very well, since all the fit statistics are within acceptable range. Going by the Hu and Bentler (1999) reporting guidelines, both RMSEA and SRMR are within acceptable range. Below, Table 32 depicts the parameter estimates from this CFA solution, while Table 33 is a presentation of the correlation matrix of the latent factors in this model.

**Table 32: Unstandardized (B) and Standardized ( $\beta$ ) factor loadings for the best-fitting CFA model (Omnibus)**

Items	<i>B</i>	<i>SE</i>	$\beta$	
Independent to:				
Independent 1	.75	.06	.64	***
Independent 2	.46	.04	.48	***
Interdependent to:				
Interdependent 2	.41	.03	.54	***
Interdependent 3	.67	.05	.72	***
Power to:				
Power 1	.65	.05	.53	***
Power 2	.82	.05	.70	***
Power 4	.65	.05	.53	***
Ambiguity tolerance to:				
Ambiguity tolerance 2	.79	.05	.63	***
Ambiguity tolerance 3	.72	.04	.63	***
Ambiguity tolerance 4	.67	.04	.56	***
Masculinity to:				
Masculinity 1	.79	.05	.62	***
Masculinity 2	.67	.05	.61	***
Achievement motivation to:				
Achievement motivation 4	.86	.03	.80	***
Achievement motivation 5	.92	.03	.92	***
Achievement motivation 6	.79	.03	.77	***
Risk-taking to:				
Risk-taking 1	.79	.05	.73	***
Risk-taking 3	.52	.04	.52	***
Proactiveness to:				
Proactiveness 1	.74	.04	.78	***
Proactiveness 2	.51	.04	.53	***
Goal intentions to:				
Goal intent 3	.74	.03	.69	***
Goal intent 4	.93	.03	.85	***
Goal intent 5	.75	.03	.64	***

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ .

**Table 32 above shows:**

- a) All items loaded as expected with no cross loadings. Thus this is a congeneric CFA solution/model.
- b) No parameter estimates exhibited out of range values or Heywood cases (e.g. communalities >1).
- c) Standard errors were within reasonable range, with no standard error = 0, or very large ones i.e. while no specific guidelines are available because standard errors depend on the metric used in a given study, they should not be zero or approach zero (Brown, 2006 p.129).
- d) All parameter estimates were significant, given that in all cases  $z > 1.96$  at 0.05 level of significance two tailed, parameters associated with  $z$  values  $\pm 1.96$  or greater are statistically significant (Brown, 2006).

**Table 33: Correlations between model constructs (whole sample)**

Variables	1	2	3	4	5	6	7	8
1 Independent	1							
2 Interdependent	.08							
3 Power	.20 ***	.19 ***						
4 Ambiguity tolerance	.18 **	.09	.26 ***					
5 Masculinity	.41 ***	.35 ***	.25 ***	.29 ***				
6 Achievement motivation	.26 ***	.27 ***	.07	.12 **	.26 ***			
7 Risk-taking	.38 ***	.26 ***	.02	-.09	.06	.17 ***		
8 Proactiveness	.32 ***	.46 ***	.17 ***	.01	.39 ***	.34 ***	.48 ***	
9 Goal intentions	.18 ***	.04	.02	-.05	-.03	.43 ***	.30 ***	.20 ***

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

**Table 33 above shows:**

- a) All latent variables exhibit adequate discriminant validity since no correlation between them is greater than 0.8.
- b) Independence and Interdependence are not correlated as expected (Sharma, 2010).
- c) Goal intentions are not correlated with interdependence, power distance, ambiguity intolerance and masculinity.
- d) Risk taking is not correlated with power distance and masculinity, and is negatively correlated (though not significantly) with ambiguity intolerance.
- e) Proactiveness is correlated with all the other factors with exception of ambiguity intolerance.

#### 4.5.4 Whole Sample Structural Model

The whole sample structural model was estimated on the basis of the above CFA solution. Table 34 presents the goodness of fit statistics for this model which fits the data well, given that all the fit indices meet the acceptable thresholds. Table 35 below presents the path coefficients of this best fitting structural model, while Figure 8 is a diagram of this model. In this model, LGO was dropped because it is highly correlated with achievement motivation. Similarly, some items were dropped either because they correlated too highly with others, or they did not meet the minimum factor loading threshold (0.4).

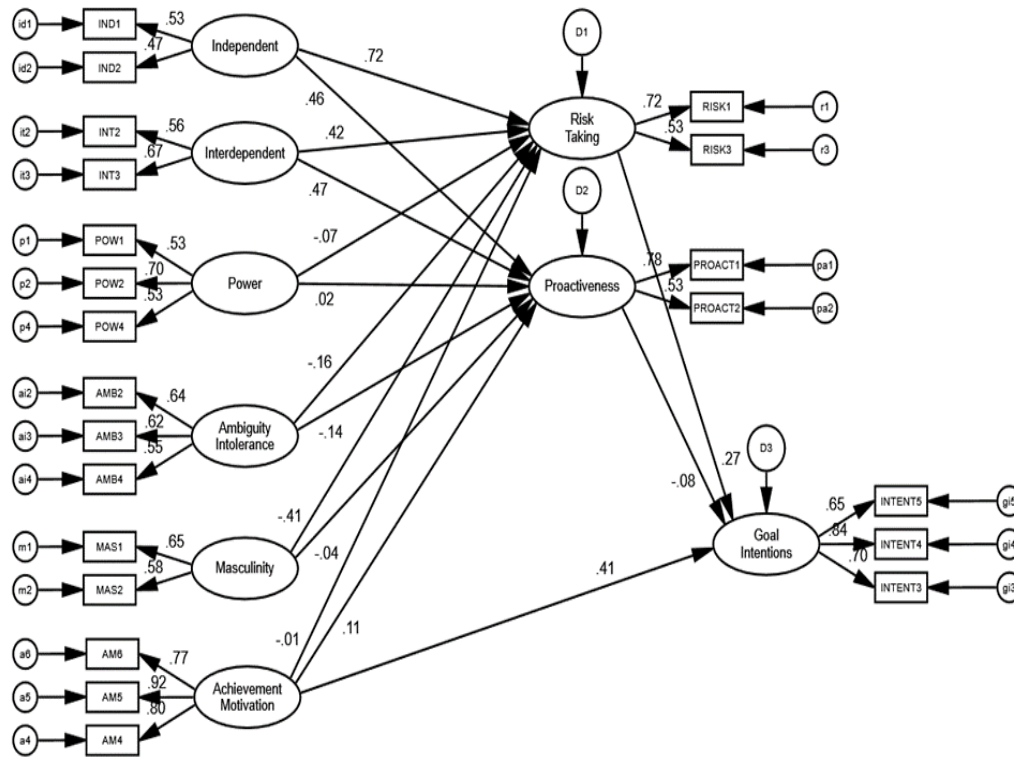


Figure 8: Standardized coefficients for the structural model whole sample

Table 34: Goodness of fit statistics for the structural model whole sample

Model	Goodness of fit statistics						
	$\chi^2$	Df	P	CFI	GFI	SRMR	RMSEA*
Omnibus	778.41	179	0.000	0.90	0.94	0.04	0.06

\*90% Confidence Interval [.05, .06], p= .011

Table 34 above shows that the omnibus structural model fitted the data well, since all the fit indices met the acceptable cut-off points as indicated in Table 15.

**Table 35: Unstandardized (B) and Standardized ( $\beta$ ) Path Coefficients for the Best-Fitting Structural Model (Whole Sample)**

Paths	<i>B</i>	<i>SE</i>	$\beta$	
Independent to:				
Risk taking	1.24	.21	.73	***
Proactiveness	.75	.13	.46	***
Interdependent to:				
Risk taking	.53	.11	.42	***
Proactiveness	.57	.09	.48	***
Power to:				
Risk taking	-.08	.08	-.07	
Proactiveness	.02	.06	.02	
Ambiguity intolerance to:				
Risk taking	-.19	.08	-.16	*
Proactiveness	-.16	.06	-.14	**
Masculinity to:				
Risk taking	-.50	.13	-.41	***
Proactiveness	-.04	.09	-.04	
Achievement motivation to:				
Risk taking	-.01	.05	-.01	
Proactiveness	.09	.04	.11	*
Goal intentions	.35	.04	.41	***
Risk taking to goal intentions	.26	.05	.27	***
Proactiveness to goal intentions	-.08	.05	-.08	

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

Figure 8 and Table 35 indicate that:

(a) Ambiguity intolerance is significantly but negatively (-sig) related to both risk taking and proactiveness, meaning that the higher a person scores on the ambiguity intolerance scale, the

less risk taking/proactive and thus the less entrepreneurial he/she will be, thus  $H_1$  and  $H_6$  are supported.

(b) Power distance is not significantly related to either risk taking (-n.s) or proactiveness (+n.s) meaning that this variable contributes nothing to intention, thus  $H_2$  and  $H_7$  are supported.

(c) Masculinity is negatively but significantly related to risk taking, while it is also not significantly related to proactiveness (-n.s) thus  $H_3$  and  $H_8$  are not supported.

(d) Independence significantly and positively (+sig) influences both risk taking and proactiveness, thus,  $H_4$  and  $H_9$  are supported.

(e) Interdependence significantly and positively (+sig) influences both risk taking and proactiveness, thus  $H_5$  and  $H_{10}$  are supported.

(f) Achievement motivation is positively and significantly (+sig) related to both proactiveness and goal intentions, thus  $H_{12}$  and  $H_{13}$  are supported, while  $H_{11}$  is not supported (achievement motivation is not positively related to risk taking (-n.s) possibly due to the measures used in this study).

(g) Proactiveness is not positively (-n.s) related to goal intentions, thus  $H_{17}$  is not supported.

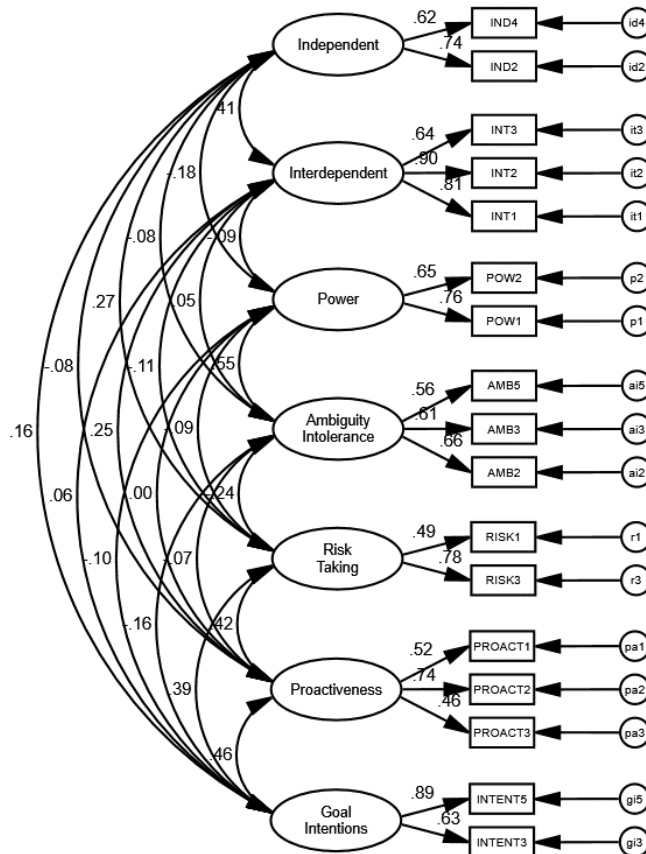
(h) Risk taking is positively and significantly (+sig) related to goal intentions, thus  $H_{18}$  is supported.

The next phase of the data analysis strategy was to fit the baseline model into the individual country data sets, which is followed by dividing the data set into groups, i.e. a male and female data set, and low and high modernity groups using a median split. The baseline model was then fitted into each of these data sets, followed by tests of invariance between male and female models and between the low and high modernity groups.

## Step 7: Fitting the baseline model into country data sets

### 4.5.5 Fitting the omnibus model into Country 1 (Kenyan sample) data set

The country model fitting exercise also followed the same pattern as that of the omnibus model, i.e. starting with a CFA measurement model, followed by the correlation matrix, followed by the structural model. The CFA model for the Kenyan sample (country 1) is presented in Figure 9 below.



**Figure 9: Standardized coefficients for the best-fitting measurement model for Kenyan sample**

**Table 36: CFA Kenyan sample**

Model	Goodness of fit statistics						
	$\chi^2$	Df	P	CFI	GFI	SRMR	RMSEA*
CFA Kenya	203.33	98	0.000	0.90	0.90	0.06	0.07

\* 90% CI [.06, .09],  $p = .006$ .

Table 36 above shows that the CFA Kenyan sample model fitted the data well, since all the fit indices met acceptable cut-off points as indicated in Table 15.

In the Kenyan sample model, the full measurement model yielded a non-positive definite matrix (a model that does not converge). Correlations between constructs were examined to determine which constructs were contributing to the non-positive definite matrix (Byrne, 2010).

Some constructs were highly correlated with each other, for example learning goal orientation (LGO) was highly correlated with achievement motivation,  $r = .71, p < .001$ , while achievement motivation was highly correlated with goal intentions,  $r = .65, p < .001$ . In this case LGO was dropped from the model. Only a single item loaded onto masculinity. This construct was therefore dropped. Further, some items were dropped either because their standardized factor loadings were below .40 (Hair, Black, Babin & Anderson, 2010, standardized factor loadings should be .70 or higher) or because they were highly correlated with other items per the modification indices (Byrne, 2010).

**Table 37: Unstandardized and standardized factor loadings for the best-fitting measurement model (Kenyan sample)**

Items	<i>B</i>	<i>SE</i>	<i>β</i>	
Independent to:				
Independent 2	.85	.11	.74	***
Independent 4	.63	.09	.63	***
Interdependent to:				
Interdependent 1	.68	.05	.81	***
Interdependent 2	.67	.05	.90	***
Interdependent 3	.44	.05	.64	***
Power to:				
Power 1	.88	.11	.76	***
Power 2	.71	.10	.65	***
Ambiguity tolerance to:				
Ambiguity tolerance 2	.82	.10	.66	***
Ambiguity tolerance 3	.80	.11	.61	***

Ambiguity tolerance 5	.70	.10	.56	***
Risk-taking to:				
Risk-taking 1	.54	.10	.49	***
Risk-taking 3	.77	.11	.78	***
Proactiveness to:				
Proactiveness 1	.49	.08	.52	***
Proactiveness 2	.68	.08	.74	***
Proactiveness 3	.51	.09	.46	***
Goal intentions to:				
Goal intentions 3	.69	.10	.63	***
Goal intentions 5	1.03	.12	.89	***

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

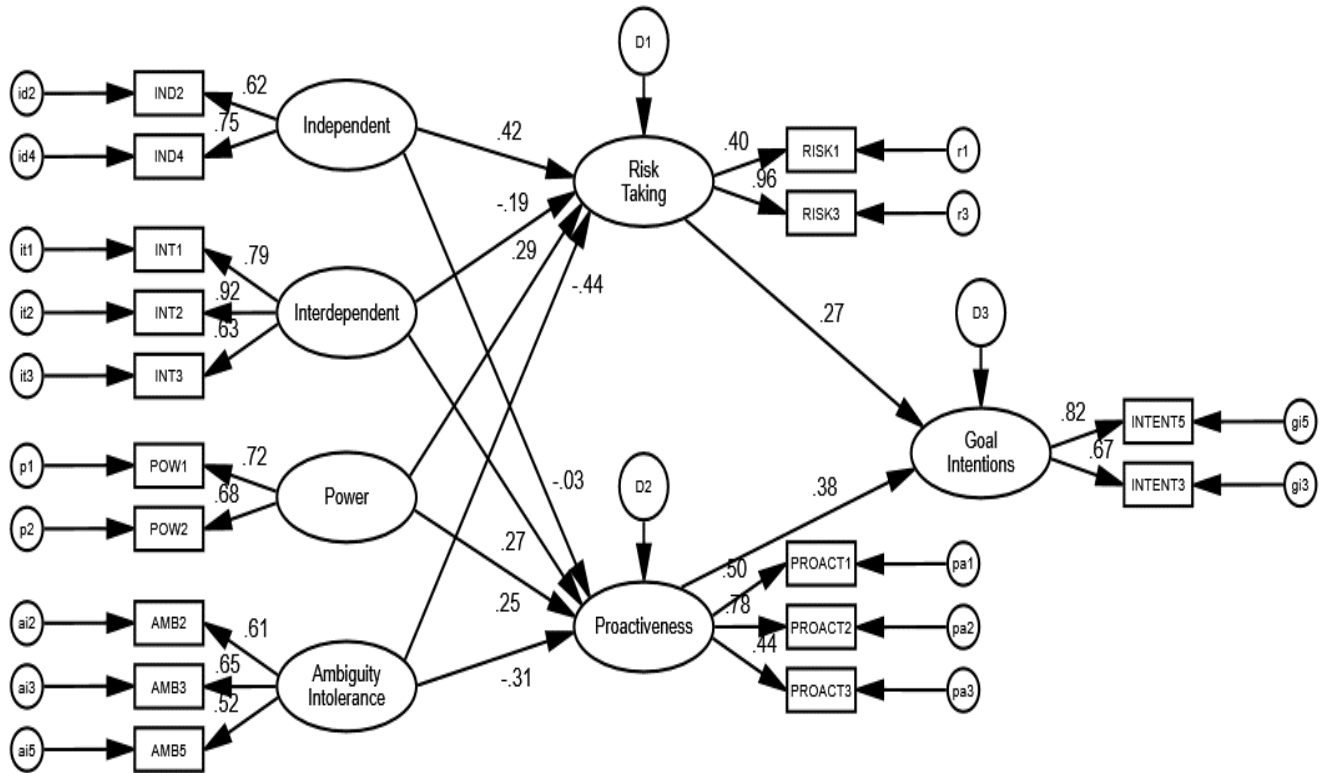
**Table 38: Correlations between the Measurement Model Constructs Kenyan sample**

Variables	1	2	3	4	5	6
1 Independent	1					
2 Interdependent	.41	***				
3 Power	-.18	-.10				
4 Ambiguity tolerance	-.08	.05	.55	***		
5 Risk-taking	.27	-.11	-.09	-.24	*	
6 Proactiveness	-.08	.25	-.00	-.07	.42	***
7 Goal intentions	.16	.06	-.10	-.16	.40	.46

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$ .

#### 4.5.6 Structural Model (Kenyan sample):

The structural model for the Kenyan sample is presented in Figure 10 while Table 39 depicts the fit statistics for this model. This is followed by Table 40 which presents the unstandardized and standardized path coefficients for this model.



**Figure 10: Standardized coefficients for the best-fitting structural model for Kenyan sample**

**Table 39: Fit indices for Kenyan sample structural model**

Model	Goodness of fit statistics						
	$\chi^2$	Df	P	CFI	GFI	SRMR	RMSEA*
Structural Kenya	226.63	103	0.000	0.90	0.90	0.07	0.08

\* 90% CI [.06, .09],  $p = .001$

Table 39 above shows that the model fitted the data well, since all the fit indices meet the acceptable thresholds as indicated in Table 15. In particular, the Hu and Bentler (1999) cut-off points for RMSEA and SRMR are met (Table 16).

**Table 40: Standardized Path Coefficients for the Best-fitting Structural Model for Kenyan sample**

Paths	<i>B</i>	<i>SE</i>	$\beta$	
Independent to:				
Risk taking	.24	.11	.42	*
Proactiveness	-.03	.11	-.04	
Interdependent to:				
Risk taking	-.19	.11	-.19	
Proactiveness	.44	.17	.27	**
Power to:				
Risk taking	.17	.11	.29	
Proactiveness	.24	.16	.25	
Ambiguity intolerance to:				
Risk taking	-.29	.15	-.44	*
Proactiveness	-.34	.18	-.31	
Risk taking to goal intentions	.45	.17	.27	**
Proactiveness to goal intentions	.39	.13	.38	**

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

### Summary of Results for Kenyan sample

a) Ambiguity intolerance is significantly but negatively related to risk taking (-n.s), thus supporting  $H_1$ , similarly ambiguity intolerance is negatively and not significantly (-n.s) related to proactiveness thus supporting  $H_6$

b) Power distance does not positively and significantly influence risk taking and proactiveness (+n.s), thus  $H_2$  and  $H_7$  respectively are supported.

c) Independence positively and significantly influences risk taking (+sig), thus  $H_4$  is supported, while it is not significantly related to proactiveness (-n.s), thus  $H_9$  is not supported.

d) Interdependence does not significantly influence risk taking (-n.s), therefore  $H_5$  is not supported while it significantly influences proactiveness (+sig), and thus  $H_{10}$  is supported.

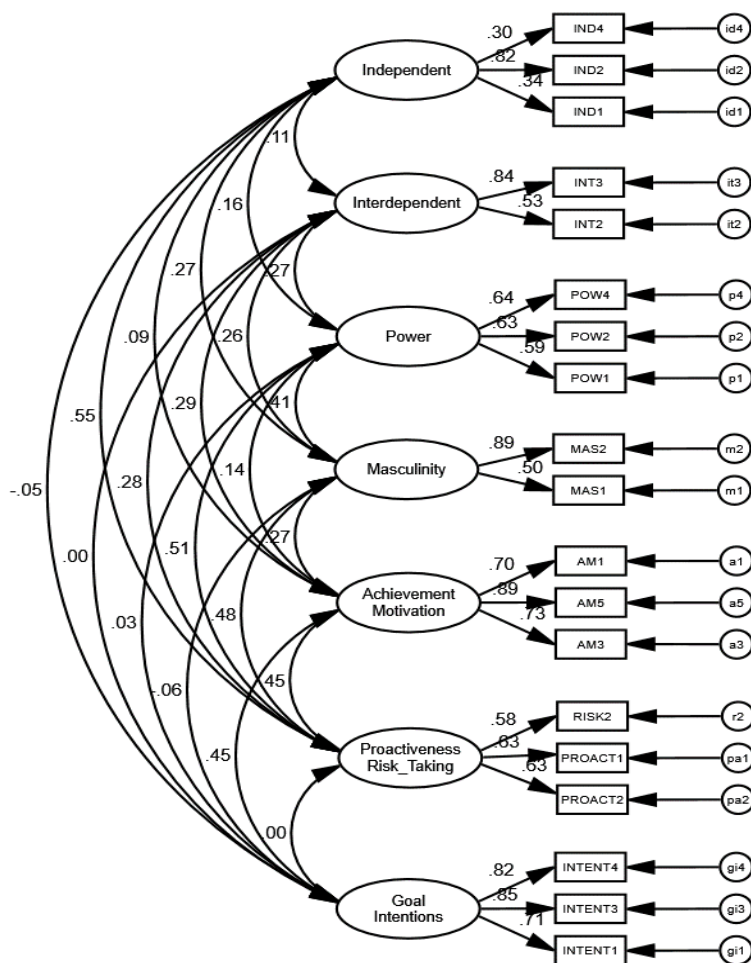
e) Proactiveness positively and significantly influences goal intentions (+sig), thus supporting  $H_{17}$ .

f) Risk taking positively and significantly influences goal intentions (+sig), hence supporting  $H_{18}$ .

In summary, students with an independent cultural orientation are risk-taking and are likely to start up, while students with an interdependent cultural orientation are not risk-taking, though they are proactive. However, students with a high power distance cultural orientation are not risk takers, nor are they proactive. Similarly, students with a high intolerance for ambiguity do not take risks, nor are they proactive. Hence both power distance and ambiguity intolerance are the most problematic cultural orientations in the Kenyan sample.

#### **4.5.7 Fitting the baseline model into country 2 (Tanzanian sample) data set**

Two models were fitted for the Tanzanian sample because there was need to examine the impact of ambiguity intolerance in this country. In the first model (2a), the CFA model yielded a non-positive definite matrix. Correlations between constructs were examined to determine which constructs were contributing to such a matrix (Byrne, 2010). Some of the constructs were highly correlated with each other, for example risk-taking and proactiveness were highly correlated ( $r = .64, p < .001$ ), so these constructs were combined into a single construct. Ambiguity intolerance items were loading onto other constructs, so that, this construct was dropped. Some items were dropped either because their standardized factor loadings were below .40 (per Hair, Black, Babin & Anderson, 2010, standardized factor loadings should be .70 or higher) or because they were highly correlated with other items (per the modification indices; Byrne, 2010). Items whose standardized factor loadings fell below .40 were included only if the two-item construct yielded a negative variance (for example, Independence 1). The CFA model is presented below (Figure 11).



**Figure 11: Standardized coefficients for the best fitting measurement model for Tanzanian sample**

**Table 41: Fit indices for CFA model Tanzanian sample (model 2a).**

Model	Goodness of fit statistics						
	$\chi^2$	Df	P	CFI	GFI	SRMR	RMSEA*
Tanzania CFA	473.99	131	0.000	0.90	0.91	0.06	0.08

\* 90% CI [.07, .08],  $p < .001$ .

Table 41 shows that the first CFA model (2a) had acceptable fit based on the cut-off points in Table 15. Table 42 below presents the unstandardized and standardized path coefficients for this

model, Table 43 presents the correlation matrix for the constructs in this model, while Figure 12 presents the structural model.

**Table 42: Unstandardized (B) and Standardized ( $\beta$ ) factor loadings for the best-fitting measurement model for Tanzanian sample (Model 2a)**

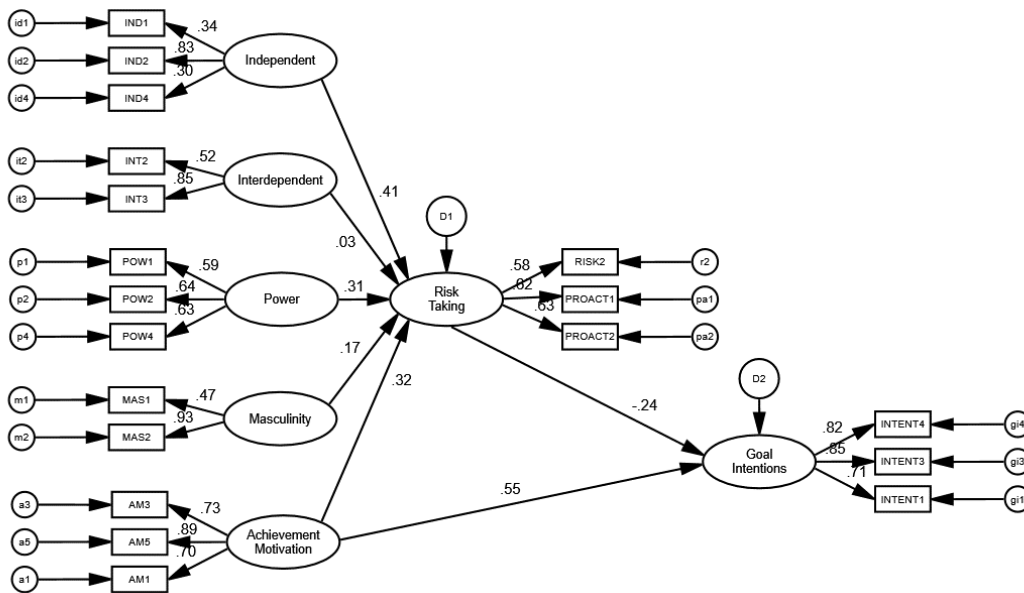
Items	<i>B</i>	<i>SE</i>	$\beta$	
Independent to:				
Independent 1	.42	.07	.34	***
Independent 2	.82	.09	.82	***
Independent 4	.34	.06	.84	***
Interdependent to:				
Interdependent 2	.39	.05	.53	***
Interdependent 3	.69	.08	.84	***
Power to:				
Power 1	.68	.06	.59	***
Power 2	.78	.07	.63	***
Power 4	.71	.06	.64	***
Masculinity to:				
Masculinity 1	.62	.07	.50	***
Masculinity 2	.92	.08	.89	***
Achievement motivation to:				
Achievement motivation 1	.64	.04	.70	***
Achievement motivation 3	.67	.04	.73	***
Achievement motivation 5	.75	.03	.89	***
Risk-taking and proactiveness to:				
Risk-taking 2	.53	.05	.58	***
Proactiveness 1	.61	.05	.63	***
Proactiveness 2	.54	.04	.63	***
Goal intentions to:				
Goal intentions 1	.77	.05	.71	***
Goal intentions 3	.95	.05	.85	***
Goal intentions 4	.90	.05	.82	***

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$

**Table 43: Correlations between the Measurement Model Constructs Tanzanian sample (model 2a)**

Variables	1	2	3	4	5	6		
1 Independent	1							
2 Interdependent	.11	1						
3 Power	.16	.27	***					
4 Masculinity	.27	***	.26	***	.41	***		
5 Achievement motivation	.09	.29	***	.14	*	.27	***	
6 Risk taking and proactiveness	.55	***	.28	***	.51	***	.48	***
7 Goal intentions	-.05	-.01	.03	-.06	.45	***	.45	***

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .



**Figure 12: Standardized coefficients for the best-fitting structural model for Tanzanian sample (model 2a).**

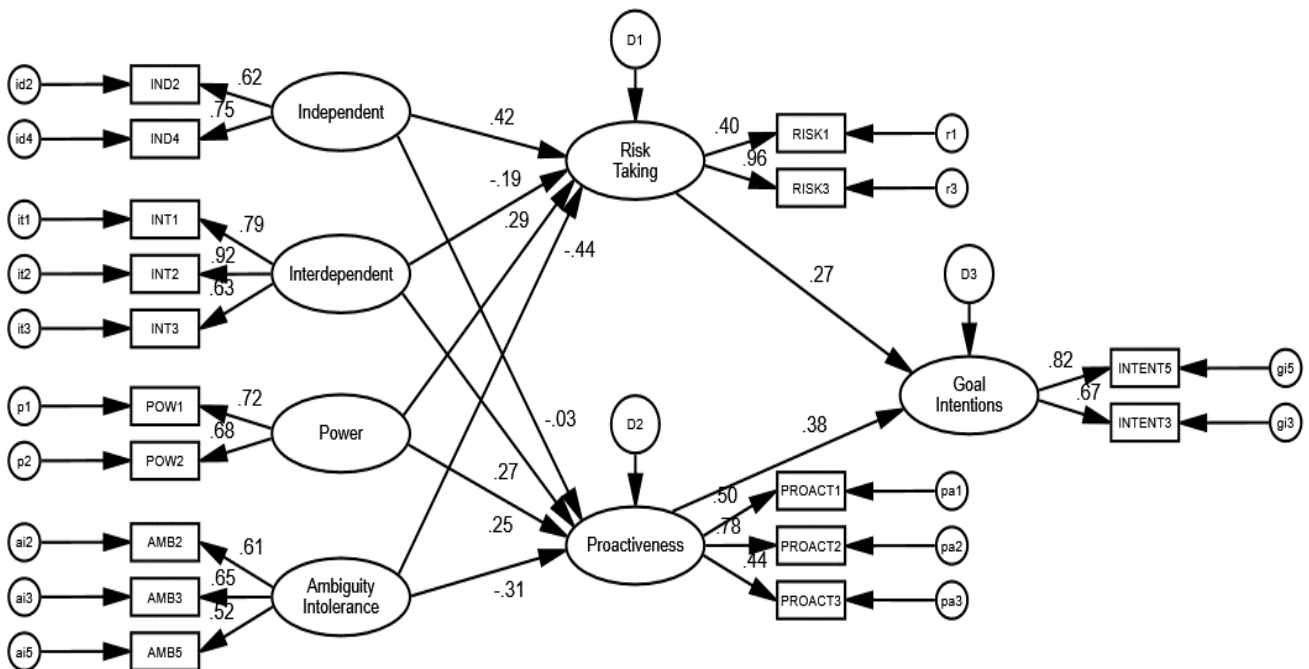
**Table 44: Fit indices Tanzanian sample structural model (2a)**

Model	Goodness of fit statistics						
	$\chi^2$	Df	P	CFI	GFI	SRMR	RMSEA*
Structural Tanzania (2a)	484.93	135	0.000	0.90	0.91	0.07	0.08

\* 90% CI [.07, .08],  $p = .001$ .

Table 44 above shows that model 2a fitted the data well, since fit indices met acceptable cut-off points in Table 15.

As stated above, a second model (2b) was estimated for the Tanzanian sample so as to examine the impact of ambiguity intolerance on risk taking and proactiveness, since ambiguity intolerance was dropped in the first model (Figure 13). The fit statistics are almost the same for model 2a and 2b. However, the relationship between ambiguity intolerance and both risk taking and proactiveness was not significant, nor was the relationship between interdependent and risk taking in both models. In model 2b, the relationship between independent and proactiveness was negative and not significant.



**Figure 13: Best-fitting structural model for Tanzanian sample (model 2b).**

**Table 45: Tanzanian sample structural model (2b)**

Model	Goodness of fit statistics						
	$\chi^2$	Df	P	CFI	GFI	SRMR	RMSEA*
Structural Tanzania (2b)	484.93	135	0.000	0.90	0.91	0.07	0.08

\* 90% CI [.07, .09],  $p < .001$ .

Table 45 shows that Tanzanian model 2b fitted the data well, since the fit indices met the acceptable cut-off points in Table 15. Table 46 presents the path coefficients for this model.

**Table 46: Unstandardized (B) Standardized ( $\beta$ ) path coefficients for the best-fitting structural model for Tanzanian sample (Model 2b)**

Paths	<i>B</i>	<i>SE</i>	$\beta$	
Independent to risk taking/proactiveness	.53	.12	.42	***
Interdependent to risk taking/proactiveness	.04	.09	.03	
Power to risk taking/proactiveness	.24	.06	.31	***
Masculinity to risk taking/proactiveness	.15	.06	.17	*
Achievement motivation to:				
Risk taking/proactiveness	.25	.05	.32	***
Goal intentions	.73	.09	.55	***
Risk taking/proactiveness to goal intentions	-.40	.11	-.24	***

\*  $p < .05$  \*\*  $p < .01$ . \*\*\*  $p < .001$

### Summary of Results for Tanzanian sample

Taking the results of model 2a and 2b together:

a) Ambiguity intolerance is not significantly related to risk taking (-n.s) or proactiveness (-n.s), so  $H_1$  and  $H_6$  respectively are supported.

b) Power distance is positively and significantly related to proactiveness (+sig), therefore supporting  $H_7$ , again in contrast to the omnibus model and the Kenya sample. Similarly Power distance is positively and significantly related to risk taking (+sig), hence supporting  $H_2$  in contrast to the omnibus model and the Kenyan sample.

c) Independence is significantly and positively related to risk taking and proactiveness (+sig), thus  $H_4$  and  $H_9$  respectively are supported.

d) Interdependence is not significantly related to risk taking nor is it significantly related to proactiveness (+n.s), thus  $H_5$  and  $H_{10}$  respectively are not supported.

e) Achievement motivation is significantly related to risk taking and proactiveness (+sig), hence supporting  $H_{11}$  and  $H_{12}$  respectively. Similarly Achievement motivation is positively and significantly related to entrepreneurial intentions (+sig), thus supporting  $H_{13}$ .

f) Proactiveness is negatively but significantly related to goal intentions (-sig), so  $H_{17}$  is not supported.

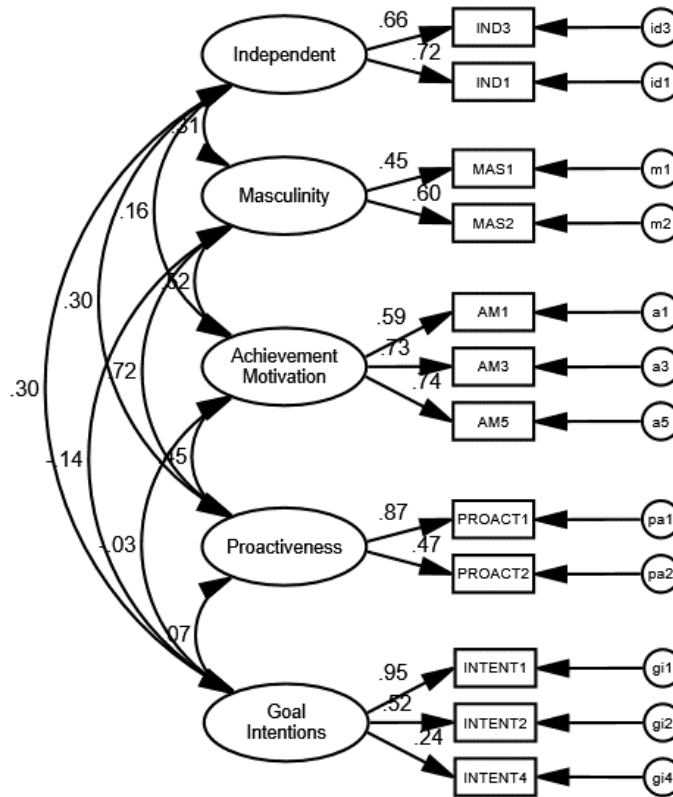
g) Risk taking is negatively but significantly related to goal intentions (-sig), so  $H_{18}$  is not supported.

#### **4.5.8 Fitting the baseline model into country 3 (Ugandan sample) data set**

This exercise followed the same pattern as that of the previous study countries, i.e. CFA measurement model was first estimated, followed by a structural model. In this model, Learning Goal Orientation was highly correlated with achievement motivation,  $r = .76$ ,  $p < .001$ ; Interdependent was highly correlated with proactiveness,  $r = .71$ ,  $p < .001$ ; risk-taking and proactiveness were highly correlated,  $r = .61$ ,  $p < .001$ ; Further, ambiguity tolerance and power items were loading onto other constructs, so these constructs were dropped. Some items were dropped either because their standardized factor loadings were below .40 (as explained by Hair, Black, Babin & Anderson (2010), standardized factor loadings should be .70 or higher) or because they were highly correlated with other items per the modification indices (Byrne, 2010). Items whose standardized factor loadings fell below .40 were included only if the two-item construct yielded a negative variance (for example, Goal Intent 4).

The resultant CFA model is presented in Figure 14, while Table 47 presents the goodness of fit statistics for this model. This is followed by Table 48, which depicts the unstandardized and standardized coefficients for this measurement model. Table 49 shows the correlations between the Measurement Model Constructs for this country. After this exercise, a structural model was

estimated and is presented in Figure 15, with its fit statistics presented in Table 50. Lastly, the path coefficients for this structural model are presented in Table 51.



**Figure 14: Standardized coefficients for the best fitting measurement model for Ugandan sample**

**Table 47: Fit indices for CFA model Ugandan sample**

Model	Goodness of fit statistics						
	$\chi^2$	Df	P	CFI	GFI	SRMR	RMSEA*
Uganda CFA	181.18	44	0.000	0.90	0.94	0.07	0.09

\* 90% CI [.07, .10],  $p < .001$ .

Table 47 shows that the model fitted the data well, since all the fit indices neared acceptable levels. Although RMSEA is above the .08 cut-off, a coefficient of 0.09 should be acceptable given that some methodologists give 0.1 as cut off for poor fitting models (Kenny, 2015).

**Table 48: Unstandardized and Standardized factor loadings for the best-fitting Measurement Model for Ugandan sample**

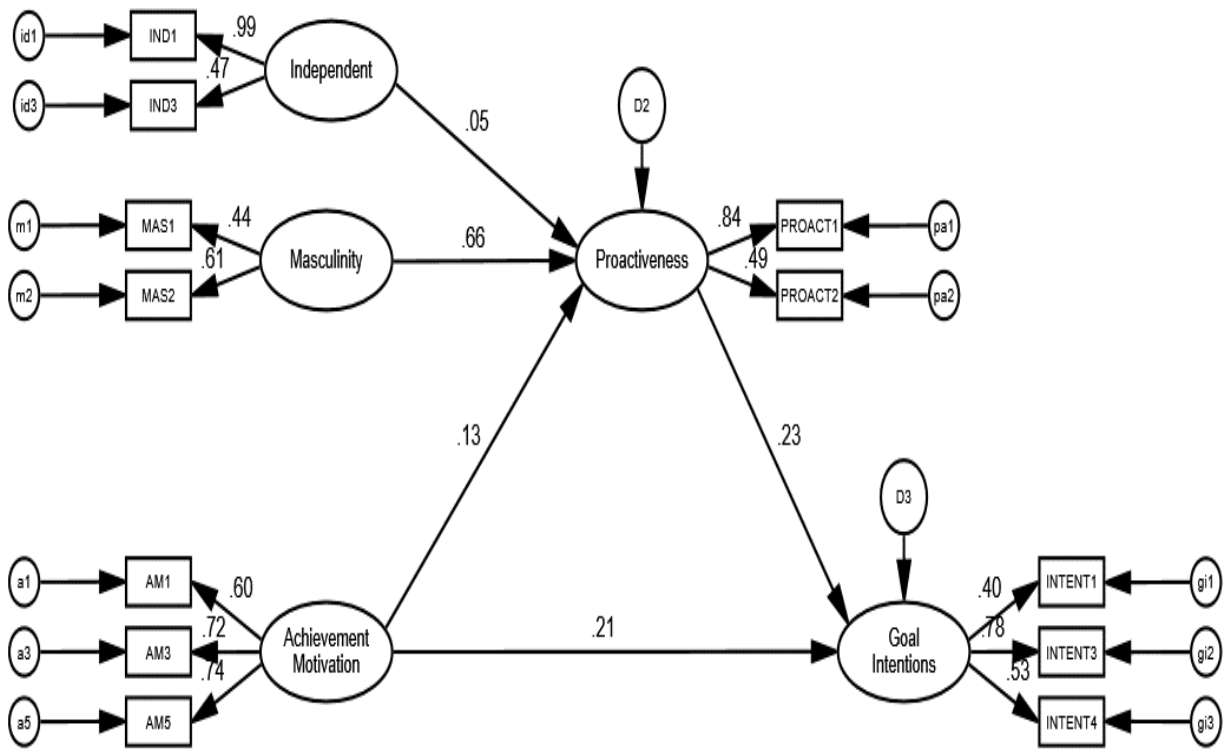
Items	<i>B</i>	<i>SE</i>	$\beta$	
Independent to:				
Independent 1	.72	.08	.72	***
Independent 3	.80	.09	.66	***
Masculinity to:				
Masculinity 1	.56	.08	.45	***
Masculinity 2	.63	.07	.60	***
Achievement motivation to:				
Achievement motivation 1	.57	.05	.59	***
Achievement motivation 3	.91	.06	.73	***
Achievement motivation 5	.82	.06	.74	***
Proactiveness to:				
Proactiveness 1	.82	.07	.87	***
Proactiveness 2	.50	.06	.47	***
Goal intentions to:				
Goal intentions 1	1.15	.12	.95	***
Goal intentions 2	.62	.08	.52	***
Goal intentions 4	.27	.06	.24	***

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

**Table 49: Correlations between the Measurement Model Constructs Ugandan sample**

Variables	1	2	3	4	5
1 Independent	1				
2 Masculinity	.31	***			
3 Achievement motivation	.16	*	.52	***	
4 Proactiveness	.30	***	.72	***	.45
5 Goal intentions	.30	***	-.14	-.03	.07

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .



**Figure 15: Standardized coefficients for the best-fitting structural model Ugandan sample**

**Table 50: Fit indices for structural model Ugandan sample**

Model	Goodness of fit statistics						
	$\chi^2$	Df	P	CFI	GFI	SRMR	RMSEA*
Structural Uganda	179.16	46	0.000	0.90	0.94	0.06	0.08

\*90% CI [.07, .10],  $p < .001$ .

Table 50 above shows that the structural model for Uganda has acceptable fit indices. Going by the Hu and Bentler (1999) guidelines in Table 16, both RMSEA and SRMR are within acceptable range for a good model.

**Table 51: Unstandardized (B) Standardized ( $\beta$ ) path coefficients for the best-fitting structural model for Ugandan sample**

Paths	<i>B</i>	<i>SE</i>	$\beta$	
Independent to proactiveness	.07	.09	.05	
Masculinity to proactiveness	.82	.22	.66	***
Achievement motivation to:				
Proactiveness	.12	.10	.13	
Goal intentions	.12	.05	.21	*
Proactiveness to goal intentions	.14	.06	.23	*

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

#### 4.5.9 Summary of results for Ugandan sample

In this model, many constructs were left out of the model due to their high correlation with others. Including them in the model would result in non-positive definite matrices (a non-convergent model) and negative variances. It is worth noting that risk taking and proactiveness were highly correlated ( $r=.61$ ) (see correlation matrix), therefore proactiveness in the model represents both of these variables.

a) Independence was not significantly related to risk taking and proactiveness (+n.s) thus  $H_4$  and  $H_9$  respectively are not supported.

b) Masculinity was positively and significantly (+sig) related to proactiveness (and thus risk taking), thus  $H_3$  and  $H_8$  respectively are supported.

c) Achievement motivation is not significantly related to proactiveness and risk taking (+n.s), thus  $H_{11}$  and  $H_{12}$  respectively are not supported.

d) Achievement motivation is significantly and positively related to entrepreneurial intentions (+sig), hence  $H_{13}$  is supported.

e) Proactiveness and risk taking are both significantly related to goal intentions (+sig), hence supporting  $H_{17}$  and  $H_{18}$  respectively.

#### 4.6 Gender (Step 8 & 9).

This section presents the results for objective four of the study, which was to examine the impact of CO and ability perception on EO and EI by gender and modernity. The section starts by examining whether there are differences in reported levels of EO and other study variables by gender. This is done through carrying out of t-tests between these variables. Table 52 presents the results of student t-tests for the study variables between the genders.

**Table 52: T-tests between variables by gender**

	Male N= 614		Female N= 460		Significance 2 tailed
	Mean	SD	Mean	SD	
Intention	3.79	.861	3.95	.799	0.002
Knowledge	3.55	.879	3.80	.808	0.000
Independence	3.89	.762	4.09	.666	0.000
Interdependence	4.23	.657	4.30	.585	0.069
Power	2.92	.867	2.94	.922	0.661
Ambiguity intolerance	3.32	.879	3.36	.761	0.520
Masculinity	3.60	.785	3.68	.771	0.097
Learning orientation	3.79	.770	3.99	.760	0.000
A/Motivation	3.86	.798	4.06	.793	0.000
Risk taking	3.80	.735	3.84	.708	0.411
Proactiveness	3.91	.768	4.10	.680	0.000
Optimism	3.75	.768	3.82	.751	0.105
Knowledge	3.55	.879	3.80	.808	0.000
Networking	3.64	.828	3.75	.777	0.022
Modernity	3.68	.901	3.84	.834	0.003

Source: Primary data

The table above shows that both genders are similar on masculinity, interdependence, power distance, ambiguity intolerance, risk taking, optimism. Females score higher than males on independence, proactiveness, intention, knowledge, networking, achievement motivation, learning goal orientation and modernity.

##### 4.6.1 Testing of the baseline model by gender and modernity.

Testing of the baseline model by gender and modernity in order to fulfill objective four of the study was done by dividing the data into male and female samples, as well as low and high

modernity groups, and then fitting the base line model into each group. The results are presented below:

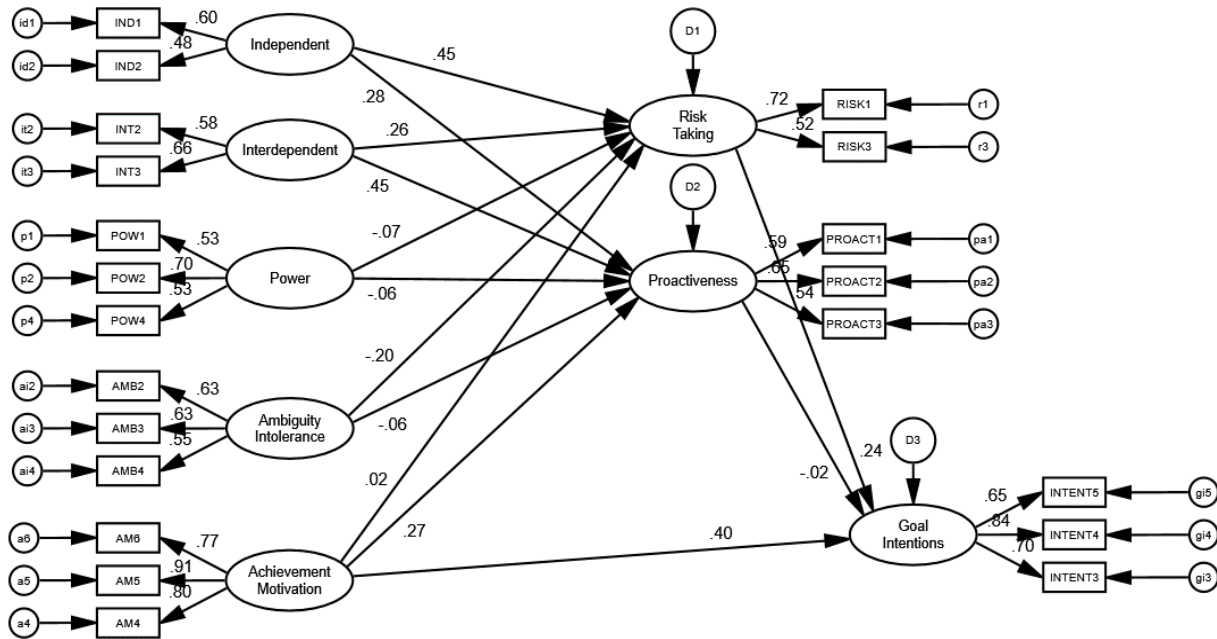


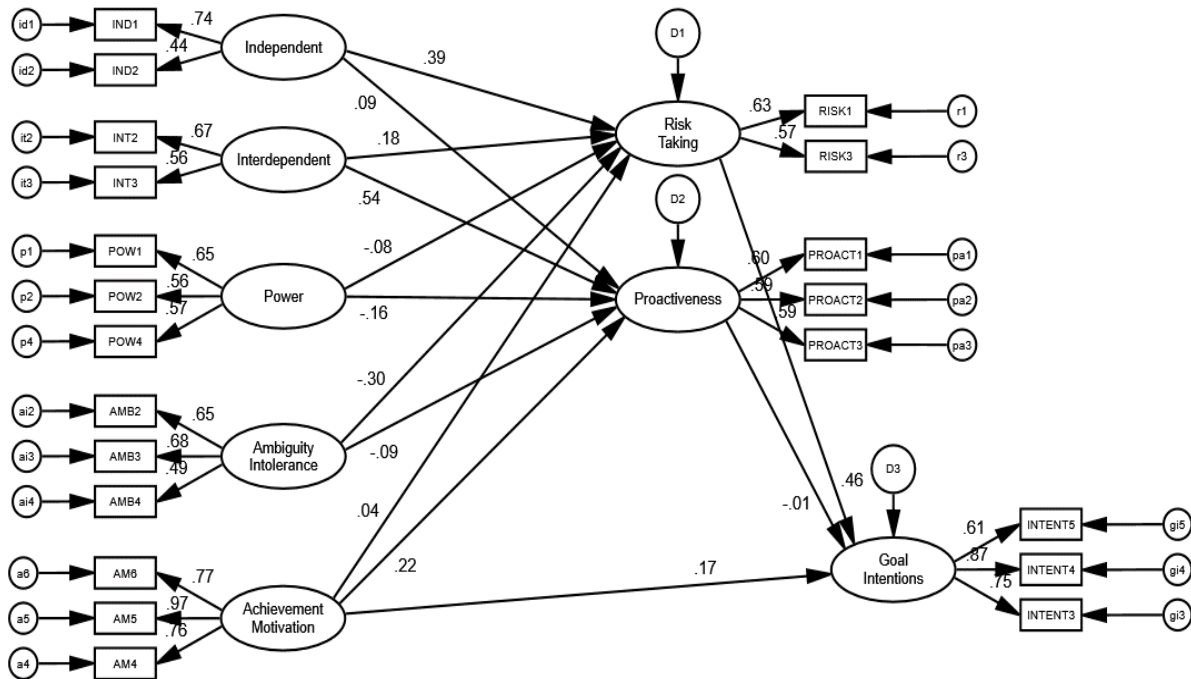
Figure 16: Standardized coefficients for male structural model

Table 53: Fit statistics for male structural model

Model	Goodness of fit statistics						
	$\chi^2$	Df	P	CFI	GFI	SRMR	RMSEA*
Male Structural	756.18	166	0.000	0.82	0.90	0.06	0.08

\* 90% CI [.07, .08],  $p < .001$ .

Table 53 and Table 54 present fit statistics for the male and female models respectively. The male model properly meets the Hu and Bentler (1999) guidelines, since SRMR is  $< .08$ , while at 0.08, RMSEA is slightly above the cut-off, but still within acceptable range (Table 15). The female model RMSEA coefficient of .09 is above the .08 acceptable cut off, but below the 1.0 cut-off for poor models (Kenny, 2015). However, SRMR coefficient of .08 for this model is acceptable. The CFI for the female model (0.90) meets the cut-off point, though the male model does not pass this test, but meets the cut-off for GFI (0.90).



**Figure 16: Standardized coefficients for female structural model**

**Table 54: Fit statistics for female structural model**

Model	Goodness of fit statistics						
	$\chi^2$	Df	P	CFI	GFI	SRMR	RMSEA*
Female Structural	726.28	166	0.000	0.90	0.83	0.07	0.09

\*90% CI [.08, .09],  $p < .001$ .

#### 4.6.2 Invariance Test for Gender

This section presents findings from the various steps done toward testing for invariance in order to enable construct comparability between groups, since meeting the criteria for reliability and construct validity is not enough to enable comparisons across groups (Steinmetz, Schmidt, Tina-Booh, Wiczorek, & Schwartz, 2009). Steenkamp and Baumgartner (1998) assert that configural invariance be done first, followed by metric invariance, scalar invariance (then other forms of invariance follow). Specifically, “*configural invariance is supported if the specified model with zero loadings on non target factors (if any) fits the data well in all countries, all salient factor*

*loadings are significantly and substantially different from zero, and the correlations between the factors (if any) are significantly below unity”* (Steenkamp & Baumgartner, 1998 p.80). While Steenkamp and Baumgartner argue that configural invariance is enough to enable group comparison, other methodologists differ and assert that metric invariance must be proved to enable this, since it implies that the groups calibrate the measures in the same way (Vandenberg & Lance, 2000) and thus should be the basis for group comparison.

To establish configural or metric invariance, the combined data set was divided into two groups to yield a male sample (N= 596) and a female sample (N= 459). The baseline model was then fitted into each of these data sets, to generate a male structural model and a female structural model, after which chi-square difference tests were done to establish metric and scalar invariance.

AMOS 23 was used in the conducting of a chi-square difference test between the two models. To control for non-normality, bootstrap standard errors were generated using 5,000 bootstrap samples with 95% bias-corrected confidence intervals, after which invariance tests were done between various models using the procedure below.

#### **4.6.3 Procedure**

1. Fit the baseline model into the two gender data sets to yield a male model and a female model. If these fit the data well, configural invariance is established as Steenkamp and Baumgartner (1998) propose.
2. Because the best-fitting structural model yielded negative variances within the female sample, the model was revised:
  - a. Masculinity was removed from the model because only one item loaded onto it.
  - b. Proactiveness became a three-item construct (i.e. one of the items was removed because it was highly correlated with other items (per the modification indices; Byrne, 2010).
3. A multiple group analysis was then conducted using the AMOS 23 program.

4. Per Arbuckle (2014), invariance were to be tested at several stages:
  - a. All factor loadings were to be constrained to be equal across males and females
  - b. All path coefficients were to be constrained to be equal across males and females.
  - c. All covariances were to be constrained to be equal across males and females.
  - d. All construct error terms were to be constrained to be equal across males and females.
  - e. All residuals were to be constrained to be equal across males and females.
  
5. According to Arbuckle (2014), if the change in chi-square from one set of constrained models to the other is statistically significant, then invariance cannot be concluded and as such, the analysis would stop there.

#### **4.6.4 Results**

1. First, the two gender model fit the data well (Figures 19 & 20), hence configural invariance is established. Fit statistics for the unconstrained and constrained models are presented in Table 53. All the models meet acceptable cut off criteria as per Table 15. The findings in Table 54 reveal that the change in chi-square between the unconstrained model and the model where the factor loadings were constrained, was not statistically significant,  $\Delta\chi^2 (13) = 18.28, p = .147$ . Therefore, the factor loadings were invariant across groups, implying metric invariance.
  
2. But the change in chi-square between the unconstrained model and the next model was statistically significant (i.e. scalar invariance not proven). As such, these parameters were not invariant across groups thus the analysis stopped here.
  
3. Given that differences in path coefficients were most important to the study, the path coefficients for the structural models for males and females are summarized in Table 55.

**Table 55: Fit statistics for the unconstrained and constrained gender models**

Model	$\chi^2$	Df	GFI	AGFI	CFI	SRMR	RMSEA			p
							Value	90% CI		
Unconstrained (Configural)	1535.67	332	.92	.90	.90	.05	.05	.05	.05	.847
Factor loadings constrained (Metric)	1553.95	345	.91	.90	.90	.05	.05	.05	.05	.945
Path coefficients constrained (Scalar)	1587.44	358	.91	.90	.90	.05	.05	.05	.05	.975

*Note.* Model chi-squares were all statistically significant at  $p < .001$ .

**Table 56: Change in chi-square statistics assuming the unconstrained gender model to be correct**

Model	$\Delta\chi^2$	$\Delta df$	p
Factor loadings constrained	18.28	13	.147
Path coefficients constrained	51.78	26	.002

The two tables above show that both configural invariance (no constraints imposed on models) and metric invariance (factor loadings constrained) were achieved, since the change in chi-square was not significant when the factor loadings were constrained. No further tests of invariance were necessary since the change in chi-square between the factor constrained model and the path constrained model was significant ( $p < .002$ ). Given that configural invariance and metric invariance were achieved, a meaningful comparison of the two genders is therefore possible.

**Table 57: Unstandardized (B) and standardized ( $\beta$ ) path coefficients for male and female models**

	Males $\beta$	Females $\beta$	$\Delta\chi^2$
Independent to:			
Risk taking	.37 ***	.39 ***	.2
Proactiveness	.41 ***	.09	2.0
Interdependent to:			
Risk taking	.24 ***	.18 *	.4
Proactiveness	.35 ***	.54 ***	4.2 *
Power to:			
Risk taking	.02	-.08	.6
Proactiveness	-.01	-.16	1.6
Ambiguity intolerance to:			
Risk taking	-.10	-.30 ***	3.6
Proactiveness	.00	-.09	.9
Achievement motivation to:			
Risk taking	.12 *	.04	1.2
Proactiveness	.37 ***	.22 **	1.8
Goal intentions	.60 ***	.17 **	22.5 ***
Risk taking to goal intentions	.14 *	.47 ***	14.0 ***
Proactiveness to goal intentions	-.10	-.01	.9

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

#### 4.6.5 Summary of Results for the gender models

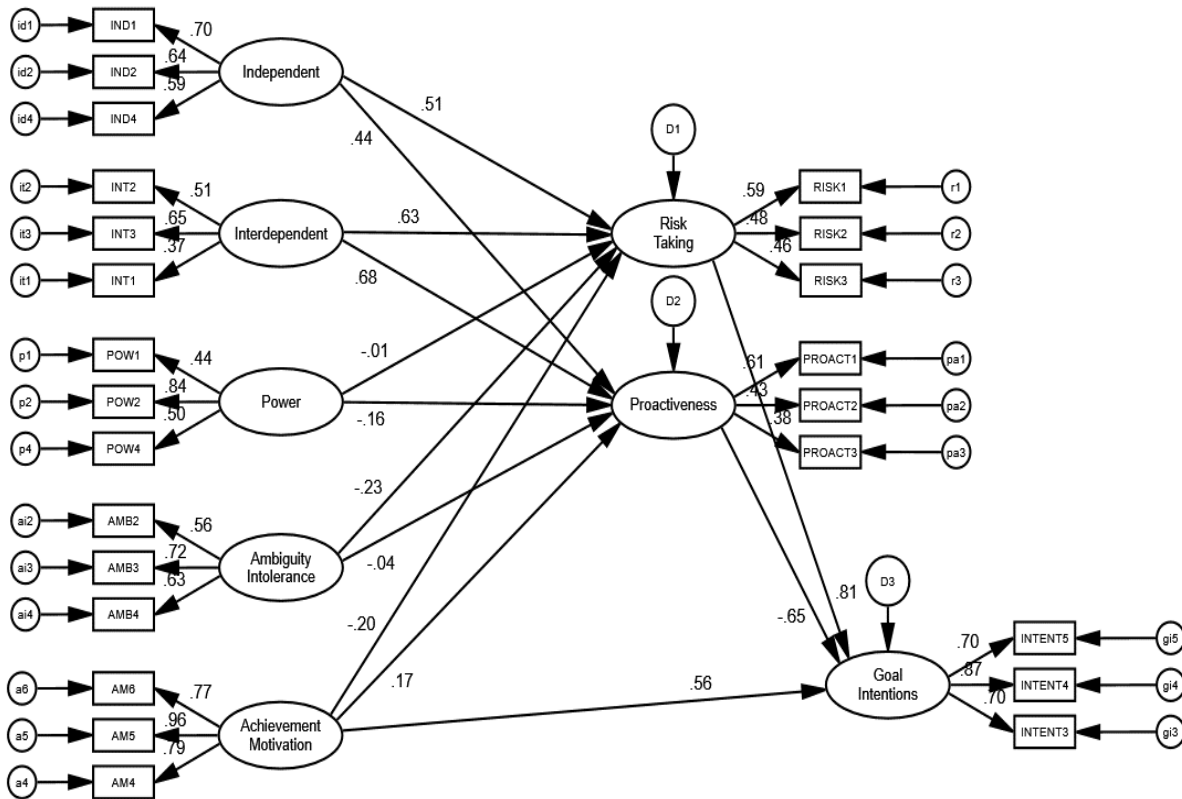
First, metric invariance was established because factor loadings in both groups are similar, which permits a comparison of both genders, and enables a testing of the study hypotheses.

a) In both genders ambiguity intolerance is not positively and significantly related to proactiveness (+n.s) for males and (-n.s) for females, therefore supporting  $H_{25}$ .

- b) In both genders, ambiguity intolerance is not positively and significantly related to risk taking, thus  $H_{26}$  is supported (In males ambiguity intolerance is negatively but not significantly related to risk taking (-n.s) while the same variable is negatively but significantly related to risk taking (-sig)).
- c) The impact of power distance on proactiveness was not positively significant in both sexes (-n.s), thus  $H_{27}$  is not supported.
- d) The impact of power distance on risk taking was not positively significant in both sexes (+n.s) thus  $H_{28}$  is not supported.
- e) The impact of an interdependent cultural orientation on risk taking is positive and significant in both genders (+sig), but significantly higher in females thus supporting  $H_{29}$ .
- f) The impact of an interdependent cultural orientation on risk taking is positive and significant (+sig) in both genders, but higher males than in females, thus  $H_{30}$  is not supported.
- g) The impact of an independent cultural orientation on proactiveness is positive and significant (+sig) for males, but positive but not significant in females, (+n.s) thus  $H_{31}$  is not supported.
- h) The influence of independence to risk taking was higher in females than males, thus  $H_{32}$  is not supported. (+sig in both sexes but higher in females).
- i) The influence of independence to proactiveness was only significant in males (+sig), while it was insignificant in females (+n.s), thus supporting  $H_{33}$
- j) The relationship between risk taking and entrepreneurial intentions is positive and significant in both genders (+sig), but higher in females thus  $H_{33}$  is not supported.
- k) The relationship between proactiveness and entrepreneurial intentions is negative and not significant in both genders (-n.s). This means that people in this sample do not take action, consequently  $H_{34}$  is not supported.
- l) The relationship between achievement motivation and proactiveness, achievement and risk taking as well as achievement motivation and entrepreneurial intentions is positive and significant in all these instances (+sig), but higher in males than females, hence supporting  $H_{35}$ ,  $H_{36}$  and  $H_{37}$

## Modernity models

As explained earlier, the whole sample data was divided into two groups, low and high modernity, and the baseline model was fitted into each of them. The resultant models and their fit statistics are presented in the figures below, following which invariance tests were carried out between the two models.

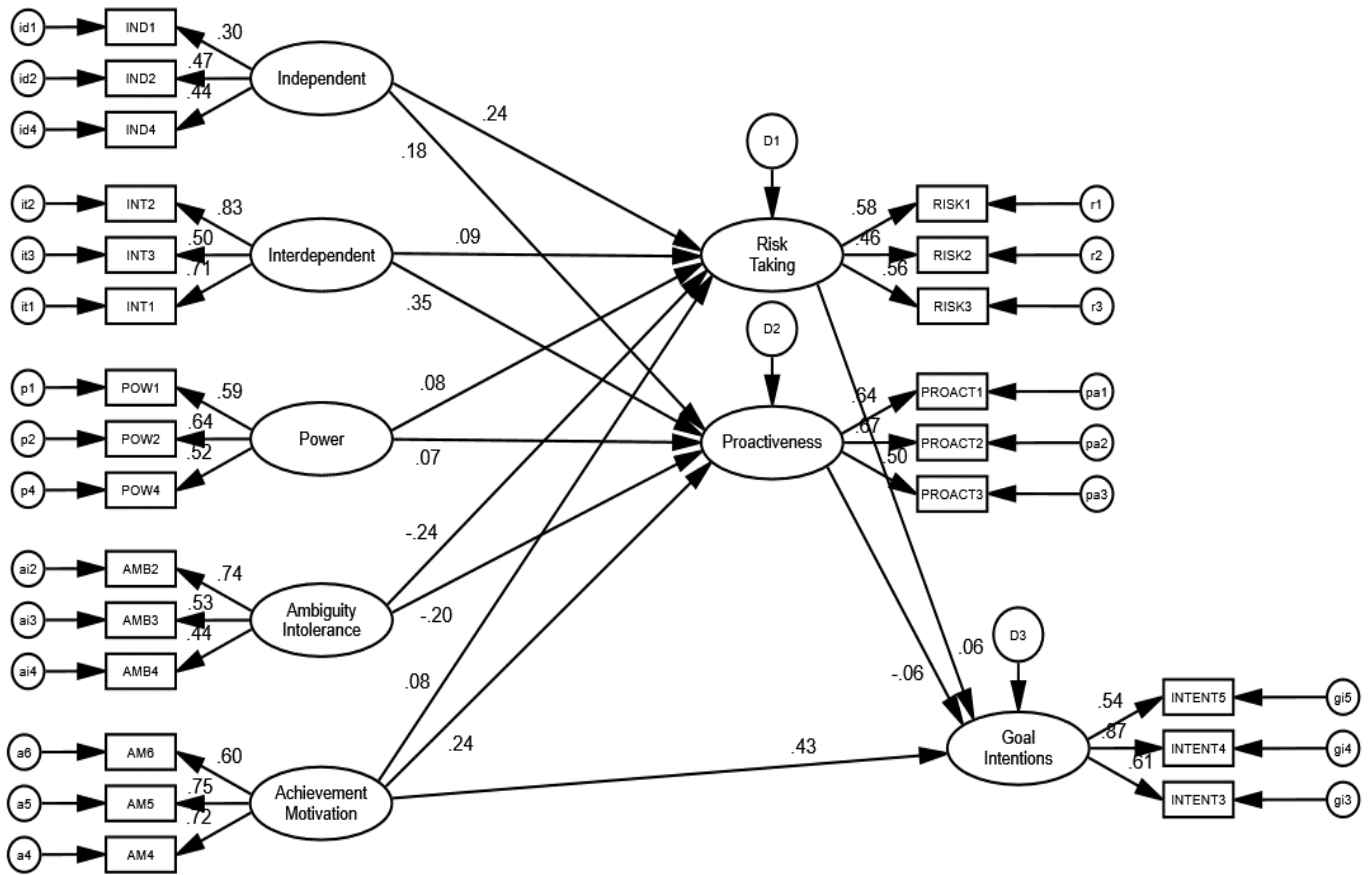


**Figure 17: Standardized coefficients for low modernity structural model**

**Table 58: Fit statistics for low modernity structural model**

Model	Goodness of fit statistics						
	$\chi^2$	Df	P	CFI	GFI	SRMR	RMSEA*
Low Modernity	1209.99	229	0.000	0.73	0.84	0.06	0.09

\* 90% CI [.09, .10],  $p < .001$ .



**Figure 18: Standardized coefficients for high modernity structural model**

**Table 59: Fit statistics for high modernity structural model**

Model	Goodness of fit statistics						
	$\chi^2$	Df	P	CFI	GFI	SRMR	RMSEA*
High Modernity	1075.21	229	0.000	0.70	0.87	0.07	0.08

\* 90% CI [.07, .08],  $p < .001$ .

Tables 58 (low modernity) 59 (high modernity) indicate that both models have acceptable fit apart from the CFI and GFI which are  $< 0.9$ , all the other fit indices are within acceptable range. In particular, RMSEA and its confidence interval as well as the SRMR are all acceptable in each case.

#### 4.6.7 Invariance Test for Modernity

Given that some cultural orientations have a negative impact on entrepreneurial orientation, it is important to establish whether a change in attitude could impact this situation positively, by comparing less modern to high modern student samples.

##### Procedure

1. The average of the four modernity items was used to create a composite modernity score. The median of the sample (*Median* = 4.00) was then used to split the sample into low and high modernity groups.
2. Because the best-fitting baseline structural model yielded negative variances within the High Modernity group, the model was revised: independence, interdependence and risk-taking became three-item constructs.
3. A multiple group analysis was then conducted using the AMOS 23 program.
4. Per Arbuckle (2014), invariance was to be tested at several stages:
  - a. All factor loadings were to be constrained to be equal across modernity groups.
  - b. All path coefficients were to be constrained to be equal across modernity groups.
  - c. All covariances were to be constrained to be equal across modernity groups.
  - d. All construct error terms were to be constrained to be equal across modernity groups.
  - e. All residuals were to be constrained to be equal across modernity groups.
5. According to Arbuckle (2014), if the change in chi-square from one set of constrained models to the other is statistically significant, then invariance cannot be concluded, and as such the analysis would stop there.

#### 4.6.8 Results

1. The findings in Table 58 reveal that the models' CFI was  $<0.9$  while RMSEA was acceptable, hence these findings should be interpreted with caution. In Table 59, the change in chi-square between the factor loadings and the path constrained models was statistically significant. As such, these parameters were not invariant across groups, thus the analysis stopped here. However, Steenkamp and Baumgartner (1998) view configural invariance as sufficient for construct comparability across groups. Hence the two groups are compared on this basis.
2. Given that differences in path coefficients were most important to the study, the path coefficients for the structural models for the low and high modernity samples are summarized in Table 58 and depicted in Figure 21 (low) and Figure 22 (high).

**Table 60: Fit Statistics for the unconstrained and constrained modernity models**

Model	$\chi^2$	Df	GFI	AGFI	CFI	SRMR	Value	RMSEA		P
								90% CI		
Unconstrained	2285.27	458	.86	.81	.72	.07	.06	.06	.06	.000
Factor loadings constrained	5344.98	471	.85	.81	.71	.07	.06	.06	.06	.000
Path coefficients constrained	2390.39	484	.85	.82	.71	.08	.06	.06	.06	.000

*Note.* Model chi-squares were all statistically significant at  $p < .001$ .

**Table 61: Change in chi-square statistics assuming the unconstrained modernity model to be correct**

Model	$\Delta\chi^2$	$\Delta df$	P
Factor loadings constrained	73.38	16	.000
Path coefficients constrained	119.60	29	.000

*Note.* The above table indicates that metric invariance was not achieved; hence no other invariance tests were necessary.

**Table 62: Standardized path coefficients for low and high modernity samples**

	Low $\beta$	High $\beta$	$\Delta\chi^2$
Independent to:			
Risk taking	.51 ***	.04 *	1.1
Proactiveness	.44 ***	.18 *	1.1
Interdependent to:			
Risk taking	.63 ***	.09	11.1 ***
Proactiveness	.68 ***	.35 ***	.9
Power to:			
Risk taking	-.02	.08	.7
Proactiveness	-.16 *	.07	5.4 *
Ambiguity intolerance to:			
Risk taking	-.23 **	-.25 **	.7
Proactiveness	-.04	-.20 **	4.1 *
Achievement motivation to:			
Risk taking	-.20 **	.08	5.6 *
Proactiveness	.17 *	.24 ***	3.6
Goal intentions	.56 ***	.43 ***	.0
Risk taking to goal intentions	.81 ***	.06	12.7 ***
Proactiveness to goal intentions	-.65 *	-.06	4.6 *

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

#### 4.6.9 Summary of results for modernity

Given that strictly adhering to recommend values can lead to Type 1 error i.e. rejecting a correct model (Marsh, Wen, & Hau, 2004), the modernity models are deemed acceptable going by the Hu and Bentler (1999) two index classification strategy i.e. RMSEA  $< 0.08$  with acceptable confidence intervals in each case, and SRMR  $< 0.8$  (see Table 16). Thus it can be argued that configural invariance was established based on this (Steenkamp & Baumgartner, 1998).

**Rationale for comparing the two modernity groups:** The objective of comparing the two groups was to ascertain whether people who hold more liberal views are more entrepreneurial than those who do not (that is to say they score higher on variables that are deemed important for entrepreneurship).

### **Low modernity group**

- a) For the low modernity group, independent and interdependent cultural orientations are positively and significantly (+sig) related to risk taking and proactiveness.
- b) Power distance is negative and not significantly related to risk taking (-n.s), while it is significantly but negatively related to proactiveness (-sig). This finding means that power distance is contributing nothing to the model, consistent with other models.
- c) Ambiguity intolerance is significantly but negatively related to risk taking (-sig), However it is negatively but not significantly (-n.s) related to proactiveness. This finding indicates that ambiguity intolerance is contributing nothing to the model, consistent with other models.
- d) Achievement motivation is negatively and significantly related to risk taking (-n.s), but positively and significantly (+sig) related to both proactiveness and goal intentions.
- e) Risk taking is significantly and positively related to goal intentions (+sig), while proactiveness is negatively but significantly related to goal intentions (-sig).

### **High Modernity group**

- a) Independence is positively and significantly (+sig) related to both risk taking and proactiveness.
- b) Interdependence is not significantly related to risk taking (+n.s), but is positively and significantly (+sig) related to proactiveness.
- c) Power distance is not significantly related to risk taking and proactiveness (+n.s). This finding means that power distance is contributing nothing to the model.
- d) Ambiguity intolerance is significantly and negatively related with both risk taking and proactiveness (-n.s). This means that the higher the ambiguity intolerance the less risk taking and proactive one becomes.
- e) Achievement motivation is not significantly related to risk taking (+n.s), but is positively and significantly related to proactiveness and goal intentions.

f) Risk taking (+n.s) and proactiveness (-n.s) are not positively and significantly related to goal intentions.

#### 4.7 Research objective Five

This section presents the results for objective five of the study which was to examine the extent to which knowledge, networks and optimism moderate the relationship between EO on one hand, and entrepreneurial intention on the other.

##### Moderation Results (STEP 10)

As stated in Chapter Three, the process macro was used (Hayes, 2013) to test for moderation.

First, a composite dimension was formed for each of the variables to be employed in moderation analysis, following which they were entered into the moderation model. The independent variables as well as the moderator variables were then mean-centered. Process provides an output for the Johnson-Neyman coefficients which indicate the point at which the interaction effect of moderator in the relationship between X and Y becomes significant.

##### 4.7.1 Networking as a moderator between proactiveness and goal intentions

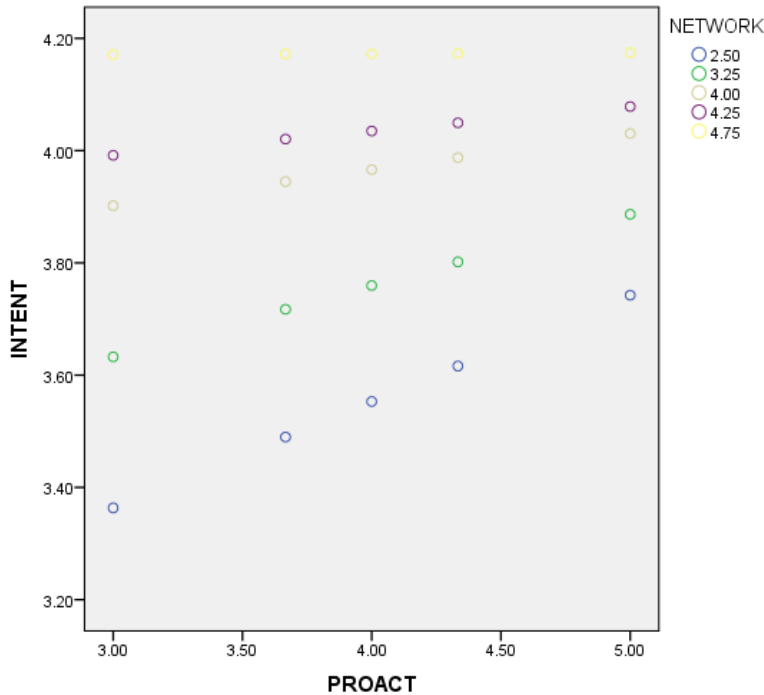
Networking significantly moderates the relationship between proactiveness and goal intentions, overall model  $F(3, 1082) = 42.59$   $p < .05$ ,  $R^2 = .105$ . Table 63 shows that zero does not lie between the lower and upper confidence intervals, thus this interaction is significant. This supports  $H_{19}$ .

**Table 63: Linear regression results testing the moderating effect of networking on the relationship between proactiveness and intentions (N = 1082)**

	B	SE	T	Sig.	LLCI	ULCI
Networking	.28	.032	8.65	.000	.212	.338
Proactiveness	.089	.036	2.52	.011	.020	.159
Networking x Proactiveness	-.084	.033	-2.51	.012	-.149	-.018

Note. Overall model  $F(3, 1082) = 42.59$ ,  $p < .05$   $R^2 = .105$

Figure 19 below illustrates this interaction, which was probed by testing the conditional effects of risk at five levels of networking, i.e. at 2.50, 3.00, 4.00, 4.25 and 4.75. Generally the figure illustrates that as networking levels increase, the relationship between proactiveness and intentions also increases.



**Figure 19: The moderating effect of networking on the relationship between proactiveness and intention**

However, as per the Johnson-Neyman areas of significance, the relationship between proactiveness and goal intentions is positive and significant from 1.0 to 3.89, but from 4.0 to 5.0 the relationship is positive but not significant.

### **Networking as a moderator between risk and entrepreneurial intentions**

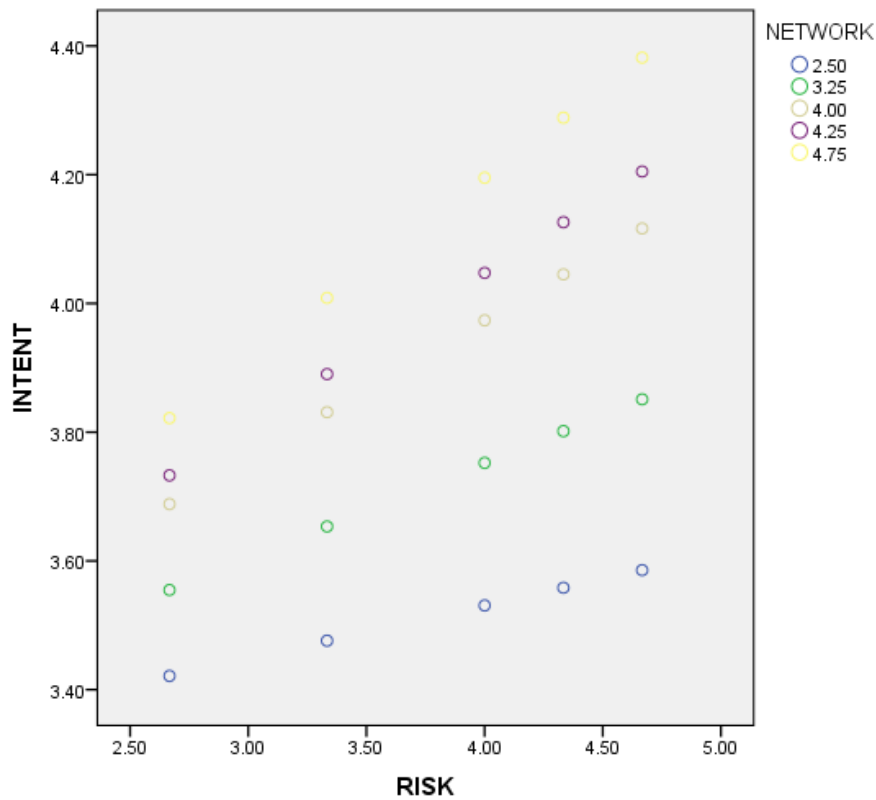
Networking significantly moderates the relationship between risk and goal intentions overall model  $F(3, 1082) = 48.73$   $p < .007$ ,  $R^2 = .119$ . Table 64 shows that zero does not lie between the lower and upper confidence intervals, thus this interaction is significant. This supports  $H_{20}$ .

**Table 64: Linear regression results testing the moderating effect of networking on the relationship between risk and intentions (N = 1082)**

	B	SE	T	Sig.	LLCI	ULCI
Networking	.279	.031	8.94	.000	.218	.340
Risk	.189	.035	5.40	.000	.119	.255
Networking x Risk	.087	.033	2.69	.007	.024	.152

*Note.* Overall model  $F(3, 1082) = 48.73, p < .007 R^2 = .119$

Figure 20 below illustrates this interaction, which was probed by testing the conditional effects of risk at five levels of networking, i.e. at 2.50, 3.00, 4.00, 4.25 and 4.75. Generally the figure illustrates that as networking levels increase, the relationship between risk taking and intentions also increases.



**Figure 20: The moderating effect of networking on the relationship between risk and intention**

Generally, the figure shows that the relationship between risk taking and intentions increases as networking levels increase. An examination of the Johnson-Neyman areas of significance indicates that from 1.0 to 1.4, the relationship between risk and goal intentions is negative and not significant. From 1.6 to 2.8 the relationship is positive and not significant. However from 3.0 to 5.0, the relationship is positive and significant.

#### 4.7.2 Knowledge as a moderator between proactiveness and intentions

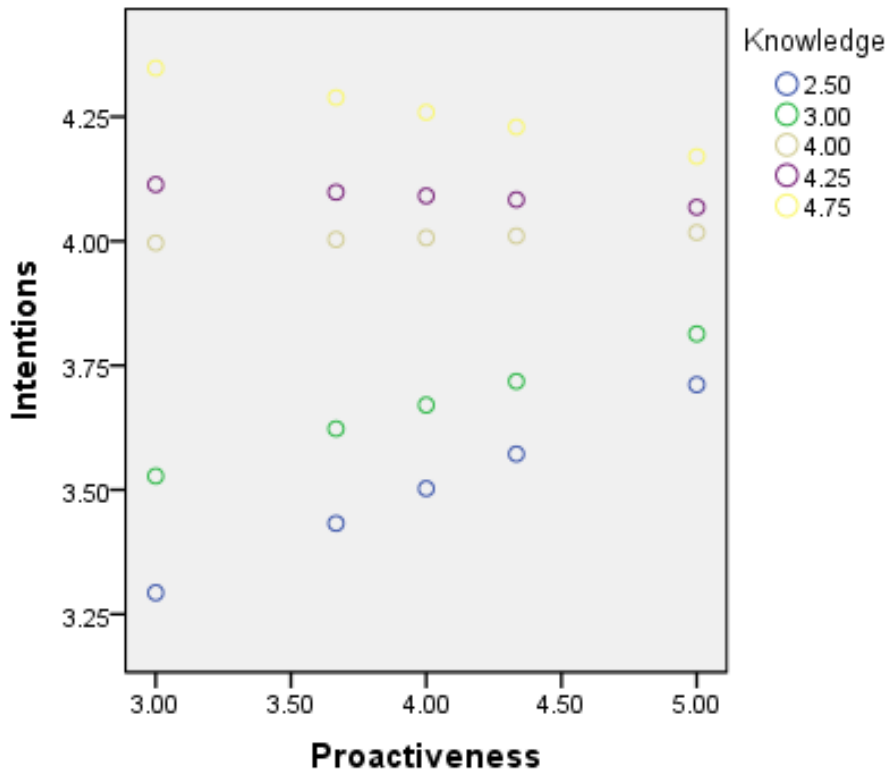
Knowledge significantly moderated the relationship between proactiveness and intentions, overall model  $F(3, 1082) = 74.25, p < .001, R^2 = .171$ . Table 65 shows that zero does not lie between the lower and upper 95% confidence interval levels, thus this interaction is significant. These results support  $H_{22}$

**Table 65: Linear regression results testing the moderating effect of knowledge on the relationship between proactiveness and intentions (N = 1082)**

	B	SE	T	Sig.	LLCI	ULCI
Knowledge	.34	.03	11.61	.000	.279	.393
Proactiveness	.06	.04	1.66	.097	-.010	.122
Knowledge x Proactiveness	-.13	.03	-4.21	.000	-.194	-.070

*Note.* Overall model  $F(3, 1082) = 74.25, p < .001, R^2 = .171$

Figure 21 below illustrates this interaction, which was probed by testing the conditional effects of proactiveness at five levels of knowledge i.e. at 2.50, 3.00, 4.00, 4.25 and 4.75



**Figure 21: The moderating effect of knowledge on the relationship between proactiveness and intention**

Per the Johnson-Neyman regions of significance, when knowledge scores were between .99 and 3.06, the relationship between proactiveness and intentions was positive and significant. When knowledge scores were between 3.06 and 4.90, the relationship between proactiveness and intentions was not significant. When knowledge scores were 4.91 or higher, the relationship between proactiveness and intentions was negative and significant.

**Knowledge as a moderator between risk taking and goal intentions**

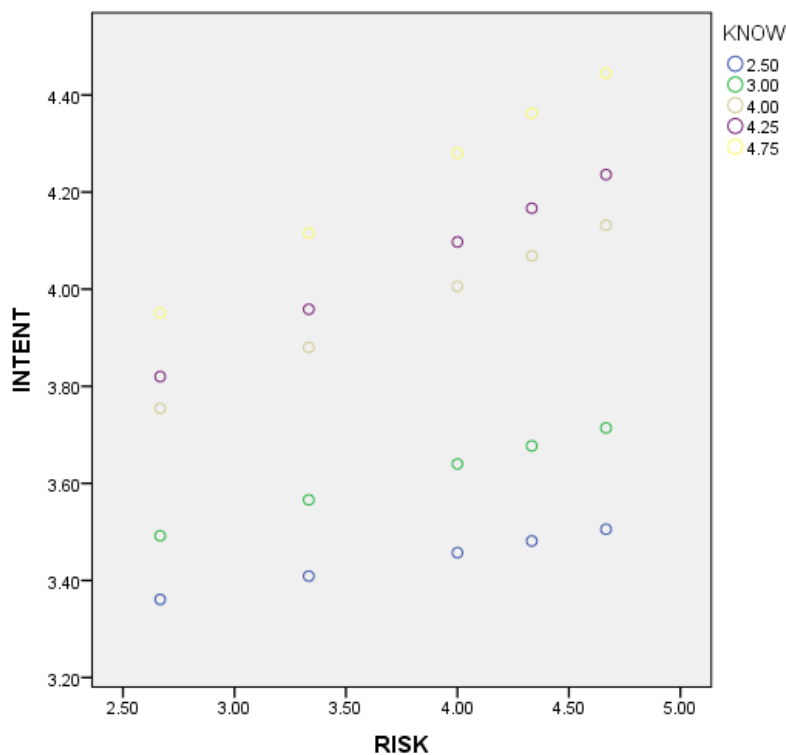
Knowledge significantly moderated the relationship between risk and intentions, overall model  $F(3, 1082) = 75.55$   $p < .001$ ,  $R^2 = .173$ . Table 66 below shows that zero is outside of the lower and upper 95% confidence interval levels, thus this interaction is significant supporting  $H_{21}$ .

**Table 66: Linear regression results testing the moderating effect of knowledge on the relationship between risk and intentions (N = 1082)**

	B	SE	T	Sig.	LLCI	ULCI
Knowledge	.35	.02	12.4	.000	.296	.407
Risk	.16	.03	4.83	.000	.096	.228
Knowledge x Risk	.077	.02	2.63	.000	.019	.135

*Note.* Overall model  $F(3, 1082) = 75.55, p < .001 R^2 = .173$

Figure 22 below illustrates this interaction, which was probed by testing the conditional effects of risk at five levels of knowledge i.e. at 2.50, 3.00, 4.00, 4.25 and 4.75.



**Figure 22: The moderating effect of knowledge on the relationship between risk and intention**

An examination of the Johnson-Neyman region of significance indicates that between 1.16 and 1.56, the relationship between risk and goal intentions is negative and not significant, while between 1.76 and 2.96 the relationship is positive but not significant. From 3.16 and above, the relationship is positive and significant.

#### 4.7.3 Optimism as a moderator between entrepreneurial orientation and intentions

The relationship between proactiveness and goal intentions was not moderated by optimism, overall model  $F(3, 1082) = 14.37, p > .05, R^2 = .038$ . Table 67 shows that zero lies in between the upper and lower 95% confidence interval levels, thus this interaction was not significant, thus  $H_{24}$  is not supported.

**Table 67: Linear regression results testing the moderating effect of optimism on the relationship between proactiveness and intentions (N = 1082)**

	B	SE	T	Sig.	LLCI	ULCI
Optimism	.053	.036	1.45	.144	-.018	.124
Proactiveness	.190	.036	5.26	.000	.119	.262
Optimism x Proactiveness	-.045	.041	-.109	.275	-.127	.036

*Note.* Overall model  $F(3, 1082) = 14.37, p > .05, R^2 = .038$

#### Optimism as a moderator between risk taking and goal intentions

The relationship between risk and goal intentions was not moderated by optimism, overall model  $F(3, 1082) = 20.02, p > .05, R^2 = .05$ . Table 68 shows that zero lies in between the upper and lower levels of the 95% confidence interval, thus this interaction was not significant, hence  $H_{23}$  is not supported.

**Table 68: Linear regression results testing the moderating effect of optimism on the relationship between risk and intentions (N = 1082)**

	B	SE	T	Sig.	LLCI	ULCI
Optimism	.036	.035	1.00	.313	-.0342	.1067
Risk	.246	.036	6.79	.000	.1756	.3182
Optimism x Risk	-.014	.041	-.34	.728	-.0947	.0663

*Note.* Overall model  $F(3, 1082) = 20.02, p > .05, R^2 = .05$

#### 4.8 Chapter Summary

This chapter presents the findings of the qualitative and quantitative phases of the study. In section one, qualitative study results are presented, while in the sections there after quantitative study findings are presented beginning with descriptive statistics of the study population i.e. sex, age, marital status, start-up activities and intentions. This is followed by the findings for objective one of the study which aimed at examining the prevalence of business start-up experience, fear of failure, modernity and cultural orientation variables in the whole or omnibus sample. In the section there after, results from estimation of the structural models for the whole and individual country samples were presented, in order to cater for objectives two and three of the study. This is followed by presentation of findings for objective four of the study, which was to estimate the baseline model by gender (male and female) and by modernity (low and high groups) followed by invariance tests between these groups. Lastly, the chapter presents results of the extent to which entrepreneurial competencies and optimism moderate the relationship between EO on one hand and entrepreneurial intention on the other to cater for objective five. Generally, findings indicate that a significant number of respondents in each country had taken no action towards entrepreneurship and that on the whole they had low entrepreneurial intentions. Findings also indicate that there is a significant difference between the low and high fear of failure groups in each country, and the low and high modernity groups with the low fear of failure and the high modernity groups exhibiting more entrepreneurial characteristics in each case. Further, the country samples exhibited some variability in the prevalence of the cultural orientations. The results of the hypothesis testing are presented in table 69 below.

**Table 69: Summary of hypothesis testing (Baseline model)**

Hypothesis	Whole Sample	Kenya Model	Tanzania Model	Uganda Model	Low Modernity model	High modernity model	Male Model	Female Model
Independence to Risk	(+) sig.	(+) sig.	(+) sig.	(+) n.s	(+) sig.	(+) sig	(+) sig	(+) sig
Independence to Proactiveness	(+) sig.	(-) n.s	(+) sig	(+) n.s	(+) sig	(+) sig	(+) sig	(+) n.s
Interdependence to risk	(+) sig.	(-) n.s	(+) n.s	-	(+) sig	(+) n.s	(+) sig.	(+) sig.
Interdependence to Proactiveness	(+) sig.	(+) sig.	(+) n.s	-	(+) sig	(+) sig	(+) sig	(+) sig
power to risk	(-) n.s	(+) n.s	(+) sig	-	(-) ns	(-) n.s	(+) n.s	(-) n.s
Power to proactiveness	(+) n.s	(+) n.s	(+) sig	-	(-) n.s	(+) n.s	(-) n.s	(-) n.s
Ambiguity to risk	(-) sig.	(-) sig	(-) n.s	-	(-) sig	(-) sig	(-)n.s	(-) sig
Ambiguity to proactiveness	(-) sig	(-) n.s	(-) n.s	-	(-) n.s	(-) n.s	(+) n.s	(-) n.s
Masculinity to risk	(+) sig	-	(+)sig	(+) sig	-	-	-	-
Masculinity to proactiveness	(+) sig		(+) sig	(+) sig				
nAch to risk	(-) n.s	-	(+) sig	(+) n.s	(-) n.s	(+) n.s	(+) sig.	(+) n.s
nAch to proactiveness	(+) sig.	-	(+) sig	(+) n.s	(+) sig	(+) sig.	(+) sig.	(+) sig
nAch to intentions	(+)sig.	-	(+)sig	(+) sig.	(+) sig	(+) sig	(+) sig	(+) sig
Risk to intentions	(+) sig	(+) sig	(-) sig	(+) sig	(+) sig	(+) n.s	(+) sig	(+) sig
Proactiveness to intentions	(-) n.s	(+) sig	(-) sig	(+) sig	(-) n.s	(-) n.s	(-) n.s	(-) n.s

NS=Not significant; nAch= Achievement motivation

Table 69 above summarizes the results of the hypothesis testing and shows the impact of the cultural orientation variables and achievement motivation on both risk taking and proactiveness for the whole sample, by country, by modernity (low and high groups), and by gender (male and female). The table shows that ambiguity intolerance and power distance are the most problematic variables in this study and may be the reason why graduates do not start-up. The table also shows that both genders are not proactive, since proactiveness to intention is not significant; however they are risk taking since risk taking to intention is positive and significant. The following chapter discusses the implications of these findings.

### 5.1 Introduction

This chapter presents a discussion of the study findings in five sections. Section 5.2 discusses the findings from objective two (which was to examine the impact and directionality) of the cultural orientation variables and achievement motivation on EO. This is the first part of the study model in Chapter One. This section is strengthened with the findings on both modernity and fear of failure (objective one) and the non structured interviews. Since LGO was dropped as it correlated highly with achievement motivation (Chapter 4), only achievement motivation is included in this chapter.

Section 5.3 discusses the findings for objective three, which aimed at scrutinizing the impact and directionality of proactiveness/risk taking on entrepreneurial intention (the second part of the study model). The discussion for the findings of these three objectives is based on standardized path coefficient tables (structural models) for the whole sample (Table 35), for Kenya (Table 40), for Tanzania (Table 46), for Uganda (Table 51). Section 5.4 discusses the findings for objective four, which introduces a gender perspective in the study that is establish the extent to which cultural orientations and ability perceptions influence EO and eventually EI by gender and modernity. The discussion of these findings is based on standardized path coefficient tables (structural models) for male and female samples (Table 57) and for the low and high modernity samples (Table 62).

Lastly, section 5.5 discusses findings for the fifth objective (the third part of the study model), which was to examine the extent to which entrepreneurial competencies (knowledge and networks) and optimism moderate the relationship between risk taking/proactiveness and entrepreneurial intention. The discussion in this section is based on Tables 63 and 64 (moderating effect of networks), Tables 65 and 66 (moderating effect of knowledge) and Tables 67 and 68 (moderating effect of optimism). Concluding remarks are presented in section 5.6 in which a call for societal attitudinal change is made. A chapter summary closes the discussion (section 5.7).

## **5.2 Impact of the cultural orientations and achievement motivation on risk taking and proactiveness**

African entrepreneurship has been viewed differently by various stakeholders, and the literature delineates three popular positions. First is the notion that there is little entrepreneurial talent in Africa, resulting into fewer establishments in management and manufacturing companies for productive activities, a view supported by Morch von der Fehr (1995). The second position is that entrepreneurial endowment exists in Africa, but is constrained by economic conditions which do not allow it to grow, such as lack of electricity, access to finance, tax rates, skill shortages among others (Brixiova, 2013). The third position holds that African entrepreneurship is very much alive, but the social-cultural context is a hindrance to the development of a strong entrepreneurial orientation (Pretorius & Van Vuuren, 2002) and this cultural context is especially harmful to the female gender (Mungai & Ogot, 2012). The third stand is the position of the current study, given the study findings enumerated in the various sections of this chapter.

### **5.2.1 Ambiguity intolerance and risk taking/proactiveness**

Risk taking generates high levels of outcome uncertainty; hence those in managerial positions (or aspiring to take on such roles) must be able to tolerate elements of uncertainty in various situations (Kreiser et al., 2010). The findings of the study indicate that ambiguity intolerance is at times negative and not related to both risk taking and proactiveness (-n.s), is inversely related to them where the relationship is significant (- sig) or is positive but not significant (+n.s) in all the different samples (thus supporting  $H_1$  and  $H_6$ ). This makes ambiguity intolerance (an issue raised in the interviews) the most problematic dimension of all the cultural orientations in the current study. For example for the whole sample, the relationship between ambiguity intolerance and risk taking is significant but negative ( $\beta = -0.16, p < .05$ ), while ambiguity intolerance to proactiveness is highly significant but negative ( $\beta = -0.14, p < .001$ ). In Kenya, ambiguity intolerance to risk taking is significant, but negative ( $\beta = -0.44, p < .01$ ), while in the same country ambiguity intolerance to proactiveness is not significant and negative ( $\beta = -0.31, p > .05$ ). In Tanzania, ambiguity intolerance is negatively and not significantly related to both risk taking ( $\beta = -0.44, p > .05$ ) and proactiveness ( $\beta = -0.31, p > .05$ ) as shown in the model in figure 2b. Turning to the low modernity group, ambiguity intolerance to risk taking is significant but negative ( $\beta = -$

0.23,  $p < .01$ ), while ambiguity intolerance to proactiveness is negative and not significant ( $\beta = -0.04$ ,  $p > .01$ ), similarly for the high modernity group, ambiguity intolerance to risk taking is significant but negative ( $\beta = -0.25$ ,  $p < .01$ ) while its relationship to proactiveness is also significant but negative ( $\beta = -0.20$ ,  $p < .01$ ). In the same vein, ambiguity intolerance and risk taking are negative and not significantly related in the male sample ( $\beta = -.10$ ,  $p > .05$ ) and inversely related in the female sample ( $\beta = -0.30$ ,  $p > .05$ ). Similarly, ambiguity intolerance and proactiveness are not related at all in the male samples ( $\beta = .00$ ) and inversely related in the females ( $\beta = -0.09$ ,  $p < .05$ ). In the literature the position is that individuals who find it difficult to tolerate ambiguity detest unstructured and obscure circumstances and take measures to evade them (Lumpkin & Erdogan, 2004). Therefore students with high ambiguity intolerance may want to avoid entrepreneurship, given that the entrepreneurial process could be lengthy yet one cannot precisely tell what the future will bring, since entrepreneurial endeavors are uncertain by nature (McMullen & Shepherd, 2006). Mitchell et al., (2000) describe commitment tolerance as the will to take the risk and any consequences that accrue as a result of start-up. People in low uncertainty avoidance accepting communities will possibly exhibit more commitment tolerance and bear the risk associated with entrepreneurship than those from high uncertainty avoidance cultures (Kreiser et al., 2010). Another reason why ambiguity intolerance disrupts students' entrepreneurial endeavors could be due to the dread of facing an uncertain future. This refers to fear that arises because one is not certain what the future holds and shows how the working self-concept is influenced by a turbulent social atmosphere (Markus & Nurius, 1986). According to McMullen and Shepherd (2006), uncertainty evolves into doubt and constrains action by denting one's evaluation regarding the existence of a potential opportunity in the market, the feasibility of the opportunity, and whether this opportunity can be successfully exploited to the fulfillment of a given personal aspiration. Thus individuals with a lot of knowledge, skills and experience but who harbor a big fear of embracing an uncertain future will most likely view their past experience through a lens of uncertainty and may therefore be less willing to take entrepreneurial action. Conversely, those with high levels of self-efficacy perceive themselves as able to take action (Wood & Bandura, 1989), so they will most probably invoke action to take charge of their future (Mitchell & Shepherd, 2011).

### 5.2.2 Power distance and risk taking/proactiveness

The findings of the study show that power distance is a problematic variable affecting graduate start up negatively in this region. First, power distance is not significantly related to risk taking in the whole sample ( $\beta = -.07, p>.05$ ), in Kenya ( $\beta = 0.29, p>.05$ ), in the male sample ( $\beta = 0.02, p>.05$ ), in the female sample ( $\beta = 0.08, p>.05$ ), in the low modernity sample ( $\beta = -0.02, p>.05$ ), and in the high modernity sample ( $\beta = 0.08, p>.05$ ). Similarly power distance is not related to proactiveness in the whole sample ( $\beta = 0.02, p>.05$ ), in Kenya ( $\beta = 0.25, p>.05$ ), in the male sample ( $\beta = -.01, p>.05$ ), in the female sample ( $\beta = -.16, p>.05$ ), in the low modernity group ( $\beta = -.16, p>.05$ ) and in the high modernity group ( $\beta = 0.07, p>.05$ ). By contrast, power distance is positively and significantly related to risk taking/proactiveness ( $\beta = 0.31, p<.001$ ) only in Tanzania. These findings are in agreement with the literature which gives two contradictory positions regarding power distance and entrepreneurship. In one view, entrepreneurship is more common in societies with low power distance (Hayton et al., 2002) and in the second, high power distance supports entrepreneurship (Busenitz, & Lau, 1996; Hofstede et al., 2004; Schlaegel, He, & Engle., 2013). Power distance is also one of the issues that were raised by respondents during the interviews (see 4.2 Table 17).

Descriptive statistics and t-tests results for the low modernity value orientation (Table 28) indicate that power distance is lowest in Kenya (mean = 2.59, SD = 0.958) than it is in Tanzania (mean = 2.88, SD = 0.910) and it is highest in Uganda (mean = 3.24, SD = .751). This is confirmed by MANOVA multiple country comparisons (Table 30), which indicate that there is a significant difference on power distance between Kenya and Tanzania ( $p<.001$ ), between Tanzania and Uganda ( $P<.001$ ) and between Kenya and Uganda ( $p<.001$ ). These statistics indicate that students in Kenya will be tending toward a more individualistic cultural orientation, yet this low power distance is not related to either risk taking or proactiveness. On the contrary, high power distance is positively related to risk taking in Tanzania, whose sample seems to tend a high degree of interdependence.

In general, there are three possible explanations for the impact of power distance on entrepreneurial orientation in this study. First, (Kenyan) students who tend toward a more

individualistic stand may not be able to leverage resources from important others as explained in the section on independence and proactiveness because they may not fit properly in a collective setting. Hence, the low power distance while being supportive of entrepreneurship in Western societies may be a barrier in a more collective cultural context. Second, and from a theoretical perspective, the results in Tanzania can be explained by social cognition theory (Fiske & Taylor, 1991) as well as expert information processing theory ( Craik & Lockhart, 1972), which argues that people with expert knowledge scripts about particular domains outperform others who do not possess and apply such knowledge (Leddo & Abelson, 1986). Mitchell, et al. (2000) propose three types of knowledge scripts. First are arrangement scripts, which refer to the possession and use of essential and unique social contacts and resources necessary for new venture creation. Second are the willingness scripts that emphasize proactive behavior and venture opportunity pursuit (Sexton & Bowman, 1985), and third are the ability scripts “*which consist of the capabilities, skills, knowledge, norms, and attitudes required to create a venture*” (Mitchell et al., 2000, p.978). All these scripts are influenced by culture in particular individualism and power distance, and Mitchell et al. (2000) propose two situations in which power distance influences entrepreneurial activity, through its action on the said scripts. In the first situation, power distance positively influences arrangement, ability and willingness cognitions for those who wield power, since they control resources and possess knowledge, given that in these societies who one knows is more important than capability. For students from a collective background with parents who have the resources and a positive attitude towards entrepreneurship, power distance will be a positive step toward their start-up endeavors. On the other hand, the less privileged in such a society may view start-up as something which only the elite can do, and hence do not develop the scripts for scanning and evaluation of opportunities, since knowledge and resources are a preserve of the elite. The current study suggests that both situations may obtain in a collective setting, i.e. with some students having the resources and connections while others do not. Tanzania’s history as a socialist state may have built the social structures that permit and thus support networking, in a high power distance setting.

The third explanation (for example, for the low modernity group/or interdependence setting) is that since power distance is positively correlated with obedience (Kohn, 1969), people in high power distance societies (mainly collective cultures) may have little free will and independence

to come up with bold choices (Hofstede, 1980). This situation may be obtaining in East Africa and is similar to that in high filial piety societies. Filial piety originating from Chinese culture is defined as a “*specific complex syndrome or a set of cognition affects, intentions and behaviors concerning being good or nice to one’s parents*” (Yang, 1997, p.252). Filial attitudes include obedience to one’s parents (refer to 4.2) treating them with politeness and respect, promoting the public prestige of one’s kindred and fulfilling parental aspirations/wishes about occupations or vocation, among others. Society expects a student to go by group norms, be obedient to his or her parents, not to bring shame and embarrassment to the family. Therefore, high power distance could be negatively related to entrepreneurship in an African context, especially where parents have a negative attitude toward this career path. The student fears upsetting important others, especially parents and close relatives and faces various pressures as a result of high power distance not to engage in a low status career: *‘In societies where entrepreneurship is accorded a low status, graduates may not startup as response to their fear of losing face’*(Spencer & Gomez, 2004, p.3). As expressed in the literature review section, Maina (2011) found that Kenyan students found entrepreneurship to be a demeaning career. Takya-Asiedu (1993, p.94) explains this well when he asserts that “*critical career decisions are made by parents even before their children go to secondary school*”. Given that the commitment of others is a key issue in the exploitation of an opportunity, a person’s perception of what important others believe matters, since it correlates with the likelihood of obtaining the resources and the required support to exploit the opportunity (Jelinek & Litterer, 1995). Thus networking among these people is of paramount importance.

### **5.2.3 Masculinity and risk taking/proactiveness**

In the whole sample structural model, masculinity was negatively but significantly related to risk taking ( $\beta = -.41, p < .001$  – thus  $H_3$  was not supported), and it was also not significantly related to proactiveness ( $H_8$  was not supported). In the Tanzanian sample, masculinity was positively and significantly related to risk taking /proactiveness ( $\beta = 0.17, p < .01$ ), while in the Ugandan structural model, masculinity was strongly related to proactiveness ( $\beta = 0.66, p < .001$ ). Only one item loaded onto masculinity in the Kenyan sample, thus this variable was dropped from the Kenyan structural model. The level of masculinity in Tanzania and Uganda was significantly

higher than that in the whole sample (mean = 3.59). MANOVA descriptive statistics (Table 29) indicate that Uganda has the largest score on masculinity (mean = 3.78, SD =.783), followed by Tanzania (mean = 3.63, SD =.810) and Kenya (mean = 3.35, SD =.771). Uganda significantly differs from that of Kenya ( $p < .001$ ) and also significantly differs from that of Tanzania ( $p < .05$ ). This high level of masculinity could possibly explain why this variable is positively related to proactiveness in Uganda and risk taking/proactiveness in Tanzania, which is consistent with theory. The literature is full of assertions that masculine orientations are more likely to embrace entrepreneurship (McGrath et al., 1992). High masculinity is strongly correlated with an individualistic orientation in the literature (Hofstede, 1980). For example, Schwartz's (1992, 1994a) mastery dimension data across 23 countries correlated significantly with masculinity ( $r = .53$ ). This mastery dimension comprises values such as "*ambition, success, daring, and competence*" (Schwartz, 1999, p.28).

#### **5.2.4 Independence and risk- taking /proactiveness**

Culture is theorized to determine the extent to which a community views entrepreneurial behaviors such as risk taking, creativity, identification and pursuit of opportunities to be pleasant (Zhao et al., 2010). As already stated in the literature review section (2.4.4), people may maintain both autonomous and interdependent emotions each of which can be activated according to the situation an individual is facing (Markus & Kitayama, 1991). An examination of standardized path coefficient tables of all the samples starting with the whole sample in the current study, shows that independence (autonomous cultural orientation) was positively and significantly related to risk taking ( $\beta = 0.73, p < .001$ ), thus supporting  $H_4$ . This concurs with the notion that people with this orientation take moderate risks (Kreiser et al., 2010 p. 963). Turning to the individual country samples, independence was also positively related to risk taking in the Kenyan sample ( $\beta = .42, p < .05$ ) and in the Tanzanian one ( $\beta = .42, p < .001$ ). Independence to risk taking was also positive and significant in the male sample ( $\beta = .37, p < .001$ ), in the female sample ( $\beta = .39, p < .001$ ), in the low modernity sample ( $\beta = .51, p < .001$ ) and in the high modernity sample ( $\beta = .04, p < .05$ ).

Kenyan and Ugandan samples do not differ significantly in terms of independence (mean = 4.07, SD =.820) and (mean = 4.05, SD =.662) respectively, but they are significantly higher on this variable than the Tanzanian sample (mean = 3.87 SD =.729) as per MANOVA multi-country comparisons (Table 30). In consonance with these findings, Kenyan respondents score higher on risk taking (mean = 4.03, SD =.735) and their score is significantly different ( $p < .001$ ) from the Tanzanian sample (mean = 3.66, SD =.685) and the Ugandan sample (mean = 3.81, SD =.730). Thus an independent cultural orientation supports risk taking in all the samples even in the Tanzanian sample in which independence is low. The theory of achievement motivation suggests that achievement behavior is individualistic (Nelson & Shavitt, 2002), therefore people with a more individualistic/independent cultural orientation might not easily be influenced by in groups (because of low power distance) and might not fear risks “*because they are more active to get somewhere*” (Hofstede, 1980, p.233).

The literature on socially desirable responding (Lalwani, Shavitt, & Johnson, 2006), throws light on the behavior of collectivists and individualists that may explain risk taking and independence in the current study. Research shows two distinct socially desirable response styles, namely self-deceptive enhancement (SDE) and impression management (IM). SDE is a tendency to portray one-self in positive light and is a rigid form of over confidence (Paulhus, 1998) which is correlated with personality variables such as perceived control, self-controlled behavior and social dominance (Paulhus, 1991). SDE is also related to self-esteem, and a feeling of competence (Holden & Fekken, 1989). Conversely, interdependence is related to impression management or the need for people to behave in culturally acceptable ways in order to obtain social approval (Lalwani et al., 2006). Similarly, Johnson and Van de Vijver (2003) argue that impression management is related to conformity, face management and deference, all of which are related to a collectivist (interdependent cultural orientation). Thus, in the current study and consistent with Lalwani et al., (2006), independent culturally oriented students scored highly on risk taking in all the samples. In a study of Chinese American students, Tsai, Ying and Lee (2000) argue that individualistic cultures entreat their people to portray distinctiveness through self improvement strategies, while collective cultures value connections with others and thus urge their members to maintain self-effacement strategies which results in having low self-esteem. As Krueger and Dickson (1994) posit, feelings of self-efficacy are more essential than

even actual skills when it comes to accounting for behavior. Students who harbor an independent orientation will most probably be high on self- efficacy, masculine and risk-taking.

### **Independence and proactiveness**

An independent cultural orientation was significantly and positively related to proactiveness in the whole sample ( $\beta = .46$   $p < .001$ ), in the Tanzanian sample ( $\beta = .42$   $p < .001$ ), in the male sample ( $\beta = .41$   $p < .001$ ), in the low modernity sample ( $\beta = .44$   $p < .001$ ), and in the high modernity sample ( $\beta = .18$   $p < .001$ ), thus supporting  $H_9$ . By contrast, this cultural orientation was not significantly related to proactiveness in Kenya ( $\beta = -.04$ ,  $p > .05$ ) and Uganda ( $\beta = 0.05$   $p > .05$ ). These findings lend support to the view that people with an independent cultural stance can make decisions on their own, take action on them and take responsibility for their action. On the other hand, the findings from the Kenyan and Ugandan samples are consistent with Kreiser et al., (2010), who assert that proactive conduct is likely to be negatively related with the level of individualism in a given culture. Many other researchers concur with the view that individualistic behavior limits entrepreneurial behavior (Franke, Hofstede, & Bond, 1991; Peterson, 1988). Tiessen (1997) agrees and argues that enterprises in societies that espouse individualistic behavior may find it difficult to acquire the necessary resources in pursuit of emerging market openings. Since entrepreneurs usually seek support from social networks such family members and colleagues, opportunities will be exploited by those who are well positioned within these networks (Aldrich & Zimmer, 1986). That is to say entrepreneurs are resource dependent, hence they search for resources externally (Begley et al., 2005; Kollmann & Kuckertz, 2007). In a predominantly collective society, as is the case in the three study countries, leveraging of resources and gaining the cooperation and support of others in the initial stages of an enterprise may be an uphill task for students with an individualistic cultural orientation since they are viewed as rebels (they go against group/clan/family norms), or as ‘aloof’, since they will often pursue their own goals rather than the group goals.

Chigunta et al. (2005) argue that the lack of support from customary structures of empowerment and socialization is a key constraint to entrepreneurial activities of young people in sub-Saharan Africa. Thus, while an independent cultural orientation may favor business start-up, this may not turn into business reality in some cases unless the leveraging of resources is made possible by adhering to the implicit collective norms, based on the shared goals and values of members

(Zeffane, 2014). Results from the Kenyan and Ugandan samples concur with the position that independence has less success in accounting for entrepreneurship in predominantly collective societies (Nguyen, Huy, & Boles, 2010; Tiessen, 1997).

### **5.2.5 Interdependence and risk taking/proactiveness**

The findings for the relationship between interdependence and risk taking are contradictory, with some supporting the view that people with this orientation may or may not be entirely risk averse. An interdependent cultural orientation is positively and significantly related to risk taking in the whole sample ( $\beta = .42$   $p < .001$ ), in the male sample ( $\beta = .24$   $p < .001$ ), in the female sample ( $\beta = .18$   $p < .05$ ), and in the low modernity sample ( $\beta = .63$   $p < .001$ ), thus supporting  $H_5$ . By contrast, this relationship was not significant in the Kenyan sample ( $\beta = -0.19$ ,  $p > .05$ ), positive but not significant in the Tanzanian sample ( $\beta = 0.03$ ,  $p > .05$ ) and also not significant in the high modernity sample ( $\beta = .09$   $p > .05$ ) thus  $H_5$  is not supported in this case. Thus country sample results are consistent with the view that people with a collective cultural orientation are risk averse (Hofstede, 1980). This result is also in agreement with the view that Africans sustain their communities by evading non-essential risks (Onuejeougwu, 1995) and bar any activities that deviate from agreed norms since such actions may create disorder (Munene et al., 2000); In consonance with this view is the notion by some scholars that the impact of fear of failure is higher in collective societies than individualistic societies, because the stigma of failure is more acute in collectivist cultures and therefore acts as a deterrent to entrepreneurship (Damaraju et al., 2010). This matter was also raised in the interviews (see 4.2).

### **Interdependence and proactiveness**

On the other hand, the relationship between interdependence and proactiveness is positive in the whole sample ( $\beta = 0.48$ ,  $p < .001$ ), in the Kenyan sample ( $\beta = 0.27$ ,  $p < .01$ ), in the male sample ( $\beta = 0.35$ ,  $p < .001$ ), in the female sample ( $\beta = 0.54$ ,  $p < .001$ ), the low modernity sample ( $\beta = 0.68$ ,  $p < .001$ ) and in the high modernity sample ( $\beta = 0.35$ ,  $p < .001$ ), thus  $H_{10}$  is supported, agreeing with the view that interdependence (connectedness) is good for entrepreneurship (Tiessen, 1997). These findings confirm the observation that collectivism supports entrepreneurship since such communities avail communal support and resources, for instance relatives can contribute

the required resources for one's entrepreneurial activities as well as some form of social security just in case something goes wrong (Zhao et al., 2010). This is also in agreement with the 'cushion' hypothesis of Weber and Hesse (1998) which argues that collectivist societies perceive the riskiness of risky options as smaller because group members will come to the rescue of a person who experiences a loss after selecting a risky option, while in individualistic societies whoever takes a risky decision personally bears the consequences of his /her actions.

Conversely, this relationship is not significant in the Tanzanian sample ( $\beta = 0.03$ ,  $p > .05$ ), possibly due to high power distance, as explained in section 5.2.2. Although the Kenyan sample is higher on the independent cultural orientation than the other two states, as shown in the MANOVA table above, this sample is also highest in exhibiting interdependence (mean = 4.45 SD=.630), compared to the Tanzanian sample (mean = 4.29, SD = .557) and the Ugandan one (mean = 4.14, SD = .672). The Kenyan sample is significantly different from the Tanzanian one on interdependence ( $p < .001$ ), and also significantly different from the Ugandan sample ( $p < .001$ ).

The literature holds that a proactive orientation can arise from a range of goals such as creating desirable impressions (for example face saving). However it is important to note that proactive individuals display both individualistic (Tu et al., 2011) and collective values (Bateman & Crant, 1993), hence the mixed findings in regard to individualistic values and proactive behavior, for example some studies reported an affirmative association (Shane, 1993), in contrast to those that reported the opposite (Kreiser et al., 2010). An interdependent cultural orientation could be positively related to proactiveness because of the ease of acquiring resources for entrepreneurship by people who are well interconnected /interdependent. This supports more recent findings by Houston, Edge, Anderson, Lesmana, and Suryani, (2012) where interdependence was established to be a major antecedent of competitiveness and entrepreneurial intent.

### **5.2.6 Modernity**

In order to explore the impact of dependence/interdependence further, the modernity dimension was divided into low and high groups, using the median and invariance tests performed to compare the groups. Although t-tests (Table 28) shows the high modernity group to hold more entrepreneurial characteristics in each country, a comparison of the low and high modernity

models based on the whole sample shows that the low modernity group (more interdependent) seems to be performing better than the high modernity group since regression coefficients are higher for the former group, consistent with the Houston et al. (2012), view that interdependence is a precursor of entrepreneurship. For example, in the first part of the model, an independent cultural orientation is strongly related to risk taking ( $\beta=.54$ ,  $p<.001$ ) in the low modernity group, compared to ( $\beta=.04$ ,  $p<.05$ ) in the high modernity group. Similarly, the relationship between independence and proactiveness is stronger in the low modernity group ( $\beta=.44$ ,  $p<.001$ ) compared to ( $\beta=.18$ ,  $p<.05$ ) in the high modernity group. Also, the relationship between an interdependent cultural orientation and risk taking is strong in the low modernity group ( $\beta=.63$ ,  $p<.001$ ), while it is not significant in the high modernity group ( $\beta=.09$ ,  $p>.05$ ). Further, the relationship between an interdependent cultural orientation and proactiveness is strong in the low modernity group ( $\beta=.65$ ,  $p<.001$ ) compared to ( $\beta=.35$ ,  $p<.001$ ) in the high modernity sample. In the same way, the relationship between achievement motivation and entrepreneurial intentions (extension of the TPB) is significant in both groups, but higher in the low modernity sample ( $\beta=.56$ ,  $p<.001$ ) compared to ( $\beta=.43$ ,  $p<.001$ ) for the higher modernity group.

In the second part of the models, the relationship between risk taking and intentions is significant in the low modernity group ( $\beta=.81$ ,  $p<.001$ ), while it is not significant in the high modernity group ( $\beta=.06$ ,  $p>.05$ ). However, the relationship between proactiveness and intentions is significant but negative in the low modern sample ( $\beta=-.61$ ,  $p<.05$ ), just as it is not significant in the high modernity sample ( $\beta=.06$ ,  $p>.05$ ). These results mean that the more interdependent group is more entrepreneurial than the modern one, although both groups are not proactive. This is possibly because just like in Asian societies, values associated with entrepreneurial success are those related to an interdependent cultural orientation namely family support and networks (Pearson & Chatterjee, 2001).

### **5.2.7 Achievement motivation, risk taking/proactiveness**

This section discusses findings for three hypotheses, i.e. achievement motivation to risk taking, achievement motivation to proactiveness and achievement motivation to entrepreneurial intentions (extending the TPB). Regarding the first two hypotheses, structural model findings of the study indicate that achievement motivation is not significantly related to risk taking in the

whole sample ( $\beta = -.01, p > .05$ ), in the female sample ( $\beta = 0.04, p > .05$ ), in the low modernity sample ( $\beta = -.20, p > .05$ ), and in the high modernity sample ( $\beta = .08, p > .05$ ). However, achievement motivation is significantly and positively related to proactiveness in the whole sample ( $\beta = 0.11, p < .05$ ), in the Tanzanian sample ( $\beta = 0.31, p < .001$ ), in the male sample ( $\beta = 0.37, p < .001$ ), in the female sample ( $\beta = 0.22, p < .001$ ), in the low modernity sample high ( $\beta = 0.17, p < .05$ ) and in the high modernity sample ( $\beta = 0.24, p < .001$ ). The fact that achievement motivation is not significantly related to risk taking in the first set of samples can be explained by the structure of the achievement motivation construct used in the current study. Sagie and Elizur (1999), suggest that achievement motivation has three major facets. First is the “behavioral facet”, which is itself made up of instrumental (action-oriented), cognitive and affective components. Second is “the type of confrontation facet”, i.e. is the willingness to face up to challenging situations in which one has to take calculated risks, and third is the “time facet”, which refers to the time relative to task performance, because some aspects of achievement motivation are more important depending on the time a task is performed. Sagie and Elizur (1999) argue that achievement motivation is mainly related to the instrumental facet of behavior, yet the six measures used in this study reflected the instrumental aspect, and not the risk taking facet.

As stated ( section 1.5.1 on ability perceptions ), conscientiousness, which is the tendency to be organized, persistent, responsible and dependable, has been theorized to be positively related to proactive behaviors, because people who score high on this variable are dedicated to work and are more likely to be persistent in achieving their goals when facing obstacles (Tornau & Frese, 2013). Conscientiousness has also been linked positively to various proactive behaviors such as personal initiative (Frese & Fay, 2001). Achievement motivation as a sub-dimension of conscientiousness is associated with characteristics that are quite common in the entrepreneurship domain, such as a strong sense of purpose, ambition, obligation, hard work, and persistence in performance (Barrick & Mount, 1991). Hence fact that achievement motivation is a subset of conscientiousness explains why it is positively and significantly related to proactiveness.

### 5.2.8 Extending of the TPB

Like McClelland's (1960) achievement motivation theory, task motivation theory (Locke, 1968) argues that entrepreneurs possess high levels of achievement motivation and its closely associated variables such as dependability, due to the temperament of the entrepreneurial role. Although these two theories predict high levels of entrepreneurial motivation, some researchers did not find a definite link between achievement motivation and entrepreneurship (Brockhaus, 1980). However, achievement motivation and intention are significantly related in the current study, given that achievement motivation predicts intention in the whole sample ( $\beta = 0.41$ ,  $p < .001$ ), Tanzanian sample ( $\beta = 0.55$ ,  $p < .001$ ), Ugandan sample ( $\beta = 0.21$ ,  $p < .05$ ), low modernity ( $\beta = 0.56$ ,  $p < .001$ ), high modernity ( $\beta = 0.43$ ,  $p < .001$ ), male ( $\beta = 0.60$ ,  $p < .001$ ) and female samples ( $\beta = 0.17$ ,  $p < .001$ ). These results are in line with and confirm a meta-analysis by Stewart and Roth (2007), who established a Cohen's  $d$  value of .44 (effect size between two means) between achievement motivation and entrepreneurship, lending support to the extension of the TPB. Ajzen (1991) accepts the extension of the TPB so long as it has a strong theoretical basis: *"The TPB is in principle open to the inclusion of additional predictors, if it can be shown that they capture a significant proportion of variance in intention, or the behavior after the theories current variables have been taken into account. The TPB is itself an expansion of the Theory of Reasoned Action (TRA), by adding the concept of perceived behavioral control"* (Ajzen, 1991 p.199). As an example, Ajzen (1991) demonstrated the extension argument using personal or moral norms. Some societies uphold both social norms and personal feelings of moral obligation to perform or not perform a given behavior (Gorsuch & Ortberg, 1983). These moral obligations are likely to influence intention together with attitude, subjective norms and PBC. Beck and Ajzen (as cited by Ajzen, 1991) conducted a study in which they established that moral obligation adds predictive power to the TPB, outside the traditional antecedents of intention.

In this theory (TPB), PBC is the only antecedent which directly influences intention and action or behavior. The TPB urges that behavior is a result of significant information or conviction about the given behavior and it is such convictions that determine one's intentions and line of action. There are three belief types: behavioral beliefs (which influence attitudes), normative beliefs (which influence subjective norms), and control beliefs (which refer to the availability of

resources and opportunities). Such control beliefs may emanate from past experience with the behavior, knowledge of the behavior, experiences by family/friends or by other issues that promote or decrease ease or complexity of executing the behavior. The more resources and opportunities available to an individual, the fewer the obstacles and impediments he/she anticipates, hence the greater his/her perceived behavioral control over the behavior.

Perceived behavioral control (PBC), together with intention, can be used to predict action for two reasons. First, if intentions are kept constant, the energy levels needed to execute an action increase with PBC, and second, because PBC is regarded as a substitute for actual control. In the current study and following Nicholls (1984) achievement motivation is defined as behavior which is aimed at demonstrating high instead of low ability. Thus achievement motivation is substituted (as a measure of actual control) for PBC, because perceptions of control reflect actual control (Ajzen, 1991) and are suggestive of self-efficacy (Bandura, 1997). Psychological conceptions of how cognitions influence behavior are composed of factors such as outcome expectations, i.e. the formation of expectations that responding to stimuli in a given way will produce favorable results, for example Rotter's (1966) locus of control. Similarly, expectancy value theories postulate that the chance of performing a behavior in a given context is a function of the value an individual attaches to a particular outcome and his/her expectation of obtaining the outcome as a result of participating in the behavior or probability of success (Atkinson, 1957). On the other hand, attribution theories (Weiner, 1985) hold that attributions influence expectations of success or are provided as excuses for poor performance. Self-efficacy differs from all these views in that it emphasizes the notion that an individual's belief in his/her abilities to act in a given way influences his/her behavior, rather than the outcome of these actions. Different studies have demonstrated the validity of self-efficacy as a predictor of motivation and achievement behavior (Schunk, 1989). Achievement motivation predicts intention because it is a correlate of PBC and self-efficacy.

Thus, in summary, while many people postulate that the relationship between achievement motivation and entrepreneurial intentions is positive for entrepreneurship its importance is largely assumed, rather than empirically confirmed. This study joins studies such as that by De Pillis (1998) to empirically confirm this relationship, hence extending the TPB. Since

achievement motivation is culturally acquired (Trumbull & Rothstein-Fisch, 2011), then it could be that the sense of obligation to their families makes these students highly achievement-oriented. As Ajzen (1991) notes, moral obligation is expected to predict intention.

### **5.3 Entrepreneurial orientation and entrepreneurial intentions**

This section addresses the second part of the study model, i.e. the impact of risk taking/proactiveness on intentions in the different models.

#### **5.3.1 Risk Taking/and intentions**

The relationship between risk taking and entrepreneurial intentions is significant and positive in the whole sample ( $\beta = .27$ ,  $p < .001$ ), significant and positive in the Kenyan sample ( $\beta = .27$ ,  $p < .01$ ), significant in the male sample ( $\beta = .14$ ,  $p < .05$ ), significant in the female sample ( $\beta = .47$ ,  $p < .05$ ), significant in the low modernity sample ( $\beta = .81$ ,  $p < .001$ ) and significant in the high modernity sample ( $\beta = .06$ ,  $p < .05$ ). These results indicate that overall risk taking predicts intention in this study, consistent with theory, for example Rauch et al. (2004) find a positive relationship between risk taking and entrepreneurship. Thus  $H_{18}$  is supported in all these cases.

#### **5.3.2 Proactiveness and intentions**

On the other hand, the relationship between proactiveness and entrepreneurial intentions is not positively significant in the whole sample ( $\beta = -.08$ ,  $p > .05$ ), in the Tanzanian sample ( $\beta = -.24$ ,  $p < .01$ ), in the male sample ( $\beta = -.01$ ,  $p > .05$ ), in the female sample ( $\beta = -.01$ ,  $p > .05$ ), in the low modernity sample ( $\beta = -.65$ ,  $p < .01$ ) and in the high modernity sample ( $\beta = -.06$ ,  $p < .05$ ). Thus  $H_{17}$  is not supported in these cases. However, the relationship is positive and significant in the Kenyan sample ( $\beta = .38$ ,  $p < .01$ ) and the Ugandan one ( $\beta = .24$ ,  $p < .05$ ). In light of these findings, it can be concluded that generally the students in this study were not proactive, thus the findings on proactiveness generate concern and deserve a special comment. In the whole-sample structural model, power distance is not positively and significantly related to proactiveness ( $\beta = 0.02$ ,  $p > .05$ ), just as masculinity is not significantly related to it ( $\beta = -.04$ ,  $p > .05$ ). In the Kenyan sample structural model, independence is not significantly related to proactiveness ( $\beta = -.04$ ,  $p > .05$ ), and in the same way, power distance is not significantly related to it ( $\beta = 0.25$ ,  $p > .05$ ). In

the Tanzanian structural model, an interdependent cultural orientation is not significantly related to risk taking/proactiveness ( $\beta = 0.03, p > .05$ ), and in the same model, risk taking/proactiveness is significantly but negatively related to intentions ( $\beta = - 0.24, p < .001$ ), meaning that the higher the risk taking/proactiveness, the lower the entrepreneurial intentions. Lastly, in the Ugandan sample structural model, an independent cultural orientation is not related to proactiveness ( $\beta = 0.05, p > .05$ ), just as achievement motivation is not significantly related to it ( $\beta = 0.13, p > .05$ ). However, as expected, ambiguity intolerance is not significantly related to proactiveness in all the three country structural models.

In general, the implication of these findings is that students are not proactive, yet without action/initiative, one cannot start a business venture. Although most of the students harbor an intention to start a business, this intentionality was low (Table 22). An examination of Table 23 regarding actual activities that students may have so far undertaken confirms the fact that students in all the three countries are not proactive. For example, in Kenya only about 10% of the 204 students had written a business plan, while only 25.9% of the 467 students in Tanzania had done so. Since all these are business students who should really have gone through writing a business plan somewhere in their curriculum, then it should not be difficult. Thus the below average performance (50%) on this zero-cost activity is an indicator of lack of proactiveness. Similarly, market research, another near-zero-cost activity was below average, as only 29.4% had undertaken such an activity in Kenya, while only 26.3% had done so in Tanzania. Only 17.6% had saved some money to fund their business in Kenya, while only 16.9% had done so in Tanzania. To sum up, 36.8% of the respondents in Kenya consented to the fact that they had not undertaken any activity toward starting their business, while in Tanzania those in this category were 26.6%. These findings rhyme those of the Ugandan sample.

#### **5.4 Gender, risk taking and proactiveness**

Many researchers have advanced the notion that entrepreneurial activities occur in a gendered atmosphere, thus making a case for gender in entrepreneurship, pointing out that any differences between males and females in entrepreneurship are due to the extent to which people espouse masculine and feminine tendencies (gender identity) instead of biological differences due to sex

(Goktan & Gupta, 2015). Gender identity reflects the constructionist perspective, which presents gendered qualities as delineated by cultural descriptions of male and female. Thus gender roles are the basis for developing beliefs for which behavior is appropriate for each sex (Ratajack, 2011).

Studies dedicated to the examination of gender disparities in entrepreneurial orientation at the individual level often present contradictory results (Fellnhöfer, Puumalainen, & Sjögrén (2016). Student t-tests between the genders were presented in Table 52 and indicated both similarities and differences between the genders on some of the variables. In particular, there was no significant difference between the genders on risk taking, while the female scored higher than the male gender on proactiveness. These findings affirm those of Runyoan et al. (2006), who, in a study of 467 small business owners, established that females exhibited a higher degree of entrepreneurial orientation and social capital than males. This finding is also consistent with the view that females are just as likely to display entrepreneurial competencies as men (Esnard-Flavius, 2010), contrary to the general belief that males are more risk-taking than females (Lim & Enwick, 2013). In the next section, the study discusses the differences in standardized path coefficients between the genders (Table 57).

An examination of standardized path coefficients of the two gender models shows that females who exhibit an independent cultural orientation are more risk-taking ( $\beta = 0.39$ ,  $p < .001$ ) than males, ( $\beta = 0.37$ ,  $p < .001$ ), thus  $H_{32}$  is not supported. Conversely females who exhibit an independent cultural orientation are hardly proactive as the relationship between independence and proactiveness is not significant ( $\beta = 0.09$ ,  $p > .05$ ), yet this relationship is highly significant in the male sample ( $\beta = 0.41$ ,  $p < .001$ ) thus supporting  $H_{33}$ . This could mean that females high on independence are viewed as deviants because in general (and more so in the African context), females are not supposed to be assertive and should be more concerned with building relationships and harmony (Hofstede, 1980). Due to the fact that prevailing cultural value orientations represent what is ideal in a society, aspects of culture (or behavior) that are opposed to them will breed tension and disapproval and create a demand for their amendment (Schwartz, 2006). Consequently, such individualistic females may not be able to leverage resources from those around them, thus their inability to be proactive.

Another reason for the variation between the two genders on proactiveness is that males and females differ on their degree of social contacts (Goktan & Gupta, 2015); prior research reveals that females feel that they will not garner enough assistance for entrepreneurial activities from important others whose help they may need (Shinnar et al., 2012). Hence with regard to entrepreneurship, women tend to perceive themselves less favorably than men (Langowitz & Minniti, 2007).

On the other hand, an interdependent cultural orientation supports more risk taking in both genders, males ( $\beta = 0.24, p < .001$ ), compared to females ( $\beta = 0.18, p < .05$ ), although it is higher in the males thus supporting  $H_{30}$ . This is consistent with the view by Sexton and Bowman-Upton (1990) that males are more energetic and are thus more risk-taking than females. Nevertheless, interdependence is more significantly and positively related to proactiveness in females ( $\beta = 0.54, p < .001$ ), than in males ( $\beta = 0.35, p < .001$ ) thus  $H_{29}$  is not supported. Borrowing a leaf from Gupta and Fernandez (2009), who allowed country-specific entrepreneurial concepts to emerge rather than assuming that the US profile of an entrepreneur was universal, it would seem that an interdependent cultural orientation supports entrepreneurship very well in both genders, presumably because one can easily gain the support of important others rather than their disapproval.

Power distance is not significantly related to risk taking ( $\beta = -.08, p > .05$ ), and proactiveness in females ( $\beta = -.16, p > .05$ ), just as it is not related to risk taking ( $\beta = 0.02, p > .05$ ) and proactiveness ( $\beta = -.01, p > .05$ ) in males, thus  $H_{27}$  and  $H_{28}$  are not supported. According to Shane (1992), the bureaucracy in high power distance societies reduces creative activity; further, communication enhances invention, because inventive activity requires information from others, yet in high power distance societies, information is hoarded to favor only a few.

While these and many other negative connotations of power distance affect both male and female students as is evidenced by these findings, women feel the brunt more than males do. For example, in high power distance, high uncertainty avoidance, collective societies such as Uganda, patriarchal and patrilineal beliefs which make women subservient to men are well entrenched (Mirembe & Davis, 2001). Power distance is correlated with gender inequality (see literature review) depriving women of important resources in favor of men and thus extending

the gender gap. Table 4 (in Chapter Two) shows that the three study countries have a high gender inequality index (above 0.5 in each country). In a Kenyan study, Kiriti, Tisdell, and Roy (2003) concluded that patriarchal beliefs are a key factor in assigning women to a given social-economic status and their participation in entrepreneurial activities. For example, cultural norms determine who goes into business and his/her functional role in that business. In fact, Holmquist and Sundin (1987) posit that men and women work in different worlds, each with its own values. This makes power relationships balanced in favor of men.

In individualistic societies, people are free to make decisions which enhance creativity, yet this is not the case in high power distance societies where the individual must not deviate from group norms or the views of the leadership or parents. Women cannot easily do what they want even if they are right because of the roles society assigns to them, yet they are very enterprising. Takya-Asiedu (1993, p.94) sums it up very well: “*This traditional sexism ... deprives women of the initiative and independence that are some of the prerequisites for entrepreneurship*”. According to the resource based view of entrepreneurship (Barney, 1991), firms perform well, not because of the industry they are in, but due to the resources they are endowed with. In short, although power distance affects both genders, women are still a more disadvantaged lot due to the inequalities in society entrenched by power distance. Lastly, cultural expectations of women entrenched by power distance for example sexual piety limit their mobility, i.e. who they talk to, do business with, and so on, all of which constrain their entrepreneurial zeal (Mungai & Ogot, 2012).

Ambiguity intolerance is strongly but negatively related to risk taking in females ( $\beta = -0.30$ ,  $p < .001$ ), and negatively and not significantly related to proactiveness ( $\beta = -0.09$ ,  $p > .05$ ). These results support  $H_{26}$  since in both genders ambiguity intolerance is not significantly and positively related to risk taking. This means that the higher a female perceives ambiguity in a situation, the less risk-taking she will be. Similarly, ambiguity intolerance is also not positively related to risk taking ( $\beta = -0.10$ ,  $p > .05$ ) and proactiveness ( $\beta = 0.00$ ) in males, thus supporting  $H_{25}$ . These findings are consistent with theory (Budner, 1962) and research findings for all the other samples in this study. Acceptance of uncertainty is important in entrepreneurship because innovativeness requires a high tolerance for risk and change (Shane, 1993). Hence, people high up in this cultural orientation are not likely to start up as they fear uncertainty and are also not self-starting.

Lastly, achievement motivation is positively related to risk taking in males ( $\beta = 0.12, p < .05$ ), but not in females ( $\beta = 0.04, p > .05$ ), supporting  $H_{36}$ , while it is positively related to proactiveness in both samples, i.e. females ( $\beta = 0.22, p < .01$ ) but more strongly in males ( $\beta = 0.37, p < .001$ ) thus supporting  $H_{35}$ . Further, this variable is significantly related to intentions in both genders, females ( $\beta = 0.17, p < .01$ ) but very strongly in males ( $\beta = 0.60, p < .001$ ), thus supporting  $H_{37}$  consistent with the view that males are assertive, dominant and ambitious (Hofstede, 1980). According to the Eagly and Karau (2002) role congruity theory, assertiveness is negatively associated with female entrepreneurship. In general, entrepreneurship is viewed in terms of male characteristics such as dominance, aggressiveness, and confrontation (Sexton & Bowman-Upton, 1990). Hofstede (1980) asserts that generally, women are interested in social goals, such as networking and being of help to other people while men are ego-oriented and so attach importance to career and money. The pattern of male “*assertiveness and female nurturance leads to male dominance in many aspects of life*” (Hofstede, 1980, p.280). In both samples, entrepreneurship occurs through risk taking and achievement motivation but not proactiveness, since there is no relationship between proactiveness and intentions in females ( $\beta = -0.01, p > .05$ ), just like there is none in males ( $\beta = -.10, p > .05$ ). Lastly, in the second part of the study model, the relationship between risk and intention is higher in females ( $\beta = .47, p < .001$ ) compared to males ( $\beta = .14, p < .05$ ), thus  $H_{33}$  is not supported. However, the relationship between proactiveness and intention is not significant in both groups ( $p > .05$ ), meaning that they are both not proactive, hence  $H_{34}$  is not supported either.

In conclusion, in East Africa, the extent to which females are able to participate in entrepreneurship will depend on the cultural environment. There is need to specifically overcome cultural barriers that seem to be a hindrance to the participation of women in entrepreneurship. While power distance affects men and women equally in this study (not positively significant), the literature on patriarchal beliefs and gender inequality puts women in a more disadvantaged position because tradition gives them less freedom to make decisions over assets than men, to engage in remunerated activities and acquire property (Dancer, 2017; Peterman, 2011).

## **5.5 Moderation**

This section presents a discussion of findings for the third part of the study model. A theoretical argument is made as to why networks and knowledge moderate the relationship between risk taking/ proactiveness and intention (whole sample), while optimism does not moderate this relationship. Contingency theory studies by Lawrence and Lorsch (1967) were “*based on the premise that organizations interact with several environments*” (Tosi & Slocum, 1984 p.14) thus in the contingency approach, a similarity of fit among key variables is a precursor to attaining good organizational performance (Lawrence & Lorsch, 1967). Utilizing this approach, the relationship between any two variables may be dependent upon the level of a third variable or moderator; thus introducing a moderator into bivariate relationships may help to draw more accurate inferences about them (Rauch et al., 2009).

### **5.5.1 Networking and EO**

Blesa and Ripollés (2005) assert that personal networking and in particular the knowledge acquired from these networks, have an impact on entrepreneurial orientation and firm growth. This assertion corroborates the findings of the current study. Networking moderates the relationship between proactiveness and entrepreneurial intention, overall model  $F(3, 1082) = 42.59$   $p < .05$   $R^2 = .105$  thus supporting  $H_{19}$ , because acquisition and exploitation of knowledge is a social process (Sullivan & Marvel, 2011), i.e. some of the environmental factors related to proactive behavior include socio-networks (Morrison, 2002). Proactiveness refers to an effort to shape the environment in which one operates. People who are proactive are high performers (Crant, 2000), are autonomous in character and have confidence in their capacity to complete the task assigned to them (Frese, Kring, Soose, & Zempel, 1996). Proactive people are most often successful in their endeavors, since they create changes in their surroundings to enhance their careers (Seibert, Kraimer, & Crant, 2001). Most important of all is that to craft circumstances that are in consonance with their endeavors, proactive people are good at socializing and networking with others, because they appreciate the value of interdependency in work outputs (Crant, 2000). In particular, networking is important because of its role in knowledge acquisition (Sullivan & Marvel, 2011).

In an effort to develop a venture, an entrepreneur may pursue sole knowledge acquisition, for example through reading, or acquire knowledge through interaction with others through his/her network (Kaish & Gilad, 1991). Seeking for knowledge using the former approach may be of limited value in the early stages of the venture when the entrepreneur is knowledge-deficient (Collinson & Gregson, 2003). Useful knowledge transfer may not occur unless the entrepreneur relates with others who can organize the knowledge into an understandable form (Reagans & McEvily, 2003). Therefore, networks are the means by which entrepreneurs are exposed to an array of people and circumstances, which sharpen their capacity to gain and utilize knowledge in a useful manner for new start-ups. Powell (1990) sums it up by saying that networks are the most effective way of sourcing reliable information that is highly valuable for start-up (Burt, Hogarth, & Michaud, 2000).

In the same way, networking moderates the relationship between risk taking and entrepreneurial intentions, overall model  $F(3, 1082) = 48.73$   $p < .007$   $R^2 = .119$ , thus  $H_{20}$  is supported. This is because an individual obtains information from others through networking, which mitigates risks in the environment. In a business environment, building relationships and networking can be viewed as an avenue for minimizing risks when working in an atmosphere full of turmoil (Ahmad, 2007). Gibb (2005) asserts that survival in such a situation compels entrepreneurs to possess competencies that permit them dare these challenging circumstances. An example of such a competence is the building and development of relationships and networks, which enable entrepreneurs to wade through chaotic situations (Baum, Calabrese, & Silverman, 2000). In summary, social capital greatly influences knowledge transfer, because the people known to you will definitely influence *what* it is that you know (Nahapiet & Ghoshal, 1998).

### **5.5.2 Knowledge and EO**

In this study, knowledge moderates the relationship between EO (risk taking/proactiveness) and Intention. Risk taking overall model  $F(3, 1082) = 74.55$   $p < .001$   $R^2 = .173$  thus supporting  $H_{21}$ . For proactiveness overall model  $F(3, 1082) = 74.25$   $p < .001$   $R^2 = .171$  thus  $H_{22}$  is supported. A number of explanations can be offered for this finding. First, Reuber, Dyke and Fischer (as cited in Sommer & Haug (2011) suggest that tacit knowledge raises discernments of feasibility and may be a contributor to belief development. This view is also held by Cohen and Levinthal (1990 p.130) who postulate that “*problem solving methods and heuristics constitute the prior*

*knowledge that permits individuals to acquire problem solving capabilities..... problem solving and learning capabilities are so similar that there is little reason to differentiate their modes of development”*

Second, theory suggests that use of experience (or prior knowledge) in decision making influences behavior (Norton & Moore, 2006). Hence people learn from experience, just as knowledge can be acquired from observation (Minniti & Bygrave, 2001). Experience is one of the means by which people ready themselves for start-up and many institutional investors attach great importance to the experience an entrepreneur possesses (Nofsinger & Wang, 2011). Hambrick and Mason (1984) note that personal characteristics like experience can have an impact on organizational outcomes, an argument in line with Upper Echelons Theory. Krueger (1993) established that experience had a positive effect on intention, while Chang and Rosenzweig (2001) argue that experience reduces risk. Taken together, these findings indicate that exposure to different types of experience could have an impact on the likelihood of performing a behavior, especially if the experiences were positive (Sommer & Haug, 2011).

In a study in which Sommer and Haug (2011) sought to extend the TPB, it was established that knowledge and experience predicted intention, which further explains why knowledge moderates the relationship between risk taking/proactiveness and intention in this study.

### **5.5.3 Optimism and EO**

Findings of the study indicate that optimism does not moderate the relationship between risk taking and entrepreneurial intention overall model  $F(3, 1082) = 20.02$   $p > .05$   $R^2 = .05$  thus  $H_{23}$  is not supported. Similarly optimism does not moderate the relationship between proactiveness and entrepreneurial intentions, overall model  $F(3, 1082) = 14.37$   $p > .05$   $R^2 = .038$ , thus  $H_{24}$  is not supported. These findings can be explained by the theory on self-enhancement, defined as an inclination for one to describe himself/herself in positive light (Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997). As espoused in image theory, there are two construals: an independent construal giving rise to individualistic stance and an interdependent construal which results in collectivism (Markus & Kitayama, 1991). Individualistic societies do support and encourage the growth of independent conceptions of the self, self-control, and an optimistic bias (Taylor & Brown, 1988). Consequently, the self-enhancement motive is one of the major differences of the

independent and interdependent construals (Markus & Kitayama, 1991). Following Weinstein's (1980) work on optimistic bias, Heine and Lehman (1995) showed that an individualistic orientation is motivated by self-enhancement, while a collective orientation is motivated by self-criticism. This self-enhancement motive places emphasis on uniqueness, self-success, is not universal and its prevalence in collective societies is either low or absent (Heine, Lehman, Markus, & Kitayama, 1999). Kitayama et al. (1997) argue that collective societies foster self-criticism, generally defined as being sensitive to self-relevant information. Self-criticism represents a constructive process that enables one to get vital information which is pertinent to sustaining group cohesion. Thus, in an interdependent construal, the sources of self-esteem may emanate from the ability to maintain harmony and to fit in the group (Markus & Kitayama, 1991), thus the irrelevance of self-success reduces the psychological benefit of self-enhancement.

Despite the above arguments, some authors advance a different hypothesis for the differences in self-enhancement between the independent and interdependent self-construals. For example, Yamaguchi (1994) asserts that cultural restrictions on the self in collective cultures are strong, and one of the results of this is a low need for uniqueness. In line with this reasoning, Kurman (2001) argues and proves in a study that the need for positive self-enhancement exists in collective societies, but its expression is restricted by the culture and in particular cultural demands for modesty. For example, comparisons of self-enhancement levels of a given trait show that when the trait does not violate cultural norms, the bias towards self-enhancement for the trait rises (Kurman, 2001). Further, collectivists have the capacity to clearly and quickly discern possible negative experiences, thus providing them with an opportunity to take measures to barricade the actual occurrence of such experiences (Chang & Asakawa, 2003). For example, one would not set up a business if he/she imagined it would fail.

In summary, following Kurman (2001), the position the current study adopts is that cultural restrictions on the self and not a lack of self-enhancement explain the reason for cross-cultural differences in self-enhancement levels, and could possibly explain why optimism does not moderate the relationship between risk taking/proactiveness and intention.

## 5.6. Conclusion

According to Takya-Asiedu (1993), many entrepreneurship development programs in some countries in sub-Saharan Africa have not been effective because they sideline the impact or influence of culture. The purpose of this study was to try and ascertain whether low graduate start-up in East Africa can be explained by the impact of five cultural orientation dimensions (ambiguity intolerance, power distance, masculinity, independence and interdependence) on two dimensions of the entrepreneurial orientation construct, namely risk taking and proactiveness.

Eight firm positions can be discerned from the findings on objective two and three. An independent cultural orientation supports risk taking and proactiveness in most of the samples (see table 69) consistent with theory. However, some students with this cultural orientation (Kenyan and Ugandan samples) are not proactive, meaning that they are not able to leverage resources since they are viewed as social deviants. Conversely, an interdependent cultural orientation supports both risk taking (in all samples apart from Kenya Tanzania and Uganda country samples) and proactiveness (in all samples apart from Tanzania and Uganda country samples) in agreement with Houston et al. (2012) and Zeffane (2014). Thus both independence and interdependence are good for entrepreneurship consistent with Tiessen (1997). Path coefficients for the low modernity group confirm that this group is more entrepreneurial than the high modern group, further supporting the role of interdependence in entrepreneurship in the current study. Ambiguity intolerance is not positively and significantly related to risk taking and proactiveness in any sample: either it is positive but not significantly related, or is significant but negatively related, or it is negative and not significant making it the most problematic cultural orientation in this study, while power distance is the second most problematic variable since it is not related to risk taking or proactiveness in all the samples except Tanzania. Achievement motivation is not related to risk taking in most samples, probably because of the measures used in this study; however, it is significantly related to proactiveness consistent with theory. Similarly, achievement motivation, as a correlate of self-efficacy, predicts intention in most of the samples, thus extending the TPB. In the second part of the study model, risk taking predicts intention in most of the samples, while proactiveness does not meaning that the students were not very proactive.

Five positions seem to emerge from the findings on objective four. The influence of independence to risk taking was higher in females than males, while the impact of independence to proactiveness was significant in males, but insignificant in females. Thus independently oriented females are generally more risk-taking than males, but are not proactive. The impact of an interdependent cultural orientation on risk taking is positive and significant in males, while it is insignificant in females, while the impact of an interdependent cultural orientation on proactiveness is positive and significant in both genders but higher in females consistent with theory. Thus interdependence supports entrepreneurship differently in both genders, though it is more pronounced in females. Power distance and ambiguity intolerance are not related to risk taking and proactiveness in both genders, while males are more achievement-oriented than females. In the third part of the study model, two major positions emerge from objective five. Knowledge and networking moderate the relationship between risk and intention, while optimism does not moderate this relationship.

In summary, starting with objectives one, two and three, the findings above indicate that fear of failure, experience and modernity are important variables that have an impact on graduate entrepreneurship in the study countries. Reverting to the cultural orientation variables, independence/masculinity and interdependence do support entrepreneurship in this region, consistent with Tiessen (1997) who argues that both collectivism and individualism are good for entrepreneurship as each plays a major role in the entrepreneurial process. In particular, the findings indicate that interdependence supports risk taking, consistent with Houston et al. (2012) and Zeffane (2014), who argue that the collective setting avails resources for start-up and cushions the individual from negative consequences (Weber & Hesse, 1998). A major shortcoming of an independent cultural orientation is that students may not be able to be proactive in some instances because they do not fit into the collective culture, thus being unable to leverage the necessary resources that enable start-up. Thus, as Kreiser et al. (2010) suggest, the impact of individualism/independence on entrepreneurship is a matter that ought to be investigated in future research.

On the other hand and at an extreme end, ambiguity intolerance and power distance are problematic in that they are either completely insignificant, or are inversely related (significant

but negative) to both risk taking and proactiveness. As Budner (1962) asserts, people who are high up on ambiguity intolerance fear uncertain situations, and are therefore not likely to embrace entrepreneurship. Power distance negatively impacts risk taking/proactiveness in most samples since people with this orientation are more inclined to the traditional orientation which argues one to align oneself with the views of the collective.

Drawing from an institutional framework in which “ *over socialized individuals are assumed to accept and follow norms unquestioningly without any real reflection or behavioral resistance based on their own particular personal interests* ” (Tolbert & Zucker, 1996 p.176)), four cultural orientations offer the best possible explanation for the low entrepreneurial intent of graduates in these three countries. First is the impact of ambiguity intolerance on risk taking and proactiveness, which makes students less proactive and less risk-taking. Njenga (2015 p.6) asserts: “*Entrepreneurship requires a culture that respects risk taking, and without risk taking, it is not possible to create value from knowledge*”. This view is shared by Saffu (2003), who adds that for a community to enhance entrepreneurial activities, its members must learn to perceive ambiguous circumstances as realities in business, not threats to be evaded.

The second factor is the impact of power distance, which is also negative, thus making students risk-averse or less proactive. Two major issues in high power distance cultures with regard to graduate entrepreneurship could be the issue of face (entrepreneurship is a low-status career), obedience to parents (deference) and promotion of the gender gap. The third factor is that some students with an independent cultural orientation are not proactive, most likely because they cannot leverage resources from important others who may see them as deviants from the norm. The fourth factor is that cultural impositions on the self hinder the manifestation of self-enhancement among these students, leading to the lack or absence of an optimistic bias which would promote entrepreneurship (Kurman, 2003).

### **5.6.1 A call for a societal change in attitude towards entrepreneurship**

According to Reynolds, Bygrave, Autio, Cox, and Hay (2002), the substantial variation in entrepreneurial activity between nations and various communities is mainly due to cultural and

social norms which act as major strengths and/or weaknesses in the entrepreneurial support structure. In light of this assertion, Shane (1993) argues that in order for countries to enhance their rates of innovation, they need to consider changing the values of the citizenry first, rather than simply investing more money in Research and Development. This indicates that fundamental forces, rather than mere economic conditions give impetus to national rates of innovation, and hence societal change must occur to spark off innovativeness in less innovative economies. This is also the view shared by Lee and Peterson (2000), who argue that economic reform is just one step to modernization, adding that modernization must be accompanied by a cultural shift/transformation. Therefore, according to these authors, entrepreneurship development takes a bottom-up approach, such that culture breeds entrepreneurial potential. Thus the presence of a favorable economic environment is not enough. What is needed is a national culture which is supportive of entrepreneurship. Almost a decade later, Muwema (2011) argues that Ugandan graduates need an attitudinal change more than money. Reiterating what Shane (1993) says above, imparting entrepreneurial support attitudes among the population is as important just as economic and political support are.

The social valuation of entrepreneurship (Liñán, 2008) is an important aspect in the entrepreneurship process, given that entrepreneurship thrives in communities where entrepreneurial activity is regarded highly (Thurik & Dejardin, 2012). Cultural values, beliefs and norms are key variables in influencing entrepreneurship in a society, since they are the immediate sources of legitimation (moral approval) that endorses an activity in a society (Etzioni, 1987). The level of legitimation of entrepreneurship in a country influences all aspects of entrepreneurship, including resource allocation, preferences, risk-taking behavior and fear of business failure, among others (Etzioni, 1987). Weiss (2015) in a phenomenological case study in Tanzania notes that entrepreneurship in this country is viewed from socially embedded relationships and educational backgrounds, and is relegated to a low economic class. Similarly, observations by Walter et al. (2004) indicate that Ugandan society accords entrepreneurship a low status, while many students in Kenya detest the idea of starting a small business, as already explained. Thus changing this attitude in favor of entrepreneurship will most likely attract more graduates in entrepreneurship, and reduce the high levels of unemployment and under-employment among them. There should be a change in attitude by African society towards

entrepreneurship in general, and towards students who engage in entrepreneurship, by popularizing entrepreneurship and portraying it as a respectable career through PR campaigns, competitions and awards (Schoof, 2006). Fear of failure is also an important issue in this study, as evidenced by the t-tests and is consistent with some scholars' argument that the impact of fear of failure is higher in collective societies than individualistic societies, because the stigma of failure is more acute in collectivist cultures and hence acts as a deterrent to entrepreneurship (Damaraju et al., 2010). African culture should deviate from stigmatizing those whose projects have failed in order not to deter others who would try.

Society ought to tolerate independent views, especially for youth who seem to gravitate towards individualistic behavior through reduced power distance. As Contiua, Gaborb, and Stefanescuc (2012 p.5557) suggest, "*the best way to deal with culture and entrepreneurship is to balance the cultural orientations*", Further, sharing of information by those in positions of authority can help reduce ambiguity intolerance. Similarly, the youth should develop a positive attitude towards humble or small start-ups. Parents are partly responsible for the careers which their children eventually take, as expressed by Takya-Asiedu (1993). A change in attitude towards entrepreneurship by parents will undoubtedly increase graduate entrepreneurial intentions.

Lastly, while the potential for graduate entrepreneurship in the three countries is high, the proactiveness part of it is wanting. In his model of motivation sequence, Locke (1991) asserts that individual performance is a derivative of self-efficacy and one's intentions, hence findings on achievement motivation as a correlate of self-efficacy are promising. Since it is known that achievement motivation is culturally acquired and that achievement is defined and understood differently in various cultures, there is a need to impress it upon cultures to tolerate and encourage high achievement-oriented people to excel instead of holding them down. The finding that achievement motivation predicts intention if validated by other studies will go a long way in helping to identify who is likely to choose an entrepreneurial path.

## **5.7 Chapter summary**

This chapter provides a theoretical explanation for the study findings in five sections. The first section discusses findings for objectives one, two and three and portrays the impact of the cultural orientation variables on risk taking and proactiveness. The findings reinforce the position of this dissertation, which is that African entrepreneurship is very much alive, but the development of a strong entrepreneurial orientation is hindered by a non-supportive social cultural context. Ambiguity intolerance and power distance are not significantly related to risk taking and proactiveness and are thus the most likely cause of low start-up in this region. Both independence and interdependence positively impact entrepreneurial orientation, supporting the view that both orientations are good for entrepreneurship, while achievement motivation was not related to risk taking possibly because of the measures used in the study. Lastly, a major finding reported in this section is the empirical validation of the prediction of intention by achievement motivation in most of the study samples, leading to an extension of the TPB. The second section presents the impact of risk taking and proactiveness on intention. Generally, risk taking predicts intention, while proactiveness does not do so, meaning that students in the current study are not proactive. The third section presents the findings of the study model by gender and modernity. Females are generally more risk-taking than males, defying findings of earlier studies. Interdependence was found to be more supportive of the development of a strong EO in females than in males, while ambiguity intolerance and power distance were not supportive of entrepreneurship in both genders. Nevertheless, the study argues that, although power distance affects both genders negatively, it is more detrimental to the female gender due to patriarchal beliefs and gender-assigned roles (gender identity) in this region. On the other hand, the impact of achievement motivation was higher in the male than the female sample, consistent with the gender identity view that expects men to be assertive and masculine. Further, the low modernity group is more entrepreneurial than the high modernity group, most probably because of the ease of acquiring resources from family structures.

The fourth section discusses the moderation results. In alignment with the resource-based view of entrepreneurship, both knowledge and networks can be viewed as resources that are vital in the entrepreneurial process, especially at the beginning of a business venture. Knowledge and experience enhance one's ability to deal with problems, hence in this study, knowledge and

networks moderated the relationship between risk taking and proactiveness and intentions while optimism does not do so, most probably because of cultural restrictions on the self that hinder self-enhancement. In the fifth section, the chapter calls for a need for a societal attitudinal change towards entrepreneurship. Strategies for achieving this objective are presented in the next chapter which summarizes the study.

### **6.1 Introduction**

Following Bunton (2005), this concluding chapter is presented in four sections. In the first section (6.2), an introductory statement comprising the purpose and research questions of the study is presented, followed by a consolidation of research space in section two (6.3), which involves summarizing the methodology used in this study. In section (6.4), a summary of findings and their practical implications is presented, while the last section (6.5) presents specific recommendations, limitations of the study and directions for future research.

### **6.2 Introductory statement**

Unemployment among the youth and particularly among graduates is a global problem. This problem can be mitigated if graduates embrace entrepreneurship by starting their own business projects, and many governments the world over encourage the youth, specifically graduates to take this direction. Unfortunately, many graduates shun this path and instead opt to seek paid employment –yet in most cases, jobs do not exist in reality. Researchers have come up with various explanations for this phenomenon (Nabi et al., 2006); however, a major gap ignored in the literature on graduate entrepreneurship is the impact of entrepreneurial orientation (EO) on graduate entrepreneurial intentions, yet EO is regarded as the most important variable during start-up (Frese, 2009). Entrepreneurial orientation cannot be explained without alluding to the social cultural atmosphere in which it is entrenched (Kollmann & Kuckertz, 2007), since entrepreneurship only takes place in a social context. While research findings suggest a vital linkage between culture and entrepreneurship, the manner in which culture impacts upon entrepreneurship is largely unexplained (Kreiser et al., 2010). According to Lee and Peterson (2000), cultural orientation will either facilitate or hinder a people's capacity to nurture a firm entrepreneurial orientation. Further, achievement motivation which is culturally determined and is a correlate of self-efficacy has been linked to entrepreneurial intentions by some researchers, while others have failed to establish a relationship.

According to Pretorius and Van Vuuren (2002), the cultural environment in Africa does not favor the development of a strong entrepreneurial orientation. Hence this study aimed at

examining the degree to which some cultural orientations act as a deterrent to the development of a robust entrepreneurial orientation (risk taking and proactiveness), eventually leading to low entrepreneurial intentions among graduates in three East African countries, namely Kenya, Tanzania and Uganda. Based on the TPB (Ajzen, 1985), upper echelons theory (Hambrick & Mason, 1984) and image theory (Beach & Mitchell, 1987), the first objective of this study examined the prevalence of cultural orientation variables in the study sample as well as the prevalence of some variables often mentioned in entrepreneurship literature namely experience, fear of failure and modernity. The second objective of the study examined the impact and directionality of cultural orientation variables and achievement motivation/LGO on risk taking and proactiveness. Given that self-efficacy predicts intention, an implicit objective in this section was to examine the extent to which achievement motivation and LGO (both correlates of self-efficacy) influence EO and eventually intention. The third objective of the study was to examine the extent to which risk taking and proactiveness predict intention (second part of the study model).

Since people with a modern orientation are thought to be more flexible than those oriented toward firm cultural values, and given that males outnumber females in entrepreneurship worldwide, it was necessary to examine the above objectives by gender and modernity in the fourth objective of the study. In order to scrutinize the influence of entrepreneurial competencies and an optimistic bias on entrepreneurial orientation, and given that moderators play a great role in explaining bivariate relationships according to contingent theory, in the fifth objective, the study examined whether knowledge, networks and optimism moderate the relationship between risk taking and proactiveness on one hand and intention on the other. While most work on entrepreneurial orientation has been done at the firm level (Lumpkin & Dess, 1996), the current study is conducted at an individual level of analysis based on 'upper echelons' theory, hence the use of cultural orientation scales (König et al., (2010).

## 6.3 Consolidation of research space

### 6.3.1 Research design

A pragmatic research paradigm was employed in this study, hence a mixed method approach was utilized (Hunt, 2011). Specifically the study used a sequential exploratory research design starting with a qualitative phase (unstructured interviews) aimed at gaining a deep understanding of the study concepts, putting the study into context and refining the study instrument. The second phase employed a cross-sectional research design, collecting data from a convenience sample of finalist business students in selected universities in the three study countries. The use of a non random sample is justified because time and cost considerations made it difficult to use random sampling in all these countries.

### 6.3.2 Sampling

Studies that employ convenience samples can produce useful data provided measures are put in place to control for uncertainty and bias (Skowronek & Duerr, 2009); this study therefore took the following measures:

1. Ensuring that the sample is as representative of the population as possible.
2. **Diversity:** By increasing diversity of the samples, data was immensely improved. Where possible in this study, data was collected from “core” courses or courses where students from different courses come together to attend a lecture, for example Research methods.
3. **Replication:** According to Peterson and Merunka (2014), a major problem with convenience samples may be their lack of reproducibility, i.e. whether under similar conditions the findings replicate. Thus, to ensure that results from convenience samples are dependable, there is a need to replicate such studies to avoid making a Type 1 error. According to these authors, only replications can reduce the uncertainty associated with any particular set of research results or sample, yet calls for replications often go unheeded. In light of these

arguments, the current study is replicated in three countries rather than use a single convenience sample from one country.

4. **Measures against Common method bias:** Further, to deal with the effects of common method bias, a set of procedures were employed (Podsakoff & Organ, 1986) as enumerated in chapter three.

### **6.3.3 Sample size**

The design of CFA/ SEM studies calls for special attention to sample size issues, because sample size has a durable effect on statistical power as well as the accuracy of a model's parameter estimates. Brown (2006) defines statistical power as 1-the the probability of a Type 11 error and recommends an 80% probability of rejecting the null hypothesis (thus risk of Type 11 error is 20%). Following Satorra and Saris (1985), a sample size of 200 is recommended as being able to meet this 0.8 power cut-off point. Thus for each study country the minimum sample size was 200 students.

### **6.3.4 Measures and data analysis.**

Qualitative analysis was carried out in the first phase of the study, to identify themes on which to anchor the study in the second phase. For phase two, the measures used in this study were obtained from past studies and had strong psychometric properties. Principal Components Analysis and Confirmatory Factor Analysis (Lisrel 8.8) confirmed that the measures met reliability cut-off criteria and discriminant and convergent validity (Phase one of the data analysis exercise). Following this cross-validation, the second phase of the data analysis exercise was hypothesis testing through structural equation modeling based on latent variables using AMOS 23. The study baseline model was fitted into the whole sample, (omnibus model structural was estimated first), followed by fitting this baseline model into individual country data sets. Other data subsets were created out of the whole sample data set, i.e. gender (male and female), low and high modernity sets and the baseline model fitted into each of these data subsets. Lastly, in the third phase of the data analysis exercise, the process macro in SPSS (Hayes, 2013) was employed to test the extent to which knowledge/networks and optimism moderated the relationship between entrepreneurial orientation and intention. Due to the fact

that LGO correlated very highly with achievement motivation, LGO was dropped from the analysis.

#### **6.4 Summary of the findings**

Eight firm positions can be discerned from the findings on objective two and three. Ambiguity intolerance is not positively and significantly related to risk taking and proactiveness in any sample: either it is positive but not significantly related, or is significant but negatively related, or it is negative and not significant. Hence this variable is the biggest obstacle to graduate entrepreneurship in this region, followed by power distance which is not related to risk taking or proactiveness in all the samples except Tanzania. These two variables also featured highly in the qualitative study in phase one. An independent cultural orientation supports risk taking and proactiveness consistent with theory. However, some students with this cultural orientation are not proactive, meaning that they are not able to leverage resources since they are viewed as social deviants. Conversely, an interdependent cultural orientation supports both risk taking and proactiveness, in agreement with Houston et al. (2012) and Zeffane (2014). Thus both independence and interdependence are good for entrepreneurship, consistent with Tiessen (1997). Path coefficients for the low modern group confirm that this group is more entrepreneurial than the high modern group, further supporting the role of interdependence in entrepreneurship in the current study. Achievement motivation is not related to risk taking in most samples, probably because of the measures used in this study; however, it is significantly related to proactiveness, consistent with theory. Similarly, achievement motivation as a correlate of self-efficacy predicts intention in all the samples, thus extending the TPB. In the second part of the study model, risk taking predicts intention in most of the samples, while proactiveness does not, meaning that the students were not very proactive.

Five positions seem to emerge from the findings on objective four. The influence of independence to risk taking was higher in females than males meaning that independence supports risk taking. However the impact of independence to proactiveness was significant in males, but insignificant in females. Thus independently oriented females are generally more risk-taking than males, but are not proactive. The impact of an interdependent cultural orientation on risk taking is positive and significant in males, while it is insignificant in females, whereas the

impact of an interdependent cultural orientation on proactiveness is positive and significantly higher in females than in males, consistent with theory. Thus interdependence supports entrepreneurship in both genders, though it is more pronounced in females. Power distance and ambiguity intolerance are not related to risk taking and proactiveness in both genders, while males are more achievement oriented -than females. In the third part of the study model, two major positions emerge from objective five. Knowledge and networking moderate the relationship between risk and intention, while optimism does not moderate this relationship.

#### **6.4.1 Implications of these findings:**

This study went out to verify the level to which culture lays a caveat on the development of a strong EO, and hence constrains entrepreneurial intentions. This question has been answered in the affirmative by the results in this study, since power distance, ambiguity intolerance, extreme individualism and a poor optimistic bias are all unrelated to risk taking and proactiveness. The quest for economic development by these factor-driven countries (Basabe & Ros, 2005) is definitely constrained by these negative cultural orientations. Although power distance seems to affect both genders the same in this study, in practice it affects females more negatively since findings indicate that they are less achievement-oriented compared to males, thus increasing the gender gap which drives females further away from entrepreneurship. Culture is again the culprit since a theoretical explanation for the moderation results is that in a collective setting, culture constrains the development of self-enhancement such that an optimistic bias does not grow or does not exist in significant quantities compared to individualistic cultures (Kurman, 2001). In light of these implications, the next section offers some specific recommendations to policy makers:

#### **6.5 Specific policy recommendations**

The last chapter discussed some areas that need action to enhance graduate entrepreneurship. This section suggests some specific courses of action that policy makers at various levels could follow.

### **6.5.1 Equip students with competencies to increase their self-efficacy**

The literature holds that ambiguity intolerance is negatively related to important variables in the entrepreneurship domain such as creativity (Stoycheva, 2003) and optimism (Pulford, 2009). According to the competency hypothesis (Heath & Tversky, 1991), people are willing to take ambiguous options in domains where they feel competent. In other words, they prefer ambiguous *ability*-based prospects guided by the relevant knowledge or experience/skills, to unambiguous *chance*-based prospects. Hence, in the case of graduate students, lack of entrepreneurial competencies or skills could lead to ambiguity avoidance behavior. The competency hypothesis affirms the notion that people who are in position to make choices do not consider a calculated risk in their competence domains as a gamble (March & Shapira, 1987). Thus the first step in stemming ambiguity intolerance is to endow students with entrepreneurial skills and competencies to increase their self-efficacy. While training people to enhance their self-efficacy is common, it has been proved that people can be trained to adopt a more proactive posture by exposing them to personal initiative training (Glaub, Frese, Fischer, & Hoppe, 2014). To combat skills deficiencies among the youth, the Government of Uganda has set up a project the Business, Technical and Vocational Training Program (BTVET), aimed at “creating employable skills and competencies relevant in the labor market instead of certificates” (Ministry of Education and Sports [MOES], 2011) in line with the Skilling Uganda Strategic Plan 2012-2022.

### **6.5.2 Revise curriculum to stem ambiguity intolerance**

In the literature, those who cannot tolerate ambiguity are known to view and interpret ambiguous situations as a hazard, are confused by ambiguous cues, and therefore tend to avoid such situations either psychologically or operationally by leaving the situation (Budner, 1962). Being unable to tolerate uncertainty in a variety of situations may be unconstructive because one may avoid ambiguity yet in reality there is a high possibility of reaping big if only the individual could be tolerant (Keren & Gerritsen, 1999). An example of rewards that can be obtained if only one exhibited tolerance rather than intolerance of ambiguity is the growth of an open, flexible and creative mind which is one of the hallmarks of entrepreneurship (DeRoma, Martin, & Kessler, 2003). Tolerance for ambiguity has been associated with various indicators of success in the business world, such as risk taking (Johanson, 2000) and creativity (Tegano, 1990). In a

college setting, much attention has been paid to ambiguity intolerance –tolerance among students (DeRoma et al., 2003). Tolerance for ambiguity is not only a valuable skill, but it is also a learnable one (Banning, 2003) if it is viewed as a cognitive and perceptual process rather than as a fixed personality trait (Furnham & Ribchester, 1995). Since evidence is rife to the effect that ambiguity tolerance can be increased through pedagogical intervention, the second recommendation in combating ambiguity intolerance is to make a curriculum review by universities in the study countries to include courses on ambiguity tolerance skills and attitudes, as suggested by Ronstadt (1984). This calls for a self-evaluation by universities in this region.

### **6.5.3 Create an entrepreneurial culture through a change in the education system**

According to Stoycheva (2003), cultural variation in uncertainty avoidance has an impact on the type of intellectual and scientific activities engaged in by schools as well as the way these schools are organized within a given community. Scholars in high uncertainty avoidance (UA) cultures are likely to search for sure situations and tend to have a strong theoretical approach which is correlated with the need for the dire facts. On the other hand, in low UA countries, scholars embrace a pragmatic and experimental stance in their hunt of utilizable knowledge. Educational institutions located in high UA societies drift toward standardization, adopt stiff programs and strict procedures, value formal procedures and produce professionals who place a high premium on expertise, are task-oriented, consistent in character, detest individual decision making, and are risk averse. Conversely, schools within low UA cultures produce pragmatic people who are flexible character, value strategy, do not fear to embrace change and take risks (Hofstede, 1980, 2001).

To overcome the negative effects of high uncertainty avoidance at a national level, an entrepreneurial culture should be allowed to evolve, that is to say a value system that favors and advocates for entrepreneurship (Thurik & Dejardin, 2012). A good entrepreneurial culture is one where innovativeness is encouraged and failure is tolerated (Heiko as cited in Munyoro, Makota, & Tanhara, 2016). For an entrepreneurial culture to emerge there is need to include everyone in entrepreneurship education through a change in the educational system, i.e. traditional education has to change to encourage entrepreneurship (Cooper et al., 2004). Owusu-Ansah and Flemin

(2002, p.) add “...enterprise can be taught by teaching entrepreneurial qualities, e.g. creativity, independence and need for achievement early in the educational system”.

In Europe, the need for a change in the education system to enhance entrepreneurship was realized long ago. For example, Miettinen (2003, p.4) argues that “*the educational system traditionally teaches young people to reproduce facts, and to look for work as employees. Entrepreneurs in contrast need an education which gives those attitudes and skills such as self-motivation, creativity, opportunity seeking, and the ability to cope with uncertainties*”. The education system has to be directed toward “doing” more than “thinking” with knowledge turned into answers to customer problems in the market (Formica, 2002). Therefore, educational programs in all levels of educational institutions should promote an entrepreneurial culture (Schoof, 2006). The three study countries lack such an education system, and complaints about the current system in each of the study countries are many, as explained in the next three paragraphs.

The Government of Kenya (GoK) launched an ambitious plan to transform the economy by 2030 (Government of Kenya [GoK], 2007); however, an analysis of the growth patterns and more especially the status of higher education indicates that this dream is not likely to be achieved in the prescribed period (Nyangau, 2014). Despite its rapid growth, the higher education system in Kenya faces multiple problems such as massification, overcrowding, curricula that are not responsive to labor market needs, declining quality, among others. Bearing such factors in mind, it can be argued that Kenya’s education system is unlikely to produce graduates that are adequately prepared to participate competitively in the global market arena (Odhiambo, 2011). Hence, if deep reforms in higher education do not take place, Kenya’s dream of a transformed economy by 2030 remains a myth (Nyangau, 2014).

The Tanzanian education system is no better off. According to Mshomba (2017), this country needs to make a careful, purposeful, and objective (non-political) evaluation of its higher education system, which is too rigid. This system may have been appropriate when the country was practicing the Ujamaa socialist policy, but it is too rigid for the present-day competitive market economy. In the Ujamaa era, the economy was guided by central planning, and the

government provided most of the jobs for university graduates, since it decided upon which students would take which courses and where they would be deployed upon graduation. Since Tanzania is no longer socialist, and due to the increasing number of universities and students, not many graduates are assured of a job in government, they have to resort to the private sector for employment. However, the reality is that the private sector requires graduates with broad theoretical and practical knowledge and are trainable, which is not the case with the current crop of graduates. The education system in Tanzania is prescriptive and its effectiveness for a market economy is therefore limited (Mshomba, 2017).

The education system in Uganda is similar to that in Kenya and Tanzania. The system is not related to the skills needed in the Ugandan job market, because it is elitist and imitates colonial traditions that have since been abandoned by institutions of learning of the former colonizers; it was designed to produce civil servants to man public positions, a job it has done well; however, the greater economy needs a different kind of higher education since the current structure and way of delivery cannot meet the expectations of all Ugandans (Kasozi, 2003). Kasozi further argues that while the aim of higher education is to produce skilled and thinking individuals who can use the knowledge to improve themselves and their societies, most Ugandan graduates fall short of what is expected of them. Thus there are many complaints against the higher education system in this country (“We need to ask whether we are teaching the right courses”, 2018). At the O (ordinary) level, the government of Uganda has put in place a new curriculum for secondary schools, though a number of stakeholder have misgivings about it, including legislators (Obilan, 2020).

This study joins other voices that have called for a change in the education curricula of the study countries. For example, an Inter-University Council for East Africa study confirmed the above assertions by establishing that over 50% of graduates of East African universities are not properly groomed for the job market (Nganga, 2014). Similarly Kaijage and Wheeler (2013 p. 53) observe “*there is a general agreement that entrepreneurial education needs to be very significantly enhanced in East Africa, and this is not just a matter of business schools. Currently business education is perceived as not fit for the purpose with respect to the needs of future entrepreneurs*”. In the same vein, O’Benny (2017) posits that Africa’s education systems

produces single-minded graduates who are not well grounded in useful attitudes, values and entrepreneurial skills, thus the initiative to revive the African Curriculum Organization (ACO) is timely (Kiva, 2018). The latest evidence of need for a change in university curricula is the fact that the National Council for Higher Education (NCHE) in Uganda has started mapping and profiling of university courses to see whether these courses contribute to producing graduates who are work –ready (Byiringiro & Amamukirori, 2020).

In summary, a change in the education system will equip students with the skills they need to counter ambiguity intolerance, make them innovative and creative as well change their attitudes for the better (Muwema, 2011). Further a change in the education system will also inculcate an entrepreneurial culture in society (by introducing entrepreneurship early in schools) which may deal with some of the negative effects of power distance and gender-related problems (produce a more modern value orientation).

#### **6.5.4 Mode of delivery of entrepreneurship education**

As noted by Stoycheva (2003), it is not only being educated which can impact on ambiguity intolerance– tolerance, but what one is educated in and the way one was were educated also matter. According to Banning (2003), tolerance for ambiguity is likely to be boosted by the teaching method rather than by the material content of a strategy course. For example, the case method of teaching in which students scrutinize debate and review written versions of real events is an effective way of helping students face ambiguous situations of the real world. Case teaching may increase students’ tolerance for ambiguity by guiding students in how to decipher ambiguous narratives that may be embedded in the social and decision context of a given case. Evidence is plentiful to the effect that exposing students to written cases can elicit similar psychological responses as do the actual events consistent with Kolb’s theory (1984). Further, teacher-centered approaches in which instructors spoon feed students by just giving them knowledge should be discouraged for learner-centered approaches which offer students a chance to utilize their personal experiences and understanding (Beghetto & Kaufman, 2014), as the former results in meaningful learning which can foster creativity. Universities ought to be encouraged to make their entrepreneurship training more practical, as it equips the students with

the experience that can help them startup. This has been proved by Gielnik et al. (2015) in the Student Training for Entrepreneurship Promotion (STEP) program in Uganda.

#### **6.5.5 Emphasize autonomy (independence) in entrepreneurship education**

Van Gelderen (2010) argues that the production of students with an autonomous orientation should be the crucial goal of entrepreneurship education, because autonomy has been identified as the major reason for start-up (Shane et al., 2003). However, it should not be assumed that entrepreneurship education automatically results in autonomy (Van Gelderen, 2010), thus there must be deliberate teacher-supportive action to promote independent thinking (Assor & Kaplan, 2001). The aim of entrepreneurship education should be to encourage people to adopt an entrepreneurial stance in whatever they do, rather than just playing a supportive role (Van Gelderen, 2010). Entrepreneurship education which does not underpin autonomy is a disservice to the students, because as entrepreneurs of tomorrow they will face numerous uncertainties and risks, thus the need for them to be autonomous in decision making (Van Gelderen, 2010). Lack of autonomy featured highly in the interviews as one of the reasons why students don't start a business upon graduation.

#### **6.5.6 Approach youth entrepreneurship programs holistically**

The governments of the three study countries have set up a number of projects, intended to make start up funds available to young would be entrepreneurs. While this form of economic support is desirable, there is need to approach the matter holistically. For example, in Uganda millions of shillings extended to the youth under the Youth Livelihood Program as business support funds were wasted since the recipients failed to repay the funds (Ogeng, 2017). In their evaluation of a Ugandan youth project, Ahaibwe and Kasirye (2015, p. 18) propose that *“for the youth fund to have a lasting impact on its intended objectives, the promotion of youth entrepreneurship should be approached comprehensively not only the credit component”* – a view shared by this study. This comprehensive approach should include up-skilling the youth to enhance their self-efficacy and performance.

### **6.5.7 Improving the business climate**

Graduates are likely to shun the prospect of starting a business if the business environment is deemed as harsh. East African governments should demonstrate more zeal towards business by improving the investment climate in their countries since they are ranked poorly in terms of ease of doing business index (Table 4). For example, in the Economic Freedom Index by the Heritage Group/ Wall Street Journal (as cited by the African Development Bank (ADB) Report, 2017) Uganda is ranked 91<sup>st</sup> among 180 nations and 9<sup>th</sup> in its region, meaning that the business climate of this country remains weak and uncompetitive. The ADB further reports that the private sector in this country faces an under developed infrastructure, weak investor protection and high administrative tax burden, consistent with arguments by Brixiova (2013) and Morch von der Fehr (1995).

### **6.5.8 Formation of entrepreneurship clubs in universities.**

Since knowledge and networking moderate the relationship between entrepreneurial orientation variables and intentions, there is need to encourage students to value knowledge seeking and networking through entrepreneurship clubs, societies. Networking was an issue raised in the qualitative interviews. In Uganda, the Uganda Manufacturing Association (UMA) together CIPE (Center for International Private Enterprise) have embarked on this strategy in some universities in Uganda (Kyalimpa, 2017).

### **6.5.9 Limitations of the study**

Just as in any other research project, this study has some limitations. The study uses a convenience sample, due to cost and time limitations. Nevertheless, steps were taken to improve the findings from this study, including improving the sample representativeness, as well as replicating the sample, thus avoiding dependence on one convenience sample which would have hiked the probability of making a Type 1 error. The sample size could have been bigger, particularly in Kenya, where the study depends on one university, the University of Nairobi. However, this is the oldest and largest university in Kenya, with the students coming from all

parts of Kenya. The study examined only one aspect of the environment, yet other factors, such as legal and economic factors, influence entrepreneurship.

#### **6.5.10 Directions for future research**

The study makes the following recommendations for future research. First and foremost is the need to further examine the ambiguity intolerance-tolerance dimension among university graduates in this region. Do entrepreneurship education courses adequately address this issue? What is the mode of delivery of entrepreneurship education in the universities? While many complaints have been leveled against the educational system as being unable to produce graduates with entrepreneurial skills such as creativity and innovation, there are not so many studies linking the education system to entrepreneurship in this region. This matter requires examination. This study needs to be replicated to validate the findings in other African collective countries, as well as to confirm the extension of the TPB by achievement motivation.

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## APPENDICES

### APPENDIX 1: Normality curves for study variables

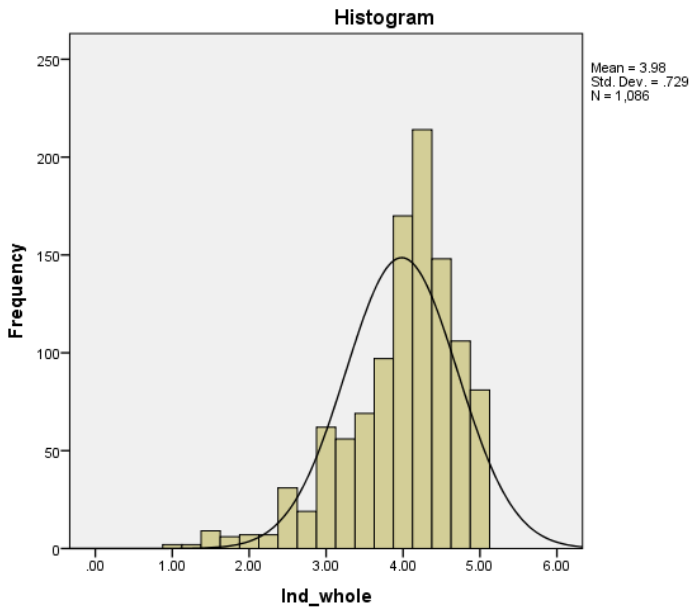


Figure A1 : Normality curve for Independence

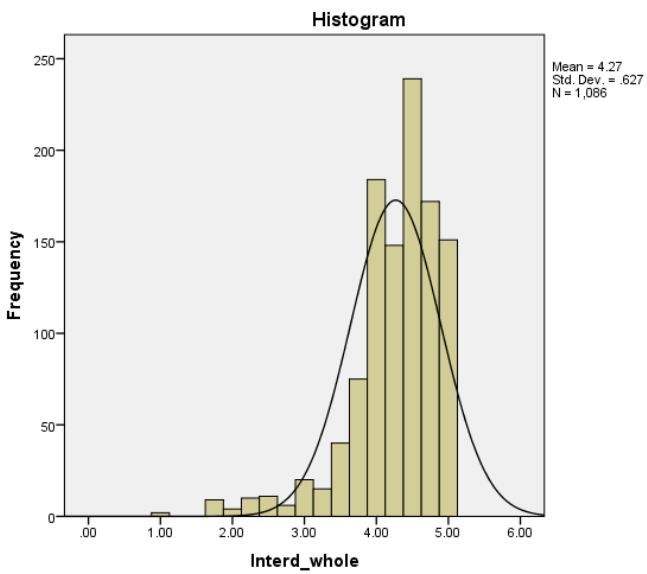


Figure A2: Normality curve for Interdependence

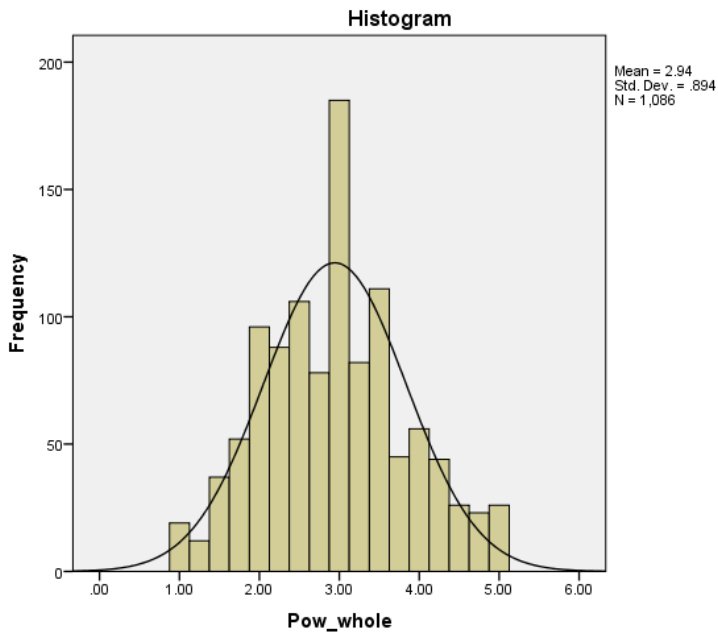


Figure A3: Normality curve for Power Distance

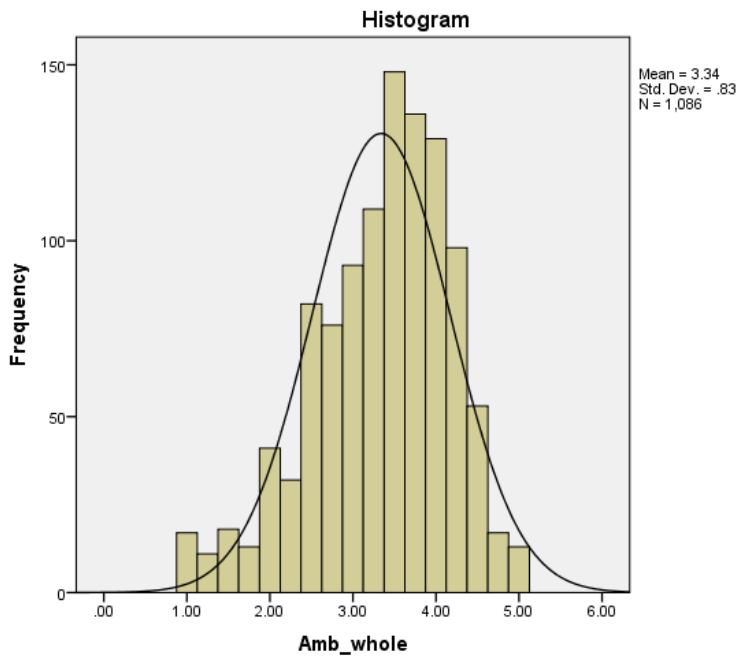


Figure A4: Normality curve for Ambiguity Intolerance

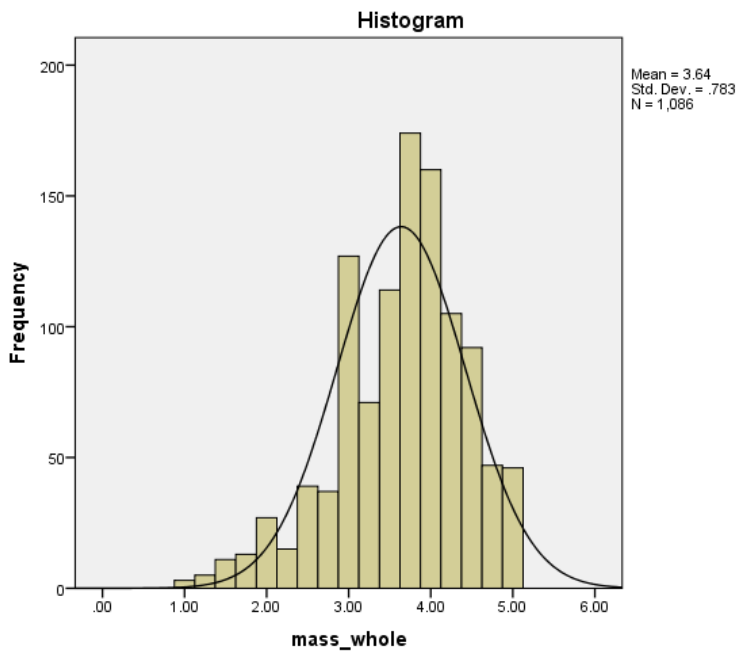


Figure A5: Normality curve for Masculinity

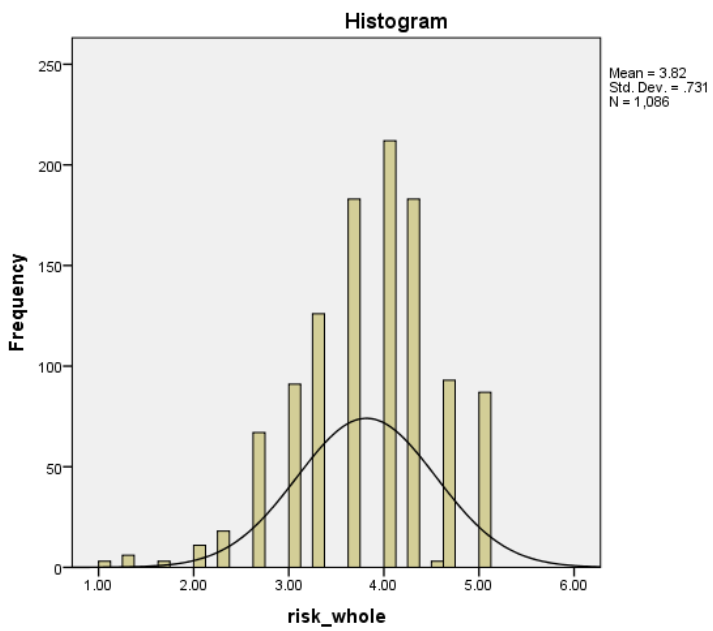


Figure A6: Normality curve for risk taking

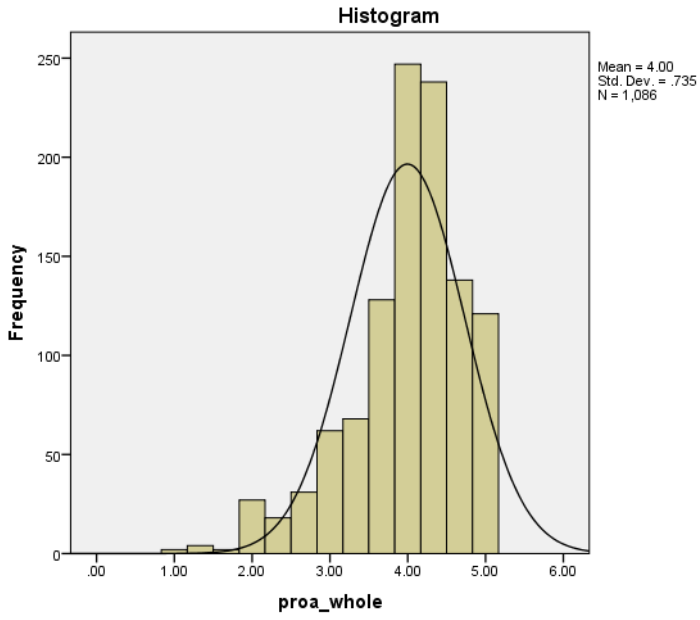


Figure A7: Normality curve for Proactiveness

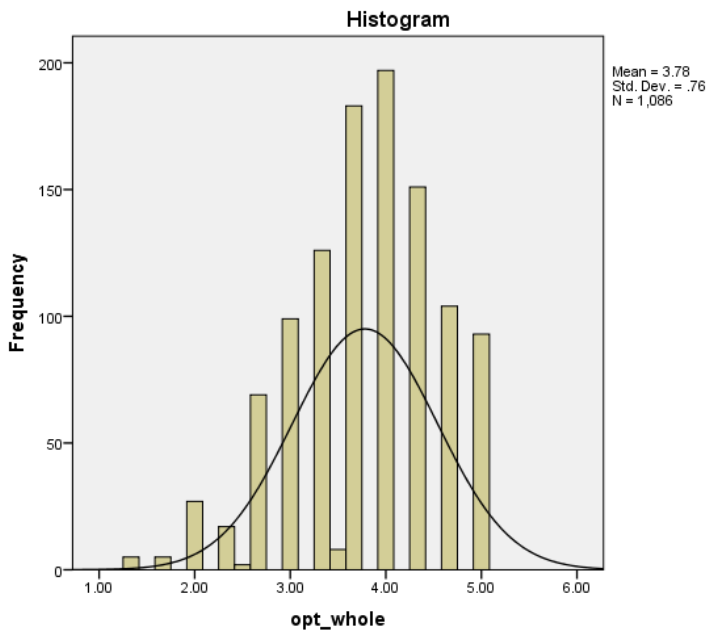


Figure A8: Normality curve for Optimism

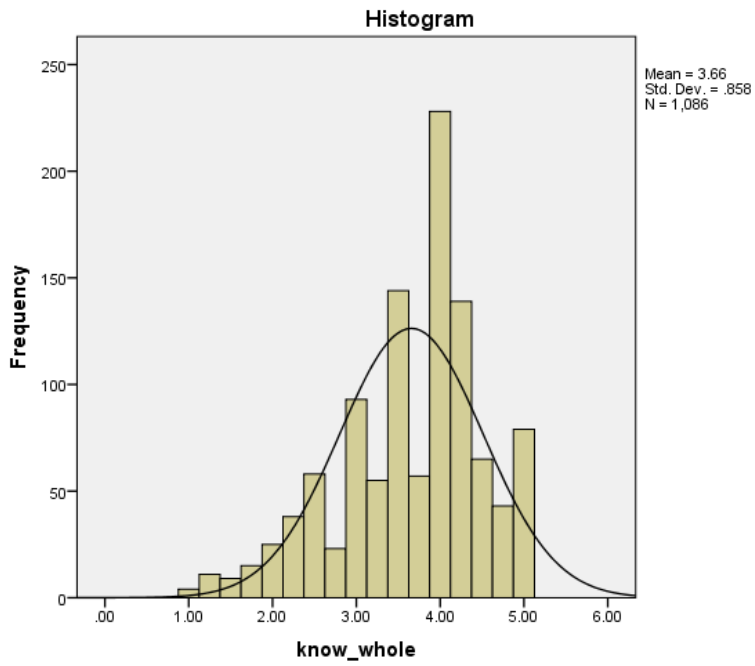


Figure A9: Normality curve for Knowledge

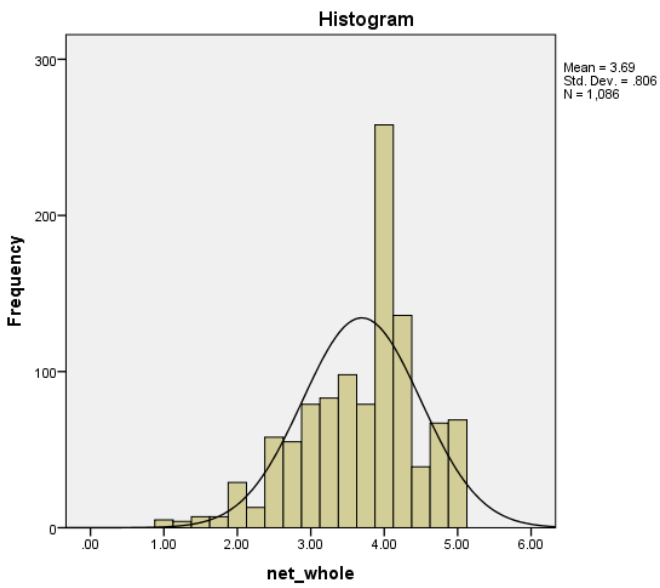


Figure A10: Normality curve for Networking

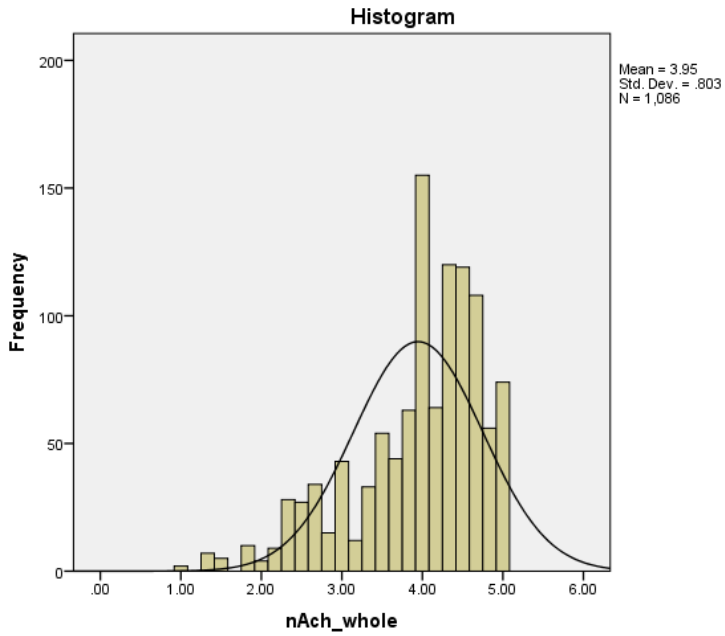


Figure A11: Normality curve for Achievement motivation

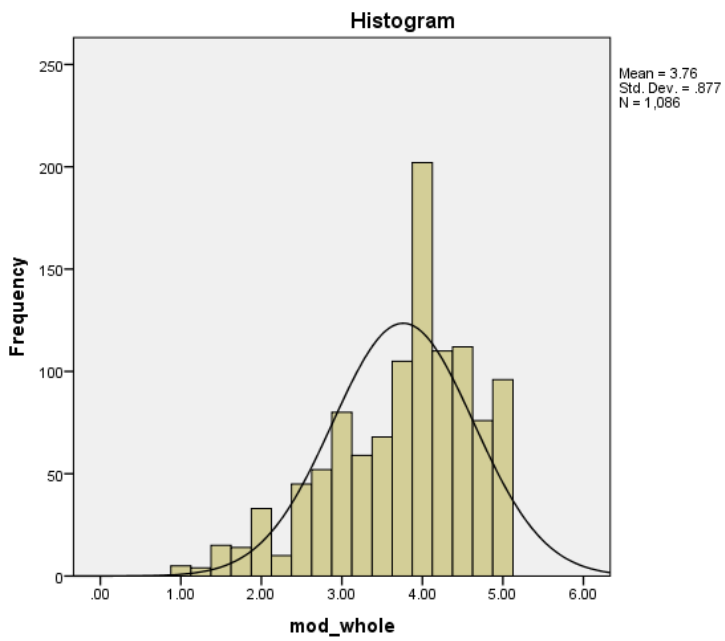


Figure A12: Normality curve for Modernity

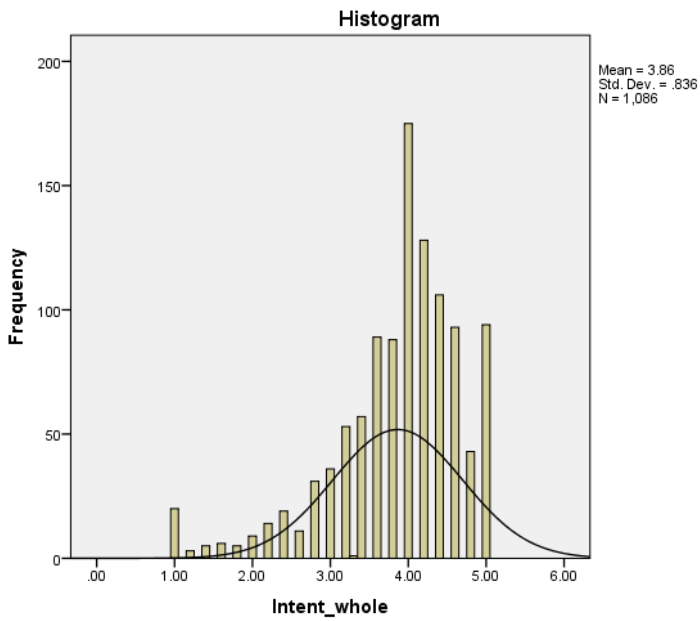


Figure A13: Normality curve for Intentions

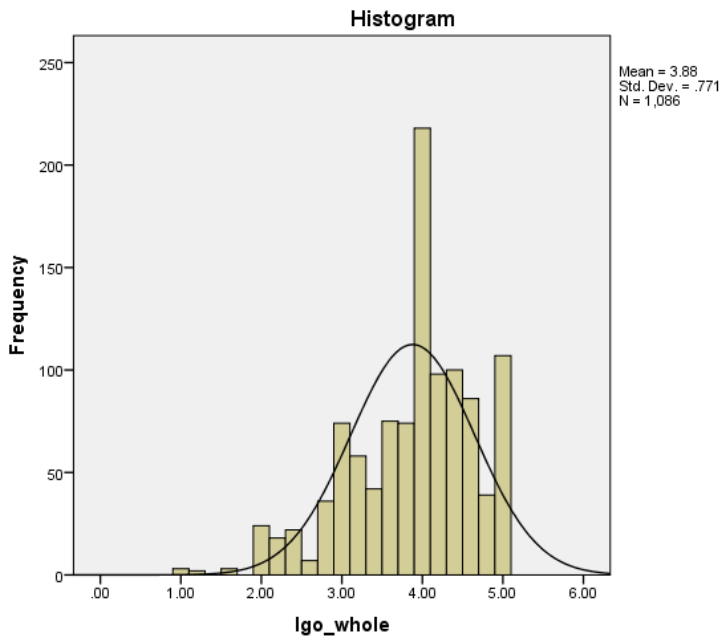
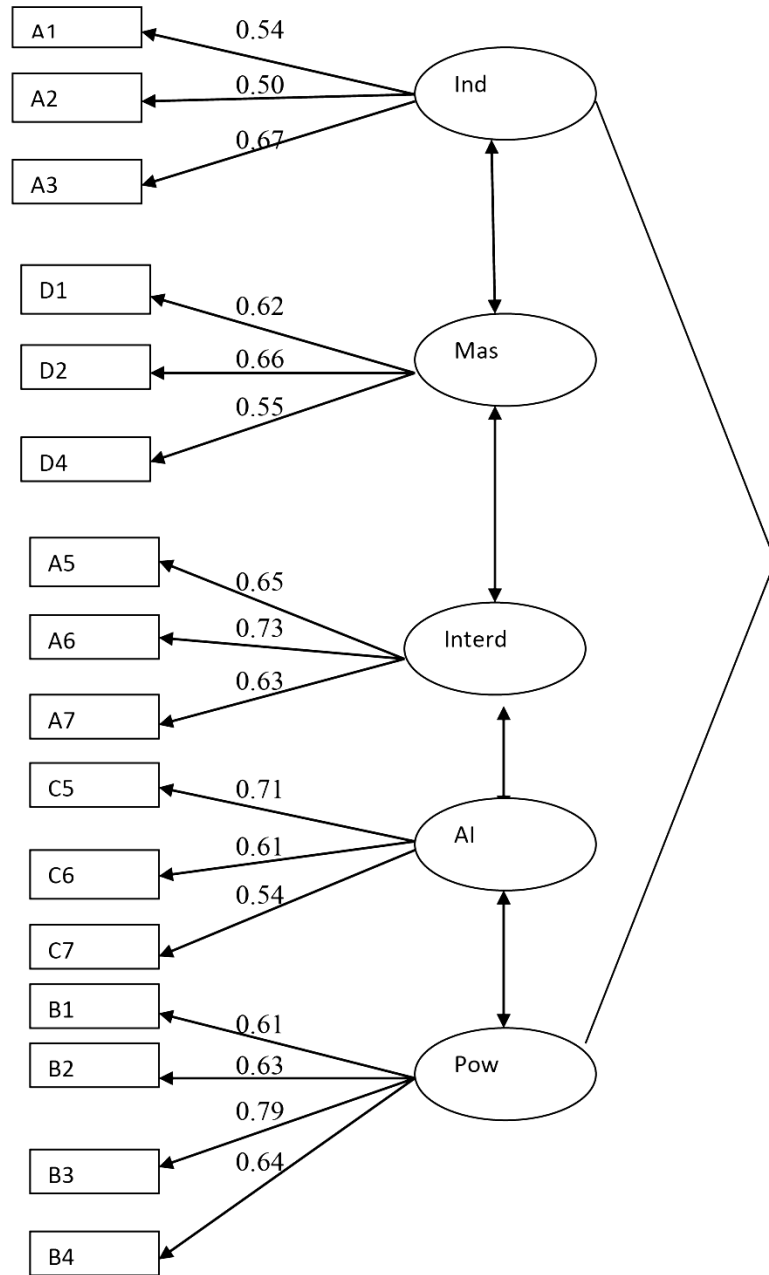


Figure A14: Normality curve for learning goal orientation

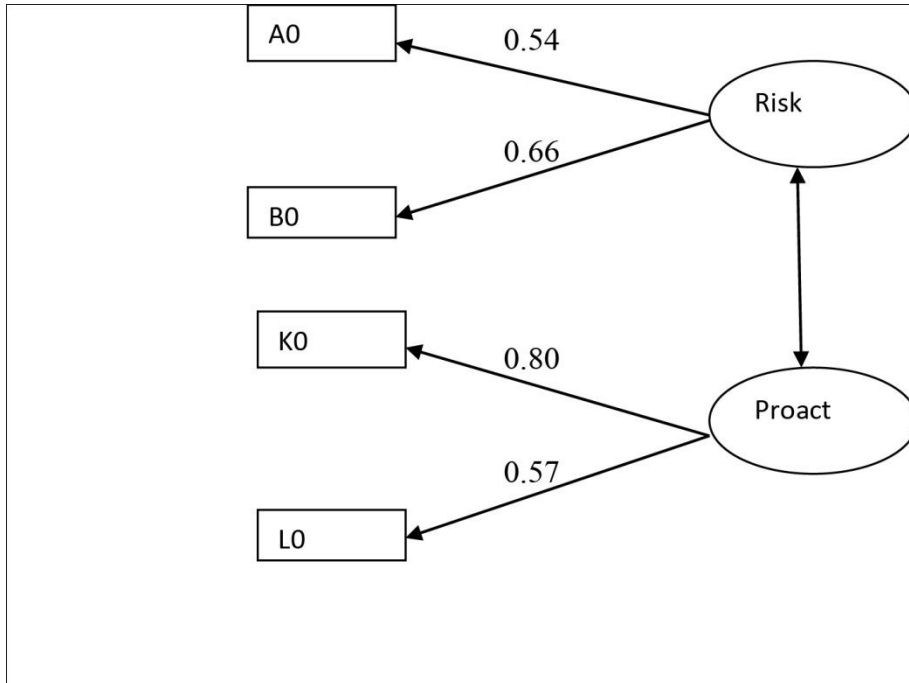
**APPENDIX 2: Measurement Models (error terms not shown in all diagrams)**

**Appendix 2a: CFA loadings of Cultural orientation variables**

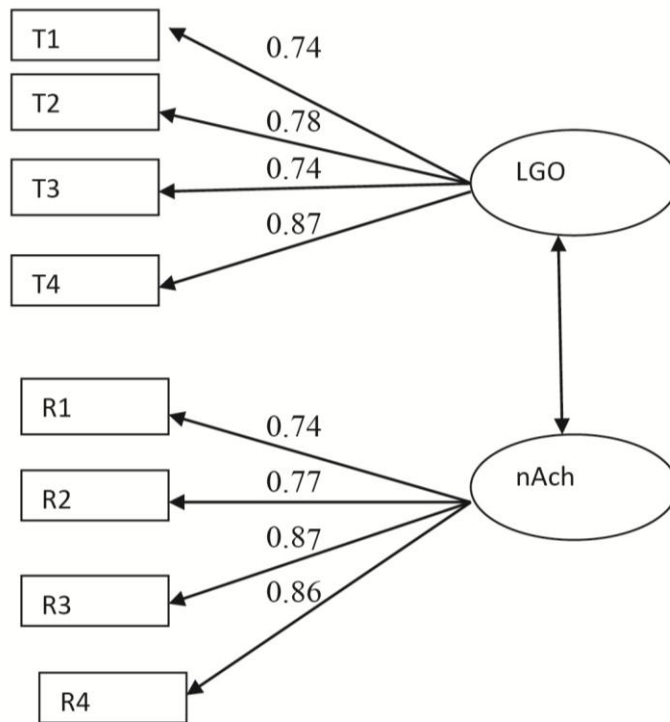


Key: Ind= Independence; Mas= Masculinity; Interd= Interdependence; AI= Ambiguity intolerance; Pow=Power distance

**Appendix 2b: CFA loadings of entrepreneurial orientation variables**



**Appendix 2c: CFA loadings of Ability Perception variables**



## APPENDIX 3 : Study Questionnaire

### University of Cape Town Graduate Entrepreneurship Questionnaire

Dear respondent,

*The purpose of this study is to examine students' attitude towards entrepreneurship. Please read and respond to the questions in each section to the best of your knowledge. Confidentiality is assured. Remember there is no right or wrong answer. Choose only one answer to each question.*

THANK YOU VERY MUCH.

#### SECTION ONE (Descriptive statistics)

*Your Sex: (M/F) Age: Country.... Course..... University..... Married (Yes/No)*

#### SECTION TWO (Explanatory/ Grouping variables)

##### 1. EXPERIENCE

J1. Have you had any start up experience or started a business before **Yes/No (Tick one)**.

J2. Did any of your parents own a business? **Yes/No**

##### 2. FEAR OF FAILURE

M1. Would fear of failure prevent you from starting a business? **Yes/ No (Tick one)**

##### 3. MODERNITY

**Rate your level of agreement with the following statements on the scale 1 = strongly disagree 2 = Disagree 3= neither agree nor disagree 4 = agree 5= strongly agree**

P5. It is alright for people to criticise sacred official matters

P6. It is best to seek new and different experiences rather than familiar ones

P7. I greatly prefer work that offers new experiences

P8. People should always be allowed to express minority ideas.

#### SECTION THREE

##### ENTREPRENEURIAL GOAL INTENTIONS

G1. Do you intend to start a business within the next 12 months? **Yes /No**

G2. If your answer is Yes to G1, do you currently have a business idea for starting a business (i.e., an idea for a product or service that you could offer)? **Yes / No**

G3. In case you have this business idea, have you taken some action about it? **Yes/ No**

**G4 Circle any action (s) you have taken: a) written a business plan, b) done market research, c)saved money to start the business, d) registered the business, e)organized a startup team, f) other**

**In case you have the intention and a business idea but have not taken action yet, rate the following statements on the scale 1=No intention 2=little intention, 3=Not sure, 4= High intention 5 =Very high intention**

- S4. Within the next 12 months, do you intend to save money for starting the business?
- S5. Within the next 12 months, do you intend to organize a start-up team or to look for partners?
- S6. Within the next 12 months, do you intend to do market research for your business idea?
- S8. Within the next 12 months, do you intend to work on a business plan for your business idea
- S9. Within the next 12 months, do you intend to register your business or obtain trade licenses?

#### **SECTION FOUR: CULTURAL ORIENTATION DIMENSIONS**

**Rate your level of agreement with the following statements on the scale 1 = strongly disagree 2 =Disagree 3= neither agree nor disagree 4 = agree 5= strongly agree**

##### **INDEPENDENT**

- A1. I would rather depend on myself than others
- A2. My personal identity, independent of others, is important to me
- A3. I rely on myself most of the time, rarely on others
- A4. It is important that I do my job better than others

##### **INTERDEPENDENT**

- A5. The well-being of my group members is important for me
- A6. I feel good when I cooperate with my group members
- A7. It is my duty to take care of my family members whatever it takes
- A8. Family members should stick together, even if they do not agree

##### **POWER DISTANCE**

- B1 I easily conform to the wishes of someone in a higher position than mine
- B2 It is difficult for me to refuse a request if someone senior calls me
- B3 I tend to follow orders without asking any questions
- B4 I find it hard to disagree with authority figures

## **AMBIGUITY INTOLERANCE**

- C4 I do not like taking too many chances to avoid making a mistake
- C5 I find it difficult to function without clear directions and instructions
- C6 I prefer specific instructions to bound guidelines
- C7 I tend to get anxious easily when I don't know an outcome
- C8 I feel stressful when I cannot predict consequences

## **MASCULINITY**

- D1 Women are generally more caring than men
- D2 Men are generally physically stronger than women
- D3 Men are generally more ambitious than women
- D4 Women are generally more modest than men

## **SECTION FIVE: ENTREPRENEURIAL ORIENTATION DIMENSIONS**

**Rate your level of agreement with the following statements on the scale 1 = strongly disagree 2 =Disagree 3= neither agree nor disagree 4 = agree 5= strongly agree**

### **RISK TAKING**

- A0**I like to take bold action by venturing into the unknown
- B0**I am willing to invest a lot of time and/or money on something that might yield a high return
- C0**I tend to act “boldly” in situations where risk is involved

### **PROACTIVENESS**

- K0.** I usually act in anticipation of future problems, needs or changes
- L0.** I tend to plan ahead on projects
- M3.** I prefer to “step-up” and get things going on projects rather than sit and wait for someone else to do it

## **SECTION SIX: MODERATORS**

**Rate your level of agreement with the following statements on the scale 1 = strongly disagree 2 =Disagree 3= neither agree nor disagree 4 = agree 5= strongly agree**

### **KNOWLEDGE**

- H1. I have knowledge of ways to make the product/ service I intend to produce
- H2. I have knowledge of products /services similar to the one I intend to produce

H3. I have knowledge of different customer problems within this industry in which I intend to operate

H4. I have had close interaction with customers in this industry in which I intend to operate

## **NETWORKING**

L1. I personally know a lot of people who started a business in the last two years.

L2. I have many contacts with people who are self-employed.

L3. I have a good network of people who know a lot about starting and running a business.

L4. I know many people who could provide me with help or advice if I started a business.

## **OPTIMISM**

K1. In uncertain times, I usually expect the best

K2. I'm always optimistic about my future

K3. I hardly ever expect things to go my way. (R)

K4. I don't get upset too easily.

## **SECTION SEVEN: PERSONALITY VARIABLES**

### **ACHIEVEMENT MOTIVATION**

R1. I spend considerable time making my performance an example for excellence

R2. I do every job as well as possible

R3. I feel proud when I look at the results I have achieved in my activities

R4. I get a sense of pride when I do a good job on my projects.

R5. I feel good when I have worked hard to improve my performance.

R6. I make it a point to improve my performance every day

### **LEARNING GOAL ORIENTATION**

T1. I am willing to select a challenging work assignment that I can learn from

T2. I often look for opportunities to develop new skills and knowledge

T3. I enjoy challenging and difficult tasks where I will learn new skills

T4. For me, developing my work ability is important to take risks

T5. I prefer work in situations that require a high level of ability and talent

THANK YOU

## **APPENDIX 4: Cultural Orientation and EO Study Interview Guide**

### UNIVERSITY OF CAPE TOWN

#### Graduate Entrepreneurship Interview Guide

1. Give your views as to why students do not start a business upon completion of their studies, and instead seek jobs which may not even exist
2. Are the barriers to entrepreneurship the same for female and male students?
3. What can be done to increase graduate interest in entrepreneurship?