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**UNLACING THE ENTREPRENEURIAL
POTENTIAL**

**Exploring factors influencing entrepreneurial
intention and entrepreneurship education in
emerging economies.**

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Preface

This dissertation is written in partial fulfillment of the requirements for obtaining a degree of Doctor of Philosophy from the Department of Food and Resource Economics, University of Copenhagen. The original research presented in this dissertation was carried out between January 1st 2012 and April 1st 2015. The work was financially supported by the Agricultural Transformation by Innovation (AgTraIn) program and the University of Copenhagen. Broadly, the thesis focuses on entrepreneurship in the emerging economy context. The work has culminated in four papers with the following titles:

1. Alexander, I. K. & Honig, B. (2015). Entrepreneurial Intentions: A cultural perspective. Article published in the African Journal of Management
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Summary

It is often assumed that there is a strong correlation between entrepreneurship and economic development and a global movement to promote entrepreneurial action is quickly gaining momentum. In emerging economies entrepreneurship may be of crucial importance. It is believed that “entrepreneurship is the engine that will push the emerging economies forward as the states of the developing world quickly grow to be major economic forces” (Bruton et al., 2008, p. 2), so it is quite surprising that entrepreneurship remains woefully under-examined in this context. This is problematic due to the situated nature of entrepreneurship. Hence, context-specific studies are necessary to enhance entrepreneurship research and to develop more effective strategies to foster entrepreneurship.

In this dissertation, I mainly focus on the entrepreneurial intentions of university students in an emerging economy context. I address the measurement issue of entrepreneurial intentions in a culturally heterogeneous society, as well as investigate widely held assumptions concerning the antecedents to entrepreneurial intentions, including the role of past entrepreneurial exposure and the influence of human, social and financial capital. These key variables have been hypothesized as having a positive influence on entrepreneurial intentions and have also been used to form the basis of entrepreneurship training intervention programs. Hence, knowledge of their functioning under different contextual conditions is important because it will allow researchers to fine-tune theories and to expand our theoretical understanding of entrepreneurship in general as well as provide practical guidelines for designing entrepreneurship teaching programs.

In Paper 1, I explore the need for context-sensitive measures of entrepreneurial intentions. The study not only shows ethnic tribal differences in entrepreneurial intentions but also that tribal ethnicity moderated the relationship between the proximal variables and entrepreneurial intention; for example, the effect of perceived behavioural control was different when comparing the Kikuyu and Kamba tribes. I conclude that researchers should seek to unpack the cultural differences that exist within a society in order to gain more specific and representative measurements of entrepreneurial intentions and, in turn, gain a better understanding of some of the mechanisms through which entrepreneurial intentions are developed.

In Paper 2, I investigate the influence of past entrepreneurial exposure on entrepreneurial intentions. I find a positive relationship between having conducted startup activities and entrepreneurial intentions. In contrast, exposure to family entrepreneurship had a negative association with intentions. The result supports the argument that it is necessary to focus more on the context of emerging economies in order to gain insights that can enhance our understanding of entrepreneurship in emerging economies. Further, it is necessary to adapt theories to reflect the specificity of the setting.

In Paper 3, I review the impact of human, social and financial capital on entrepreneurial intentions. The study shows that, in our setting, human capital has no impact on intentions, social capital has a positive impact, and financial capital is negatively correlated with entrepreneurial intentions. I conclude that while having access to capital may be important for entrepreneurship, the belief and value system of the society has an important bearing on whether these capitals are turned into entrepreneurial activities. For example, financial capital will not transmute into entrepreneurship where entrepreneurship is not a valued socially valued activity. Thus, the study provides further proof of the need to conduct context-specific studies that opens the black box of entrepreneurial intention in emerging economies.

Paper 4 departs from the entrepreneurial intention theme and uses a case study to explore an international curriculum development process spanning six universities across four countries in Africa. Using cultural-historical activity theory as an analytical framework, we explore the context of a curriculum development system and examine the contradictions within this system. The results show that the participatory curriculum process is inhibited by several factors, including difficulties in managing stakeholder relations, inadequate rules and organizational structures and resource

deficiency. However, these issues suggest starting points for designing more efficient multi-stakeholders curriculum development activities.

In summary, this dissertation responds to the call in the entrepreneurship literature for researchers to provide more in-depth study of individual emerging economies countries, keeping in mind their distinctive characteristics such as culture, history, munificence of their economies and their economic development paths, among others. It is recognized that there is a need to develop an understanding of these differences and their impacts. Thus, the studies included in this dissertation represent a significant contribution to the entrepreneurship literature and can stimulate discussion among entrepreneurship scholars about how we development measures and promote entrepreneurship within emerging economies.

Resumen

Se suele asumir que existe una fuerte correlación entre emprendimiento y desarrollo económico por lo que hay un movimiento global para promover la acción emprendedora que está ganando impulso rápidamente. El emprendimiento en economías emergentes es de importancia crucial, y se asume que el "emprendimiento o espíritu empresarial es el motor que impulsará las economías emergentes a medida que los estados del mundo en desarrollo crezcan rápidamente para convertirse en fuerzas económicas" (Bruton et al., 2008, p. 2). Por ello es sorprendente que el emprendimiento siga siendo poco estudiado en este contexto. Por lo tanto, son necesarios estudios específicos de contexto para incrementar la investigación en este ámbito y desarrollar estrategias más eficaces para fomentar el emprendimiento y el espíritu empresarial.

La presente tesis doctoral se centra principalmente en la “intención emprendedora” de los estudiantes universitarios en un contexto de economía emergente. El tema de discusión es la medición de esta intención emprendedora en una sociedad culturalmente heterogénea, así como investigar suposiciones ampliamente extendidas en relación con los antecedentes de la intención emprendedora, incluyendo el papel de la exposición previa al emprendimiento y la influencia del capital humano, social y financiero. Se plantea como hipótesis la influencia positiva de estas variables sobre las intenciones emprendedoras, así como su uso para formar la base de programas de entrenamiento para intervención emprendedora. Por lo tanto, el conocimiento de su funcionamiento en diferentes condiciones contextuales es importante, ya que permitirá a los investigadores afinar teorías y ampliar la comprensión teórica de emprendimiento en general, así como proporcionar directrices prácticas para el diseño de programas de enseñanza para el emprendimiento.

En el primer artículo, se explora la necesidad de medidas sensibles al contexto de intenciones emprendedoras. El estudio no sólo muestra las diferencias tribales étnicas en las intenciones empresariales, sino también como la etnia tribal modera la relación entre las variables proximales y la intención emprendedora; por ejemplo, el efecto del control conductual percibido sobre la intención emprendedora era diferente entre los tribus Kikuyu y Kamba. La conclusión de este primer artículo es que los investigadores deben tratar de discernir las diferencias culturales que existen dentro de una sociedad con el fin de obtener mediciones más específicas y representativas de las intenciones emprendedoras y, a su vez, obtener una mejor comprensión de algunos de los mecanismos a través de los cuales se desarrollan.

En el segundo artículo, se investiga la influencia de un contacto previo al emprendimiento más allá de las intenciones emprendedoras. En él se encuentra una relación positiva entre haber tenido actividades en nuevas empresas y las intenciones emprendedoras. En contraste, el contacto con el emprendimiento familiar tiene una asociación negativa con las intenciones. Este resultado apoya el argumento de que es necesario centrarse más en el contexto para generar ideas que pueden mejorar nuestra comprensión del emprendimiento en economías emergentes. Además, es necesario adaptar teorías para reflejar la especificidad local.

En el tercer artículo, se revisa el impacto del capital humano, social y económico en las intenciones emprendedoras. El estudio muestra que, en nuestro medio, el capital humano no tiene impacto en las intenciones, el capital social sí tiene un impacto positivo, y el capital financiero está correlacionado negativamente con las intenciones emprendedoras. Se concluye que si bien el acceso al capital es necesario para el emprendimiento, el sistema de creencias y valores de la sociedad tiene una influencia importante para que se concrete de manera efectiva en actividades emprendedoras. Por ejemplo, el capital financiero no se transforma en emprendimiento allí donde el emprendimiento no es una actividad socialmente valorada. Así, el estudio proporciona una prueba más de la necesidad de realizar estudios específicos del contexto para descubrir intención emprendedora en economías emergentes.

El cuarto artículo parte de la intención emprendedora y utiliza un caso de estudio para explorar un proceso de desarrollo curricular internacional que abarca seis universidades a través de cuatro países en África. Usando la teoría de la actividad histórico-cultural como marco analítico, se

explora el contexto de un sistema de desarrollo curricular y se examinan las contradicciones dentro de este sistema. Los resultados muestran que el proceso de currículo participativo se inhibe por varios factores, incluyendo las dificultades en la gestión de relaciones con los interesados, normas inadecuadas, así como las estructuras organizativas y la deficiencia de recursos. Sin embargo, estos aspectos sugieren puntos de partida para el diseño más eficiente de actividades para el desarrollo de un currículo orientado a múltiples actores involucrados en el proceso.

En resumen, esta tesis doctoral responde a la llamada de la literatura en emprendimiento por investigaciones que proporcionen más estudios en profundidad de distintos países de economías emergentes, teniendo en cuenta sus características distintivas como la cultura, la historia, el marco de sus economías y sus caminos de desarrollo económico, entre otros. Se reconoce que hay una necesidad de ampliar el conocimiento y comprensión de estas diferencias y sus impactos. Por lo tanto, los estudios incluidos en esta tesis representan una importante contribución a la literatura del espíritu empresarial y pueden estimular el debate entre los estudiosos sobre emprendimiento de cómo se desarrollan medidas que promuevan éste último en economías emergentes

1. Introduction

1.1 Background and Justification

Entrepreneurship plays an important role in economic development worldwide (Vita et al., 2014). There has been considerable growth in entrepreneurship support programs in developing countries, and much time, effort and resources are invested in creating unique support ecosystems that provide the right combination of training, funding, support and organization. The situation is not different in Sub-Saharan Africa where unemployment and underemployment have become major development challenges and several international and national institutions have specifically identified the promotion of entrepreneurship among young people as a key priority (World Bank, 2006; Africa Commission, 2009; Kenya Vision 2030, 2007).

Higher Education Institutions (HEIs) are expected to play their part in promoting entrepreneurship, and entrepreneurship training programs are spreading rapidly in universities and colleges throughout the world (Karimi et al., 2013). This trend is fuelled in part by the belief that 1) graduates are a potential source of venture creation (Nabi and Liñan, 2011; Hannon et al., 2005; McLarty, 2005); 2) graduates are crucial in introducing innovations and novel knowledge to the marketplace; and 3) entrepreneurship can be a panacea for the high level of unemployment experienced in developing countries (Efe, 2014). Thus, by providing entrepreneurship education, HEIs hope to instill in their students the skills, competences and mindset needed to build an enterprising economy (Raposo and Do Paço, 2011). Yet, despite the rapid increase in entrepreneurship teaching initiatives two major issues emerge. First, “few empirical findings exist to assist in the pedagogical design of contemporary entrepreneurship education” (Honig, 2004, p. 258-259) and second, there is a dearth of entrepreneurship research originating from emerging economies (Iakovleva et al., 2011).

Hence, the current thesis focuses on entrepreneurship education in Kenya. My main motivation for undertaking this study comes from my observations that although entrepreneurship education is becoming ubiquitous, there are few contextualized studies that can provide ‘tailor-made’ guidance for those wishing to promote entrepreneurship in settings different from the mainstream western context. Yet, the situated nature of the entrepreneurship phenomena (McKeever et al., 2015) suggests that it is necessary to identify and understand how contextual elements affect the manner in which tangible and cognitive resources are applied in creating new ventures. As Solomon (2006)

posits “pedagogically, entrepreneurial educators need to ensure that the knowledge disseminated and evaluation criteria employed are consistent with the phenomenon surrounding the entrepreneurial process.” Given that the context regulates what the individual observes, the choices made, and the outcomes of those choices, then a closer valuation of the context is necessary in order to increase our understanding of the origins, forms, micro-processes, functioning and diverse outcomes of entrepreneurial activities (Autio et al., 2014).

In Kenya, enterprise development is seen as being crucial to the development of the economy; for instance the government policy document, ‘Kenya Vision 2030’, considers entrepreneurs as the key pillars in economic development. Subsequently, much resource has been invested to promote the creation of small businesses. International donor agencies such as the World Bank, United Nations Development Program, and the African Development Bank have financed a number of projects to encourage the development of small enterprises in this setting (Nelson and Johnson, 1997). Also at a national level several initiatives such as the Kenya Youth Business Trust and the Uwezo Fund, in which the government has set aside USD 70 million have been established to provide financial support to the youth to assist them in venturing into entrepreneurship as a possible way of enhancing financial independence and sustainability (Kaane, 2014). Further, higher education institutions are expected to play a role in fostering an entrepreneurial culture and it is recommended that entrepreneurship training be taught in all technical and vocational education and training institutions. In fact, entrepreneurship education has been a compulsory and examinable subject at all levels of technical and vocational schools since the early 1990s (Nelson and Johnson, 1997), with a course curricula designed to 1) develop entrepreneurial attitudes in students and 2) equip the students with relevant knowledge and skills for starting and running their own businesses. Thus, given the level of interest on entrepreneurship development in the country, there are now exciting and unique opportunities for investigating the impact of these initiatives in an emerging context and also, the possibility exists to make a practical contribution to the process by providing empirical evidence that could be useful in developing entrepreneurship development initiatives.

The promotion of entrepreneurship education is seen as important for several reasons. First, among the youth (15-34 years) the rate of unemployment is at a staggering 67%. Some interesting facts about the youth employment situation in Kenya are presented by Kaane (2014) and include:

1. Over one million young people enter into the labor market annually with a deficiency of relevant, work-related skills, some having either dropped out of school or completed school and not enrolled in any college.
2. A further 155,000 join the labor market annually after completing technical/vocational training or at the university.

Thus, the Kenyan labor market is characterized by inadequate employment opportunities against a large and growing population of unemployed people, especially the youth. Subsequently, youth employment is an issue that has gained national attention. The First Medium Term Plan (MTP) of Kenya's Vision 2030 recognizes that faster job creation is required to address the high rate of unemployment and to take care of the increasing number of youths leaving educational institutions, yet unable to find gainful employment (Ponge, 2013). Kaane (2014) shows that total of over 1.3 million new employment places have to be created annually to meet the demand of youth entering the labor market. Given that the labor market is incapable of absorbing the number of youth, education institutions are expected to play their part in promoting self-employment as an attractive career option, as well as preparing students with the requisite skills and competences necessary to pursue an entrepreneurial career (Petriduo et al., 2009).

Second, the Kenyan economy is characterized by a low level of innovation and most new businesses are a duplication of already existing business models (Bowen et al., 2009). Thus, in an effort to replicate the successes of more advanced economies where entrepreneurial firms boost innovative capacity, competitiveness, and contribute to economic welfare, HEIs are expected to facilitate the development of a cadre of graduates who have the skills needed to effectively and efficiently tackle and solve an array of societal problems. Human capital is important for the creation of innovative firms (Couto and Bilau, 2007); accordingly, HEIs are expected to provide the right sort of education that will produce graduates who have not only mastered the necessary knowledge and skills for specific professions/disciplines (Jaffee, 2012), but who have also gained a suite of newly important thinking, reasoning and entrepreneurial skills (Schulte, 2004; Silva, 2009). Such skills, for example innovativeness, independence of thought and decision making, self-motivation, self-regulation, critical thinking, communication and collaborative problem solving (Ananiadou and Claro, 2009) are seen as necessary ingredients for renewing economic growth, creating jobs, stimulating creativity and new approaches to global challenges (Ndabeni, 2008). These entrepreneurship education programs are expected to help enhance entrepreneurial intentions and build enterprising economies (McKeown et al., 2006; Mwasalwiba, 2010).

Third, in the Kenyan economy there is a predominance of entrepreneurs who operate in the informal sector which is not regulated by the government. Their ventures are characterized by low levels of technology; and income, which although equivalent to a modest salaried job, involves more risk and fewer benefits than formal employment. Further, according to La Porta and Shleifer (2014, p. 109) “productive formal entrepreneurs pay taxes and bear the cost of government regulation to reach new customers, raise capital, and access public goods. These entrepreneurs are often educated and find it more profitable to run bigger formal firms rather than the smaller informal ones. In contrast, informal entrepreneurs are typically uneducated and unproductive, and they run small businesses producing low-quality products for low-income customers using little capital and adding little value.” Given that true economic growth comes from formal firms, efforts should be directed at creating conditions so that they can develop (La Porta and Shleifer, 2014). Thus, entrepreneurship education is crucial in providing the supply of human capital that will speed up the creation of these formal firms (La Porta and Shleifer, 2014).

A number of theoretical approaches have been used to investigate the propensity to pursue self-employment, including personality trait models (e.g., Crant, 1996; de Janasz et al., 2007; Zhao et al., 2010) and demographic models (e.g., Nga and Shamuganathan, 2010). In terms of personality traits, theorists assume that certain personal characteristics of the individual were effective predictors of the propensity to pursue venture creation. However research in this area has been criticized on several levels, including for its inability to adequately take into consideration elements such as personal expectations, situational factors, and social valuations in pursuing entrepreneurial action (Autio et al., 2001). More recently, increasing focus has been placed on the entrepreneurial intention model as a predictor of entrepreneurial behavior. These models based in social psychology, stems from the premise that human behavior is planned and intention is an antecedent toward that planned behavior (Ajzen, 1991). Given that entrepreneurial intention is considered an important first step in the venture creation process (Gartner et al., 1994), within the realm of higher education it has taken central stage. Although, intentions does not automatically translate into behavior and even strong, stable and well considered intentions do not necessarily translate into actions (van Gelderen, 2013), it is assumed that intentions-based models provide practical insight to any planned behavior (Krueger et al., 2000) and they have proven quite useful in identifying the antecedents to entrepreneurial behavior. Such information has proven to be invaluable when designing teaching/intervention programs that seek to build and enhance entrepreneurial attitudes, skills and competences.

Thus, the basic aim of this research is to have a better understanding of how entrepreneurship intentions, which refers to “a state of mind, directing attention, experience, and action toward a specific object or pathway to its achievement (Bird and Jelinek, 1988, p. 21) can be enhanced, and to explore different transmission mechanisms that might be responsible for its development, within the African context. I focus on the antecedents to intentions, including perceptual variables such as attitudes, which represents “the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question” Ajzen (1991, p. 188); subjective norms, which refers to the perceived social pressure to perform or avoid a behavior (Iakovleva et al., 2011); perceived behavioral control, which denotes the ability and feasibility to execute a target behavior (Ajzen, 1991). I also explore the influence of individual variables such as past exposure to entrepreneurship, as well as the influence of human, social and financial capital. Past exposure is mentioned as being important to the development of entrepreneurial intention (e.g., Carr and Sequeira, 2007; Quan, 2012). Past exposure is assumed to influence intentions through a socialization mechanism, for example Laspita et al. (2012) argue that entrepreneurial parents can trigger their offspring's entrepreneurial intentions through role modelling. Additionally, past exposure can play an important role in developing the human and social capital that can lead to greater entrepreneurial intention (e.g., Lindquist et al., 2012). Likewise, human, social and financial capital are assumed to have a positive influence on entrepreneurial outcomes (e.g., Davidsson and Honig, 2003; Kim et al., 2006; Evald et al., 2011) and it is often argued that greater stocks of capital will lead to greater entrepreneurial outcomes.

To achieve my research goal, I focus on university students within a Kenyan university. University students are not representative of the Kenyan population. For instance, despite the expansion of university education in the last decade, the capacity of the higher education sector in Kenya is still limited and only 3 percent of the university aged cohort are enrolled in university education (Njiru, 2012). Moreover, according to Molungo (2013), entry to university education in Kenya is mostly dependent on a student's socio-economic background, so to a certain degree university students can be considered an elite segment within the Kenyan society. Nonetheless, they also represent a grouping that, in comparison to other segments of the adult population, may have the resources (for example the human, social and financial capital) necessary to pursue entrepreneurship. Further, universities are where African leaders are created, thus our study population not only represents the elite but also the future leaders of Kenya and Africa. It is necessary to explore to what extent entrepreneurship and entrepreneurship values could possibly impact this class of people, keeping in

mind that in this setting the desired occupation is wage employment and entrepreneurship is a default, that is, it is pursued while the individual awaits a wage position. Also, in terms of intentions, as De Clercq et al. (2013, p. 660) argue “students are ideally suited to the study of entrepreneurial intentions, as opposed to actual entrepreneurial behaviors because reflections on the outcomes that they want to achieve in their future careers are likely in the forefront of their minds; they are relatively homogeneous with respect to their prior work experience; and compared with a general adult sample, they are less likely to have actual entrepreneurial experience – a factor which might confound the level of entrepreneurial intentions.”

While the major focus of the present study is students’ entrepreneurial intentions, as a complementary study I also investigate a case analysis of an international curriculum development process spanning six universities across four countries in Africa. The reform process aims to create employable and entrepreneurial graduates and adopts a participatory approach to curriculum design. Hence, we shed light on the complex nature of participatory curriculum reform and highlight some of the challenges inherent to such a process.

In summary, the thesis aims to contribute to the current literature by providing an analysis of possible ways of increasing entrepreneurial action among university students in the African setting. I pay particular focus to the influence of the context, in particular, culture and gender role orientation, both of which may have a determining effect and influence a variety of individual behaviors, including the decision to undertake entrepreneurial activities (Mueller and Thomas, 2001; Hayton et al., 2002; George and Zahra, 2002; Gupta et al., 2008; Haus et al., 2013). Understanding the effect of national context on the acquisition of entrepreneurial knowledge, skills and competences, with their resultant attitudes and organizational outcomes, is of increasing importance to policy-makers and educators as they attempt to promote entrepreneurship. I explore some of the commonly held assumptions regarding entrepreneurship. From a pedagogical standpoint it is obvious that these theoretical assumptions concerning entrepreneurship affect what is taught and how it is taught (Fiet, 2001). Hence, HEIs understanding of entrepreneurship and what entrepreneurship learning consists of will be vital in selecting pedagogical approaches to foster the entrepreneurial process. Yet, given that many of these assumptions hail from western society where the reality of entrepreneurship is quite different from that of the developing world, it is important to test and challenge current models (e.g., Devonish et al., 2010).

1.2 Research Location and Sociocultural Influences

1.2.1 Culture

Kenya is a culturally heterogeneous society, comprising of about 42 ethnic tribes, each with its unique social system. Culture is important to tribal communities and they have strong feelings toward their self-determination, their land and their heritage. Hence, given the deeply-rooted nature of tribal cultures, culture is featured as a moderating contextual variable in this thesis. Culture, in its broadest sense, represents “a collective programming of the mind which distinguishes the members of one group or category of people from another” (Hofstede, 1991, p. 5). The role of culture as the driver of entrepreneurial pursuits has received increasing attention among researchers (e.g., Illeris, 1986; Thomas and Mueller, 2000; Begley and Wee-Liang, 2001; Ulhøi, 2005), who argue that entrepreneurship is affected by differences in value systems. In effect, a society’s propensity to generate, autonomous, risk-taking, innovative, competitively aggressive and proactive entrepreneurs and firms will depend on its cultural foundation (Lee and Peterson, 2000). Entrepreneurship appears to be more compatible with certain cultures than others; therefore it is reasonable to assume that certain cultures are more conducive to entrepreneurial learning than others. Since entrepreneurship is a social construction, it will reflect the values, culture, and traditions of the nation or region in which it is enacted (Fuduric, 2008). Thus, ethnic group membership help explain entrepreneurial outcomes, including values, skills, social capital and resource mobilization (Hirschman, 1982; Portes and Rumbaut, 2006). According to Mungai and Ogot (2012), in Kenya, tribal differences play a role in determining who gets into entrepreneurship. The differences in entrepreneurial attitudes, intentions and behavior between ethnic groups can be attributed to differences in values, social orientation and behavioral motivation (e.g., Aharonovitz and Nyaga, 2008), as well as differences in cultural characteristics such as individualism and collectivism. Also, attributes such as risk-taking have been used to explain differences in entrepreneurial behavior among Kenyan tribes (e.g., Mungai, 2013). Hence, it is important to consider tribal ethnic identity, since trying to study entrepreneurial intentions without insight into culture/ethnicity may not address important group similarities or differences.

1.2.2 Gender Role Orientation

Gender difference is another fundamental sociocultural dimension that influences entrepreneurship. Notwithstanding, that social changes over the last half-century have given rise to modern economically advanced societies for which traditional sex roles and social barriers to historically

“male” vocations are less rigid (Mueller and Data-On, 2008), entrepreneurship is still a male dominated domain (Karimi et al., 2013). Further, African communities continue to strongly uphold patriarchal values, this impact heavily on women’s ability to build businesses in many contexts. Cultural/ethnic values can play a critical role in determining who gets into entrepreneurship and what functional role each plays in this activity (Mungai and Ogot, 2012).

Social feminist theory (e.g., Kalleberg and Leicht, 1991) suggests that the inherent difference in men and women behavior is based on differences in early and ongoing socialization. For example, at an early age the identities of females are forged within the family relationship (Chodorow, 1978) and the traditional role for women is to take care of the household and the children (Wainaina, 2011); in contrast, males are encouraged to develop independence and organizational skills. Thus, gender-role stereotyping is a product of cultural conditioning and the socialization of men and women (Mueller and Data-On, 2008). Gender-role stereotypes assume occupations associated with independence, confidence and assertiveness are associated with masculine occupations. In comparison, occupations associated with dependency, passivity, nurturing and interpersonal warmth are perceived as feminine occupations.

Given the preceding arguments, it is expected that gender-role stereotype will have a strong influence on entrepreneurial intentions in this setting. Although the percentage of female entrepreneurs has increased over the past several years, it remains far below the level of males (Haus et al., 2013) and moreover, males tend to have greater entrepreneurial intentions than females (Crant, 1996; Gupta et al., 2008). Gender stereotypes which cause differences between genders in certain psychological traits strongly associated with entrepreneurial intentions and choices (Sanchez et al. 2012), may be a prime reason for this outcome.

1.3 Research Questions and Objectives

The aim of this project is to examine the antecedents to entrepreneurial intentions in a developing country. All this is done in view of providing context-specific empirical evidence that can be used in the design of pedagogical tools aimed at enhancing the entrepreneurial mindset.

In this research project, four major objectives will be pursued, namely:

1. To examine the influence of indigenous ethnic culture on entrepreneurial intentions models.

2. To examine the influence of exposure to entrepreneurial activities (e.g., past business startup experience and entrepreneurial family members) on entrepreneurial intentions in the African setting.
3. To examine the influence of human, social and financial capital on entrepreneurial intentions.
4. To identify tensions and contradictions emerging in a participatory curriculum development activity and explore the sources of these through the application of cultural-historical activity theory.

To achieve these objectives the need arises to answer several pertinent questions. These questions form the guide to this research, hypotheses, method of data collection and data analysis are summarized in Annex 1.

2. Theoretical Framework

A number of psychosocial theories have been developed to predict, explain, and change behaviors. Among these theories cognition models have gained increasing prominence within the last few decades. In these models thoughts and feelings are considered to be the key determinants of enacting a behavior. For example, in the case of entrepreneurship, the central premise of the cognitive perspective is that entrepreneurial behavior emerges as a result of the entrepreneur's underlying cognitions (Urban, 2008). According to Mitchell et al. (2002), entrepreneurial cognition refers to the knowledge structures that people use to make assessments, judgments or decisions involving opportunity evaluation, venture creation, and growth. Sanchez et al. (2011) recognized cognitive structures as well as cognitive processes as important in opportunity recognition and exploitation and, according to Baron (2007, p. 171) "one cognitive process investigated by cognitive scientists—pattern recognition—appears to be closely related to opportunity recognition in the domain of entrepreneurship." However, given that it is not possible to fully understand an individual's behavior if the unit of study is restricted solely to the individual (Nardi. 1996); then researchers have focused on social cognition models, which considers that individual cognitions/thoughts are processes intervening between observable stimuli and responses in real world situations (Godin et al., 2008). In fact, a strength of cognition models is that they acknowledge the importance of other factors e.g., personality, economic structure, cultural factors, etc. as being important; however, in social cognition models these exogenous factors are considered to be mediated by the proximal predictors (thoughts and feelings) (Sutton, 2001). Social cognition models have gained increasing relevance because unlike socio-demographic factors which are difficult to change, thoughts and feelings are amenable to adjustment; thus cognition models can be used as the basis for intervention programs (Sutton, 2001).

Furthermore, social cognition models can be viewed as part of the process of self-regulation in which an individual “enact their self-conceptions, revise their behavior, or alter the environment so as to bring about outcomes in line with their self-perceptions and personal goals” (Fiske and Taylor, 1991, p. 181). The literature identifies two phases of self-regulation activities: 1) the motivational phase where costs and benefits are considered in order to choose between goals and behaviors, and 2) the volitional phase where planning and action directed toward achieving the set goal predominate (Gollwitzer, 1990). In this thesis, the focus will be on the motivational phase; in particular, I highlight the culmination of this phase: behavioral intention.

The formation of a behavioral intention indicates the end of the deliberation about what one will do and indicates how hard one is prepared to try, or how much effort one will exert, in order to achieve desired outcomes (Webb and Sheeran, 2006). According to Ajzen (1991, p. 181) “intentions are assumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior.” Thus, in this study intention is defined as a person's perceived likelihood or “subjective probability that he or she will engage in a given behavior” (Committee on Communication for Behavior Change in the 21st Century, 2002, p. 31).

Entrepreneurship can be considered as the intentional creation or transformation of an organization to create or add value through the organization of resources (Bird and Jelinek, 1988). Individuals do not start a business as a reflex, but they do it intentionally. Given the time lag that occur when forming a business and the considerable amount of planning involved, entrepreneurship is exactly the type of planned behavior for which intention models are ideally suited (Krueger et al., 2000). Thus, entrepreneurial intention refers to “a cognitive representation of the actions to be implemented by individuals to either establish new independent ventures or to create new value within existing companies” (Fini et al., 2009).

Entrepreneurial intentions are central to the understanding of the entrepreneurship process because entrepreneurial intentions form the underpinnings for the founding of new organizations (Krueger, 1993). Douglas (2013) adds that “the identification of individuals with entrepreneurial intentions is important because it facilitates private investment and public funding being most efficiently channeled toward those who will start new businesses that create value for individuals and society.” Moreover, understanding the identity and nature of the antecedent factors that influence entrepreneurial intentions has become important to the study of entrepreneurial behavior

(Fitzsimmons and Douglas, 2011). This information can be useful in helping build intentions. To Bird and Jelinek (1988) the macro-level antecedents to intentions can be classified in two broad categories: the individual and the context. The individual domain includes demographics, personal traits, psychological characteristics, individual skills and prior knowledge, individual network and social ties. In contrast the contextual domain encompasses environmental support, environmental influences and organizational factors (Fini et al., 2009). For purpose of this thesis, the focus will be on individual factors, for example: having entrepreneurial family members, past startup experience, having access to human, social and financial capital and demographic characteristics such as ethnic identity and gender. Moreover, I will also consider the more proximal predictors including beliefs and attitudes.

Overall, Papers 1-3 address the antecedents to entrepreneurial intentions and the mechanisms by which such intentions are developed. The analyses are mostly based on social cognition and resource-based models, for example, the theory of planned behavior (Ajzen, 1991) and the social learning theory (Bandura, 1971). In addition, Paper 4 explores a participatory curriculum reform initiative, which is explored through the theoretical lens cultural-historical activity theory (Engeström, 2001). A more detailed description of the theories used in each paper is provided below

In Paper 1, I use of the theory of planned behavior, which is one of the most influential behavioral intention models (Ajzen, 2011) to examine the influence of indigenous ethnic culture entrepreneurial intentions models. The theory helps examine and interpret, from a social cognition perspective, key antecedents to performing a behavior. It is based to the premise that intention can be an effective predictor of actual behavior and that behavior is intentionally planned (Ajzen, 1991). In the domain of entrepreneurship it has been used to predict entrepreneurial intention (e.g., Luthje and Franke, 2003; Engle et al., 2010) and to explore the antecedents to entrepreneurial behavior (e.g., Carr and Sequeira, 2007; Díaz-García and Jiménez-Moreno, 2010).

Within the theory of planned behavior framework the key determinants of behavior are intention to engage in that behavior and perceived behavioral control (PBC) over that behavior. As previously discussed, intention represents self-instructions to perform a particular behavior or to obtain certain outcomes (Triandis, 1980). PBC refers to the person's belief as to how easy or difficult performance of the behavior is likely to be (Ajzen and Madden, 1986). In the model, intentions are the most important determinant of behavior; however, perceived behavioral control can also have a direct

effect on behavior and/or moderate the relation between intention and behavior when PBC accurately reflects the amount of actual control over the performance (Ajzen and Madden, 1986; Webb and Sheeran, 2006). Moreover, in the theory of planned behavior, intention is assumed to be determined by three factors: attitudes, subjective norms and PBC. Attitudes are the degree to which a person has a favorable or unfavorable evaluation of the behavior in question (Ajzen and Madden, 1986). According to Conner (2010, p. 23), “attitudes are a function of the likelihood of the outcome occurring as a result of performing the behavior (e.g., ‘How likely is this outcome?’) and the evaluation of that outcome (e.g., ‘How good or bad will this outcome be for me?’).” Subjective norms are the perceived social pressure to perform or not to perform the behavior. They are “based on beliefs about salient others’ approval or disapproval of whether one should engage in a behavior (e.g., ‘Would my best friend want me to do this?’); i.e. normative beliefs weighted by the motivation to comply with each salient other on this issue (e.g., ‘Do I want to do what my best friend wants me to do?’)” (Conner, 2010, p. 23). Perceived behavioral control is also expected to directly influence intentions and is assumed to have motivational implications for intentions. Ajzen and Madden (1986) argues that “people who believe that they have neither the resources nor the opportunities to perform a certain behavior are unlikely to form strong behavioral intentions to engage in it even if they hold favorable attitudes toward the behavior and believe that important others would approve of their performing the behavior.” Thus, perceived behavioral control is based on control beliefs concerning whether one has access to the necessary resources and opportunities to perform the behavior, weighted by the perceived power, or importance, of each factor to facilitate or inhibit the action (Connor, 2010).

In Paper 2, I rely on social learning theory (Bandura, 1971, 1977) to explain the effect of past exposure (gained by having entrepreneurial parents and prior business startup experience) on entrepreneurial intentions. Social learning theory postulates that learning is a cognitive process that takes place in a social context and can occur purely through observation or direct experience (Bandura, 1971). Banduras theory is mainly concerned with how individuals operate cognitively on their social experiences and with how these cognitive operations then come to influence their behavior. According to Grusec (1992, p. 781), “individuals are believed to abstract and integrate information that are encountered in a variety of social experiences, such as exposure to role models, verbal discussions and discipline encounters. Through abstraction and integration, they mentally represent their environment and themselves in terms of certain crucial classes of cognition that include response-outcome expectancies, perceptions of self-efficacy, and standards for evaluative

self-reactions. These cognitions are believed to affect not only how they respond to environmental stimuli but also the environments they seek out for themselves.”

In social learning theory, the two main sources of learning are through direct experience and observation. The distinguishing feature of direct experience is that the experience of the learner occupies central place in all considerations of learning. Bandura and McClelland (1977) believed that direct experience is the more rudimentary form of learning. A key element of learning by direct experience is that learners analyze their experience by reflecting, evaluating and reconstructing it in order to draw meaning from it (Andresen et al., 2000). Further, Bandura (1978) considers that nearly all learning resulting from direct experience can also occur on a vicarious basis by observing the behavior of others and its consequences. Provided the person observed (model) exhibits socially effective behavior, the individual will develop a generalized habit of matching the response of the successful model (Bandura and Walters, 1963). The social characteristic of the role model is also an important factor in social learning (Bandura, 1977). An individual is more likely to be influenced by a person with status and power or if there is some similarity between the model and the individual – for example gender. Also, parents are powerful role models, especially in terms of how they behave (Bandura, 1978). Thus, according to Scherer (1989, p. 19) “attributes associated with the model, such as power, gender, social status, or competence, can cause the observer to believe modelled behavior is appropriate and has been rewarded in the past. The observer's perception of the model, then, can lead to the expectancy that a reward will be received for performing in a way similar to the model.”

In Paper 3, I focus on an individual's human, social and financial capital which has been used to explain the dynamic process that surrounds the development of entrepreneurial intentions and the subsequent decision to engage in entrepreneurial behavior. According to Alvarez and Busenitz (2001) capital theorists have shown “how entrepreneurship generally involves the founder's unique awareness of opportunities, the ability to acquire the resources needed to exploit the opportunity, and the organizational ability to recombine homogeneous inputs into heterogeneous outputs” (p. 771). From this perspective, individuals with greater levels of human, social and financial capital will be more likely to engage in entrepreneurial activities.

Hitt et al. (2001) believe that human capital is the most critical resource that a potential entrepreneur possesses. According to Dimov (2010) human capital represents the knowledge and skills that individuals bring to a task they set out to perform and it is characterized as general or

specific (Fitzsimmons and Douglas, 2005). General human capital is generally acquired through education and practical experience while specific capital is gained through experience and education with a scope of application limited to a particular activity or context (Becker, 1975; Davidsson and Honig, 2003; Dimov and Sheperd, 2005). For Fitzsimmons and Douglas (2005, p. 2), “the underlying premise of the human capital view is that some individuals possess the knowledge, skills, and contacts that should allow them to be ‘good’ at entrepreneurship, and after recognizing this they form the intention to become an entrepreneur.” Social capital refers to a person’s social networks and the ability to mobilize useful resources out of these networks (Goethner et al., 2012). Nahapiet and Ghoshal (1998, p. 243) define it as the “sum of the actual and potential resources embedded within, available through and derived from the network of relationship possessed by an individual or social unit.” In the literature three types of social capital are discussed: structural capital, which looks at the social capital gained through an individual’s personal network (network of relatives, friends, mentors (Širec and Močnik, 2011); cognitive social capital in which actors develop mutual interpretive frameworks based on language, codes and narratives (Nahapiet and Ghoshal, 1998; Lee and Jones, 2006) and relational social capital, where a history of interactions between actors allows them to develop a personal relationship that may prove beneficial (Macke and Dilly, 2010). The basic tenet of social capital theory is that social relationships matters and may be the source of resources (Rumala, 2012). Financial capital, in general, refers to financial resources available for use and comprises of incomes, savings and credit. Thus financial capital refers to monetary assets (Scoones, 1998; Coppock and Desta, 2013). It is assumed that individuals with greater stocks of financial capital have more flexibility to undertake a wider array of strategies to start and manage their businesses (Pena 2002). Human, social and financial capitals have all been linked to entrepreneurial intentions. For example, Raijman (2001) posited that financial resources in the family have direct bearing on entrepreneurial intentions and Davis and Peake (2014) contend that a student may exhibit a stronger or weaker intent depending on whether he or she perceives that his or her family possesses the financial means to assist with the creation of the venture.

In Paper 4, cultural-historical activity theory is used to evaluate a case example of curriculum reform in Africa. Activity Theory is an interdisciplinary approach to human sciences that originates in the cultural-historical psychology school of thought, initiated by Vygotsky, Leont'ev and Luria, as well as from the writings of philosophers such as Kant, Hegel and Marx (Engeström et al., 1999). The Theory, although first proposed in the early 20th century has remained in the background until

recently (Peachey and Edwards, 2005). Activity Theory takes the object-oriented, artifact-mediated collective activity system as its unit of analysis, thus bridging the gulf between the individual subject and the societal structure. It is an approach that aims to understand the individual within his/her natural setting. This understanding occurs through an analysis of the genesis, structure, and processes of their activities (Larkin, 2010). Cultural-historical activity theory can be used as a “psychological framework that considers cognition and development as inextricably linked with other human beings and artefacts” (Lee, 2011). It highlights “doing in order to transform something,” with the emphasis on the contextualized activity of the system as a whole (Engeström, 1987). Thus, cultural-historical activity theory can be useful in understanding the nature of societal dynamics, given that meaning is co-constructed through an active and dynamic process between agents and environments (Ogawa, 2006).

Cultural-historical activity theory assumes “purposeful human behavior is mediated, regulated by interactions with other people and the world, rather than directly effected through, e.g., stimulus–response mechanisms” (Lee, 2011). These mediators include tools, rules, community and the division of labor that are all dialectically linked. These tenets altogether comprise an activity system. The subject (i.e., the agents) transform the object (that which is to be changed) to produce an outcome. To carry out the goal they rely on tools, which can be anything used in the transformation process. The subjects do not work in isolation but within a community, which comprises of other individuals and subgroups that share the same general object. Within this context there are differentiated roles and responsibilities within the community (division of labor). Finally the relationships are governed by rules and constrained by the formal, informal (idiosyncratic adaptation), and technical (mandated and written) rules, norms, and conventions of the community. Thus cultural-historical activity theory offers a holistic view of an activity by introducing a range of features, such as the recognition of actors, mediation, historicity, constructivity, dynamics, and others (Kuutti, 1996).

A major strength of cultural-historical activity theory is that it allows researchers to identify contradictions between nodes in an activity system (Mishra et al., 2011). Engeström (2001) and Kuutti (1996, p. 34) argued that “because activities are not isolated units but are more like nodes in crossing hierarchies and networks, they are influenced by other activities and other changes in their environment. External influences change some elements of activities, causing imbalances between them. Activity Theory uses the term contradiction to indicate a misfit within elements, between them, between different activities, or between different developmental phases of a single activity.

Contradictions manifest themselves as problems, ruptures, breakdowns, and clashes.” Engeström (2001) identifies four sets of contradictions: 1) primary, 2) secondary, 3) tertiary, and 4) quaternary. The primary contradictions occur within the elements of activity systems when activity participants encounter more than one value system attached to an element within an activity that brings about conflict. In other words, they are breakdowns between actions or sets of actions that realize the activity. Secondary contradictions arise between the nodes within an activity system. Tertiary contradictions occur when activity participants face conflicting situations in adopting new and advanced method to achieve an objective; i.e., they may be found when an activity is remodeled to take into account new tasks or ways of working. Thus, they occur between an existing activity and what is described as a culturally more advanced form of that activity (Lin et al., 2012). Quaternary contradictions occur between the central activity system and outside activity systems when changes to an activity generate conflicts with adjacent activities. While contradictions may create conflicts, interruptions, and clashes, it is through their resolution that changes or development occurs (Gedera and Williams, 2013), they also reveal opportunities for creative innovations, for new ways of structuring and enacting the activity (Foot, 2001). They are “lenses through which participants in an activity can reflect on the developmental trajectory of the activity system and understand its dynamics” (Foot, 2001, p. 12). Contradictions, as a basic principle of activity theory assist in identifying the tensions and conflicts that emerge in an activity. As tensions enter the system they become the moving force behind disturbances and innovations and eventually drive the system to change and develop (Barab et al., 2002).

3. Methodology

3.1 Research Approach

Two distinct approaches to science are often discussed in scientific research. The first, a positivistic approach which “involves the manipulation of theoretical propositions using the rules of formal logic and the rules of hypothetical-deductive logic, so that the theoretical propositions satisfy the four requirements of falsifiability, logical consistency, relative explanatory power, and survival (Lee, 1991). The second is an interpretative approach in which attempts are made to understand phenomena through the meanings that people assign to them (Myers and Avison, 1997). According to Lee (1991, p. 347) interpretive researchers “take the position that people, and the physical and social artifacts that they create, are fundamentally different from the physical reality examined by natural science. The differences between the two approaches are based on fundamental differences in the assumptions about the nature of organizational phenomena (ontology), the nature of knowledge about those phenomena (epistemology), and the nature of ways of studying those phenomena (methodology) (Gioia and Evelyn Pitre, 1990). In a nutshell, Weber (2004) provides an outline of the major differences between the two approaches (see Table 1).

In this research, I adopt a pragmatic view, in that I do not limit myself to choosing between positivistic or interpretative research, but select my research approach in function of the type of knowledge that I seek to produce. Yin (1994) suggests the research strategy should be chosen as a function of the research situation and I accept that “quantitative qualitative, and mixed research (the mixture or combination of quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study) are all superior under different circumstances and it is the researcher’s task to examine the specific contingencies and make the decision about which research

approach, or which combination of approaches, should be used in a specific study” (Johnson and Onwuegbuzie, 2004, p. 22-23). Thus, in Papers 1-3, in which the goal is to confirm hypotheses as well as to measure and quantify the extent of a phenomenon (entrepreneurial intentions), I adopt a positivistic approach. In Paper 4, where the goal is to understand a phenomenon (curriculum development) in terms of a particular system of ideas and from the frame of reference of these ideas, an interpretative approach is used.

3.2 Research Design

3.2.1 Quantitative Design

Quantitative research designs are rooted in positivism and are characterized by the assumption that human behavior can be explained by what may be termed ‘social facts’ which can be investigated by methodologies that utilize ‘the deductive logic of the natural sciences’ (Horna, 1994; Amaratunga et al., 2002). Philip (1998, p. 264) considers quantitative methodologies as those that “conventionally involve traditional scientific methods, frequently with the aid of statistical techniques to test hypotheses and to verify theory, developing precise empirical descriptions and producing knowledge by means of a process that may be replicated exactly by others.” In the author’s opinion “knowledge about the world is often translated into numeric form—condensed into categories and generalizations by an apparently objective researcher striving for what are projected as being results allegedly free from the subjective influence of the researcher's own personal prejudices and biases.” (p. 264).

In quantitative research, a noted strength is that due to its rules, processes, templates, regulations and other guiding principles there is consistency in process and results can be replicable. In fact, when quantitative instruments are valid and reliable they are commonly used in other research projects (Creswell, 2003). Furthermore, it allows researchers to test and validate theories about how and why phenomena occur (Johnson and Onwuegbuzie, 2004). An additional strength of quantitative studies is that it can lead to generalizations if the selection process is well-designed and sample is representative of study, or when the study has been replicated on many different populations and subpopulations (Johnson and Onwuegbuzie, 2004). However, often the survey approach provides only a "snapshot" of the situation, yielding little information on the underlying meaning of the data. Moreover the reliability of quantitative research can be questioned especially when the phenomenon under observation is separated from its natural context and other moderating exogenous factors (Corner, 1991). In addition, the according to Johnson and Onwuegbuzie (2004, p.

19) “the knowledge produced might be too abstract and general for direct application to specific local situations, contexts, and individuals.”

Table 1. Differences between Positivism and Interpretivism (Source: Weber, 2004)

Meta-theoretical assumption about	Positivism	Interpretivism
Ontology	Positivistic ontology is dualistic in nature, in that the subject (the researcher) and object (the phenomena they are researching) are separate and independent.	The perceptions about the world are inextricably bound to a stream of experiences we have had throughout our lives. Therefore, it is not possible to separate the subject from the object
Epistemology	Human experience of the world reflects an objective, independent reality and that this reality provides the foundation for human knowledge.	Sense-making activities occur within the framework of the researcher's life-worlds and the particular goals they have for their work. Knowledge is built through social construction of the world.
Research Object	The objects of the research have qualities that exist independent of the researcher.	The qualities the researcher ascribes to the objects they research are socially constructed; that is they are products of their life-worlds.
Method	Reliance on laboratory experiments, field experiments and surveys. The idea is to generate empirical data that can be analyzed statistically to detect underlying regularities.	Reliance on case studies, ethnographic studies, phenomenographic studies and ethnomethodological studies.
Theory of truth	Statement made by a researcher is true when it has a one-to-one mapping to the reality that exists beyond the human mind (a correspondence theory of truth).	Truth is manifested when a researcher's initial interpretation of some phenomenon conforms to the meaning given to the phenomenon through the researcher's lived experience of it.
Validity	One-to-one mapping exists between the measures and the phenomena that are the focus of the research. To the extent this mapping holds, the data collected by positivist researchers are deemed valid.	Colleagues should be able to examine the evidence the researcher has collected, the research process that she or he has used, the context in which she or he has conducted the research, and perhaps some aspects of the researcher's life-world, and conclude that the claims made by the researcher are reasonable.
Reliability	The research is reliable if results can be replicated by the researcher herself/himself and other researchers.	The research is reliable if researchers can demonstrate interpretive awareness. In other words, in the conduct of their research, interpretive researchers need to show they have acknowledged the subjectivity they bring to the research process and that they have taken steps to address the implications of their subjectivity.

3.2.2 Qualitative Design

Qualitative methods have traditionally been used to explore questions that relate to the quality of or variations in experience, or the meaning of experience for different people (Durand and Chantler, 2014). Although recognizing the difficulty of defining qualitative research, Denzin and Lincoln (2009, p. 3) consider it “a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including fieldnotes, interviews, conversations, photographs, recordings and memos to self.” Smith (1994, p. 491) describes qualitative methodologies as "a set of tools developed to pursue the epistemological mandate of the philosophies of meaning". According to Philip (1998) in qualitative studies, the complexities and ‘difference’ of the worlds under study can be explored and represented. Thus, qualitative research is oriented towards analyzing concrete cases in their temporal and local particularity and starting from people's expressions and activities in their local contexts (Flick, 2009).

In terms of the strength of qualitative methods, it tends to be rich in narrative and description, and instead of providing an outcome they tend to discuss the process (Velez, 2012). It is useful for describing complex phenomena takes into account the context (Johnson and Onwuegbuzie, 2004), and as such provides a more detailed information to explain complex issues. On the other hand, it has been criticized for being too value laden and failing to provide hard, concrete evidence (Velez, 2012). Researchers’ bias (Krantz, 1995) and improper interpretation of data (Kerlinger, 1986) can also be issues. Moreover, Lee (1991) identifies several issues with qualitative research including the lack of controllability, deductibility, repeatability and generalizability.

3.3 Data Collection Method

3.3.1 Papers 1- 3

3.3.1.1 Population

I relied on a survey design to elicit responses. In general, a survey involves the collection of information from a large group of people or a population. According to (Malhotra and Grover, 1998) survey research has three distinct characteristics. First, it involves collection of information by asking people for information in some structured format. Second, it is usually a quantitative method that requires standardized information in order to define or describe variables, or to study

relationships between variables. Third, information is gathered via a sample, which is a fraction of the population, but in a manner that enables the researcher to generalize findings to the entire population.

For Papers 1- 3 the target population comprised all students in a public university in Kenya. In the study of entrepreneurial intentions the use of student population is extensive (e.g., Boyd and Vozikis, 1994; Souitaris et al., 2007; Liñán and Chen, 2009; Franco et al., 2010; Zelwegger et al., 2011). De Clercq et al. (2013, p. 660) argue that “students are ideally suited to the study of entrepreneurial intentions, as opposed to actual entrepreneurial behaviors because reflections on the outcomes that they want to achieve in their future careers are likely in the forefront of their minds; they are relatively homogeneous with respect to their prior work experience; and compared with a general adult sample, they are less likely to have actual entrepreneurial experience—a factor which might confound the level of entrepreneurial intentions.” Mungai (2013) outlines several reasons why students in Kenyan Universities are appropriate for the study of entrepreneurial intention. In the author’s words “they comprise a culturally diverse group selected from all over the country with due consideration of affirmative action in regard to gender composition as inferred from the conceptual framework of the study. Further, members of this particular student population are unlikely to have any or substantial prior business experience that would otherwise present hindsight bias or success bias in their responses (p. 77).

3.3.1.2 Questionnaire

I made use of the questionnaire (Sudman and Bradburn, 1982), which has been a dominant data collection method in entrepreneurship research (e.g., Davidsson, 1995; Krueger et al., 2000; Souitaris et al., 2007; Liñán and Chen, 2009). Closed-ended questionnaires provide several advantages, including: 1) the answers of different respondents are easier to compare; 2) respondents are more likely to answer about sensitive topics; 3) there are fewer irrelevant or confused answers to questions; and 4) answers are easier to code and statistically analyze. Further, for the questionnaire Likert-scales are used. “Measurement (in proper scales) can gauge fine differences between responses provided by participants. The consistent gauging scale provides the basis for precise estimates of the association between variables.” (Mungai, 2013, p. 75). Designing a questionnaire can be a difficult endeavor and several conditions must be met in order for a rating scale to work effectively. For example, each respondent must have a relatively precise and stable understanding of the meaning of each point on the scale and most or all respondents must agree in their

interpretations of the meanings of each scale point (Krosnick and Presser, 2010). Further, new scales and items without reports on reliability of measures are likely to result in responses that vary and have no consistency (Mungai, 2013); therefore, I used previously validated questionnaires items from authors such as Kolvereid (1996) and McGee et al. (2009). The validated questionnaires provided well tested measurement instruments and also provided the opportunity to compare the findings of this research project with those from other studies.

Where adequate, for example to measure our psychological variables (e.g., entrepreneurial intentions and self-efficacy) I used multi-item measures. The use of multi-item measures provides more valid, accurate and reliable data. Nunnally and Bernstein (1994, p. 67) note that “measurement error averages out when individual scores are summed to obtain a total score.” In term of the dependent variables, questions on the students’ entrepreneurial intentions were taken from Kolvereid (1996). Subjects could indicate their answers on a 5-point Likert scale ranging from ‘strongly disagree’ to ‘strongly agree’. For the self-efficacy construct, questions were adopted from McGee et al. (2009) and asked students to rate their ability to manage people. For these questions five multiple choice categories are given, i.e., ‘very little’, ‘a little’, ‘moderate’, ‘quite a bit’, and ‘very much’. Regarding the independent variables, I accounted for 1) students’ attitudes towards entrepreneurship. I assessed attitudes towards a career as self-employed by adapting a belief based scale proposed by Kolvereid (1996). Our measure included indexes that represent reasons in favor of self-employment and reasons favoring organizational employment. 2) subjective norm, which was measured by adopting questions drawn from Kolvereid (1996). Items for subjective norms measured both students’ normative belief and motivation to comply. 3) Perceived behavioral control, which took into consideration self-efficacy and controllability. The questions relating to perceived behavioral control were also taken from Kolvereid (1996). Further, single item constructs were used to identify 4) past entrepreneurial exposure, including family entrepreneurship and past business startup experience, 5) human, social and financial capital and 6) demographic information, including age, academic year, gender and tribal ethnicity

3.3.1.3 Data integrity

For Papers 1-3, I used a questionnaire which may result in several methodological issues. First, the questionnaire is based on self-reported data which despite being the typical mechanism for assessing and understanding certain individual differences, such as entrepreneurial intentions and self-efficacy (Kickul et al., 2009), also tend to artificially inflate relationships. (Basu and Virik,

2008) Thus, the possibility exists that students' projections of their future behavior may be biased and studies that rely on subjective measures may not be uncovering true, significant effects (Straub et al., 1995). However, self-reported data can be useful since an accurate assessment of constructs such as cognitive style and intentions must occur from the individual (Kickul et al., 2009).

Second, it is possible that the questionnaire is affected by issues of reliability and validity, especially as I deal with perceptual measures. Assessment tools such as questionnaires can be useful in measuring intangible constructs such as attitudes, behaviors, perceptions or personalities. However, it is only valuable when there is confidence with what the test actually measures and how well it does so (Knortz, 2009). To be beneficial these test must ensure both validity and reliability. Reliability refers to "the extent to which results are consistent over time and are an accurate representation of the total population under study. If the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable." (Joppe, 2000, p. 1). In contrast, validity "determines whether the research truly measures that which it was intended to measure or how truthful the research results are" (Joppe, 2000, p. 1). Or in other words, it measures the 'correctness of measure'.

To ensure that our data was not affected by issues of reliability and validity, I undertook several tests. First, to test the reliability of the measurement scale, I relied on two measures of reliability: cronbach alpha (Cronbach and Meehl, 1979) and composite reliability (Peterson and Kim, 2013). First, all the scales in our study were subjected to factor analysis to test the constructs' underlying dimensions and to look for a more parsimonious set of variables for subsequent analysis. The construct reliability was assessed using cronbach's alpha. Cronbach's alpha provides a measure of the internal consistency of a test or scale. Internal consistency describes the extent to which all the items in a test measure the same concept or construct; that is, homogeneity. It is recommended that cronbach's alpha surpass the 0.7 threshold (Hair et al., 1998). Second, after the measurement model was constructed, each construct's composite reliability was assessed. Composite reliability is a measure of internal consistency comparable to coefficient alpha (Fornell and Larcker, 1981). However, this measure is superior to cronbach alpha in that it does not assume equal item loadings (Howell, 1996). Nunnally et al. (1967) and Gefen et al. (2000) recommended that the composite reliability be higher than 0.7.

To assess validity I considered construct validity, which refers to "the degree to which inferences can legitimately be made from the operationalization in your study to the theoretical constructs on

which those operationalization were based” (Trochim, 2006). I assessed two types of construct validity convergent and discriminant validity. In terms of convergent validity, there should be a correspondence or convergence between similar construct: in other words, measures of constructs that theoretically should be related to each other are, in fact, observed to be related to each other. Convergent validity was assessed by measuring the average variance extracted (AVE), which is the average amount of variation that a latent construct is able to explain in the observed variables to which it is theoretically related (Farell and Rudd, 2009). Fornell and Larcker (1981) recommend an AVE value above the 0.5 threshold. Additionally, items with t-value > 2.0 also provide evidence of convergent validity (Gerbing and Anderson, 1988). Furthermore, discriminant validity was assessed looking at correlations. It is accepted that items should correlate more strongly with their own construct than they are with and other; in other words measures of constructs that theoretically should not be related to each other are, in fact, observed to not be related to each other. This is an indication that they are perceived as belonging to the same theoretical construct (Messick, 1998; Liñan and Chen, 2009). I followed Fornell and Larcker’s (1981) and Farrell and Rudd’s (2009) method for assessing the discriminant validity of two or more factors. First, I compared the AVE of each construct with the shared variance (square of the factor loadings) between constructs. When the AVE for each construct is greater than its shared variance with any other construct, discriminant validity is supported.

Another possible limitation of questionnaires is related to the issue of response bias. Response bias is a generic term for a whole range of answers to interviews, surveys or questionnaires which bias the response (from the correct, honest, accurate response). According to Furnham (1986, p. 385), “they include the social desirable or faking-good response as well as its opposite faking bad (or mad), acquiescence or yea-saying (the tendency to agree irrespective of the question) or its opposite or nay saying, extremity response set (always choosing extreme opposites) or its opposite, mid-point response set etc.” Given that strategies such as confidentiality and anonymity for respondents may assist in minimizing this bias, in this study I took precautions to “minimize bias responses due to social desirability, acquiescence or consistency with 'assumed' research hypotheses.” (De Clercq et al., 2013). Respondents were given the opportunity to complete the survey anonymously. Also, they were guaranteed complete confidentiality and constantly reminded in the survey instrument to answer the questions as honestly as possible since there were no wrong or right answers.

3.3.2 Paper 4

3.3.2.1 Population

For Paper 4, I relied on key informant (Gilchrist and Williams, 1999). Key informants possess special knowledge or have access to perspectives, experiences, or observations that are not directly available to the researcher (Hudelson, 2005). According to Tremblay (1957), key informants should ideally live up to the following criteria: 1) based on their role within the organization or community, key informants should have complete and specialized knowledge to the kind of information being sought by the researcher; 2) in addition to having access to the information desired, the informant should have absorbed the information meaningfully; 3) they are willing to communicate their knowledge to the interviewer and to cooperate as fully as possible; 4) they should be able to communicate their knowledge in a manner that is intelligible to the interviewer; and 5) they should be objective and unbiased. The criteria outlined by Tremblay (1957) represent an ideal situation; however, in reality before conducting the interview I was only able to verify criteria 1; that is, the informant's role in the organization or community. Therefore, I targeted informants that 1) held a managerial role with respect to educational development, 2) played an active role in the curriculum development process, and 3) is involved in the activities of the Universities, Business and Research in Agricultural Innovation (UniBRAIN) program.

3.3.2.2 Interview

Data was gathered by means of semi-structured research interviews (Kvale and Brinkmann, 2009). I used semi-structured in-depth interviews which can be defined as “a qualitative research technique that involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program, or situation (Boyce and Neale, 2006, p. 3). The technique gives a respondent the time and scope to talk about their opinions on a particular subject. The objective is to understand the respondent's point of view rather than make generalizations about behavior (Turner, 2010). In-depth interviews are useful when a researcher is seeking detailed information about a person's thoughts and behaviors or want to explore new issues in depth. They are often used to provide a more complete picture of what happened and why. Thus, the primary advantage of in-depth interviews is that they provide much more detailed information than what is available through other data collection methods, such as, for example, surveys (Boyce and Neale, 2010), and it can be particularly useful in understand complex social situations

(DiCicco-Bloom and Crabtree, 2006). The informants describe their personal feelings, opinions, and behaviors but also generalize “about patterns of behavior, after summarizing either observed (actual) or expected (prescribed) organizational relations” (Seidler, 1974, p. 817). The interviews are conducted with a fairly open framework which allows focused, conversational, two-way communication. The participants were free to deviate from the scheduled themes and the interviewer intervened only to clarify issues or to introduce a new theme. The interviews were audio-taped and transcribed by the author (Marshall, 1996).

3.3.2.3 Data Integrity

Developing reliability validity standards in qualitative research is challenging because of the necessity to incorporate rigor and subjectivity as well as creativity into the scientific process (Johnson, 1999; Whittemore et al., 2001). For instance, Whittemore et al. (2001) summarized some of the criteria necessary to ensure validity (Table 2)

Thus, to ensure the reliability and validity of the findings, first I aimed at achieving methodological coherence in which there was congruence between the research question and the components of the method; that is, I attempted to guarantee that the question match the method, which in turn matches the data and the analytic procedures (Morse et al., 2008). Also, I attempted to ensure sampling adequacy by collecting sufficient data to account for all aspects of the phenomenon.

I used an appropriate sample consisting of participants who best represent or have knowledge of the research topic. According to Paul (1953), qualitative researchers consider the informant method to be very reliable, as long as researchers stick close to the guidelines, recruiting representative, reflective, articulate, and personable informants. However, Homburg et al. (2012) note that given the complex and subjective task key informants need to perform the accuracy of their response is often considered. The key informants may 1) tend to report what they believe the researcher expects to see, or 2) report what reflects positively on their own abilities, knowledge, beliefs, or opinions 3) may suffer from recall bias. Thus, to reduce the possibility of these issues, I queried multiple informants (Kumar et al., 1993) and triangulated multiple data sources following the recommendation of Patton (1990) and Whittemore et al. (2001). I collected supplementary data, such as information from archival sources (Homburg et al., 2012), including video recordings and project reports. This technique also allowed us to have “efficient and effective saturation of categories, with optimal quality data and minimum dross” (Morse, 2008). Further, to ensure the

rigidness and replicability (i.e., reliability) of the procedure by which I interpreted the data, I made use of coding schemes and provided an audit trail.

Table 2. Validity Criteria Development (Adapted from Whittemore et al., 2001)

Author	Validity Criteria
Altheide and Johnson (1994)	Plausibility, relevance, credibility, importance of topic
Eisenhart and Howe (1992)	Completeness, appropriateness, comprehensiveness, credibility, significance
Leininger (1994)	Credibility, confirmability, meaning in context, recurrent patterning, saturation, transferability
Lincoln (1995)a	Positionality, community as arbiter, voice, critical subjectivity, reciprocity, sacredness, sharing perquisites of privilege
Lincoln and Guba (1985) ^a and Guba and Lincoln (1989) ^a	Truth value, applicability, consistency, neutrality
Marshall (1990)a	Goodness, canons of evidence
Maxwell (1992, 1996)a	Descriptive validity, interpretive validity, theoretical validity, evaluative validity, generalizability
Sandelowski (1986, 1993)	Credibility, fittingness, auditability, confirmability, creativity, artfulness
Smith (1990)a	Moral and ethical component
Thorne (1997)	Methodological integrity, representative credibility, analytic logic, interpretive authority

3.4 Analyses

In Papers 1-3, I used regression analyses. Regression analysis is useful in testing hypotheses and identifying the relationship between variables, which are our goals in in first three papers. In Paper 1, in order to verify the role of attitude, subjective norms and perceived behavioral control in influencing entrepreneurial intentions, as well as explore the moderating effect of ethnicity. To estimate the analytical model, I conducted a linear regression analysis. I also used T-tests and Wald tests to check for statistically significant differences among the ethnic groups.

In Paper 2, ordinary least square was used to investigate the relationship between past exposure to entrepreneurship and entrepreneurial intentions and self-efficacy and entrepreneurial intentions, respectively. In study II, I estimated the following equation:

$$Y_i = \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \varepsilon \quad (\text{Eq. 2})$$

where: Y_i = entrepreneurial intention (dependent variable), $X_1 - X_n$ are explanatory variables, $\beta_1 - \beta_n$ represent the parameter estimates for the explanatory variables and ε = error term. The analysis is conducted in a hierarchical format. The control variables, together with gender/ethnicity are entered in step 1. In step 2, I entered the variables of interest: family entrepreneurship and past business startup experience; the two-way interactions of family entrepreneurship $\times$ gender/ethnicity and past business startup experience $\times$ gender/ethnicity are entered into step 3. In addition, the two-way interaction is graphed.

Likewise, in Paper 3, I also used ordinary least square to estimate the model:

$$\text{Entrepreneurial Intentions}_s = \alpha + \beta_1(\text{HC}) + \beta_2(\text{SC}) + \beta_3(\text{FC}) + \varepsilon \quad (\text{Eq. 3})$$

The outcome variable is entrepreneurial intention and the unit of analysis is the student (s). The independent variable is human capital (HC), social capital (SC) and financial capital (FC). As I am concerned with the influence of potentially confounding factors, I include controls, represented by δ_s .

A possible limitation of regression analysis is related to the issue of multicollinearity. Umali and Barrios (2014, p. 1798) define multicollinearity as “a concept where two or more predictor variables in the regression model are highly correlated resulting in undue influence on the quality of estimates of regression coefficients.” The authors believed that the “presence of multicollinearity increases the standard error of the estimated coefficients; hence, any small change in the data values causes big change in the functional form” (p. 1798). Hence, multicollinearity tends to make the interpretation of the model difficult (Malhotra, 2014) and it becomes challenging to assess the relative importance of predictor variables in the model (Umali and Barrios, 2014). To minimize issues of multicollinearity I ensured that the variance inflation factors (VIF) were below the 10 threshold suggested by (Hair et al., 1998). To achieve this goal, variables from which interaction terms were constructed were mean centered (Smith and Sasaki, 1979; Boling et al., 2015)). The resulting VIF scores were within tolerance

In Paper 4, I use content analysis following the style of (Barab et al., 2004). I characterized the curriculum development activity from an Activity Theory perspective. The curriculum development activity system was conceptualized based on reading through the data and then placing various labels within each of the components of Engeström's (1987) activity system triangle.

In terms of the contradictions, following the example of Bonneau (2013), I did not conduct an exhaustive discussion of all the tensions in this activity system, but rather highlight those that regularly appear in the discourse. I also followed the coding rules of Murphy and Rodriguez-Manzanares (2008), which include: 1) defining a contradiction as a tension, contrast, denial, or opposition between two propositions; 2) assigning only one contradiction to a unit of meaning; 3) reporting the contradiction in as few sentences as possible, with the subject of the sentences being the same; and 4) the sentences are reported using the actual words of the interviewee as much as possible. Once the initial set of contradictions had been prepared, they were carefully reviewed, referring frequently to the original transcripts.

Finally, to identify the root causes of contradictions, I searched the data for common 'threads' between the contradictions by asking the following 'generative' question as a schema: 'why did the contradiction happen?' Through a number of iterations I identified the root causes of contradictions.

4. Main Findings

4.1 Entrepreneurial Intentions: A Cultural Perspective.

The first paper examined the role of tribal ethnicity in influencing entrepreneurial intentions among university students. The study aimed to answer how and to what extent does indigenous ethnic culture influence entrepreneurial intentions models. I based our analysis on the theory of planned behavior and hypothesized that the higher the attitude, subjective norm and perceived behavioral control with respect to self-employment, the stronger is the students' intention to become self-employed. From our findings, I found that attitude and perceived behavioral control constructs appear to have the potential to explain the variance in students' entrepreneurial intention. Further, and more importantly, I hypothesized that tribal ethnicity moderated the relationships between the proximal predictors (attitude, subjective norm and perceived behavioral control) and entrepreneurial intentions. First, our results show that the Luhya and Luo tribes were less likely to have entrepreneurial intentions when compared to the Kikuyu tribe, which is considered by many to be one of the most enterprising tribes of Africa (Mungai, 2013). Moreover, and more importantly, the results show that the effect of the proximal predictors on entrepreneurial intentions is influenced by culture. For example, the effect of perceived behavioural control was different when comparing the Kikuyu and Kamba tribes. Taken, together, my finding leads me to conclude that relying solely on the proximal predictors (attitude, subjective norm and perceived behavioral control) may provide an incomplete picture, and it is necessary to consider the uniqueness of setting when designing analytical models. In summary, Paper 1 illuminates a scenario in which cultural forces play a key role in determining entrepreneurial intentions. It departs from traditional measures of entrepreneurial intentions which commonly focus on national cultures, without considering that

sub-cultural variations, especially within culturally heterogeneous societies may be equally or more important in shaping entrepreneurial behavior.

4.2 Influence of Past Exposure on Entrepreneurial Intentions: Developing Country Perspective.

The second paper examined the effect of past exposure to entrepreneurship on entrepreneurial intentions. The study aimed to provide empirical evidence that the hypothesized relationship between past exposure and entrepreneurial intentions may not play out in the same way in developing economies, as it does in more advanced economies. It aimed to answer the following research question: what is the effect of past entrepreneurial exposure on entrepreneurial intentions in an African setting? I based our analysis on the social learning theory and hypothesized that past business startup experience and exposure to family entrepreneurship will be related to entrepreneurial intentions. I found that past business startup experience amplified entrepreneurial intention. In contrast, family entrepreneurship lowered it. Further, and more importantly, we hypothesized that gender and tribal ethnicity moderated the relationships between the past exposure variables (past business startup experience and exposure to family entrepreneurship) and entrepreneurial intentions, in such a way that in comparison to male Kikuyu students (reference group), there will be a greater increase in entrepreneurial intentions of female students of the Kikuyu tribe and male and female students from the Luhya tribe when they are exposed to entrepreneurship. Our results show that gender and ethnicity moderates the past business startup experience-entrepreneurial intention relationship, in such a way that there is a greater increase in entrepreneurial intentions of female Luhya students than for male Kikuyu students (reference group) when they have past business startup experience. Based on the findings I was able to conclude that the focus in the extant literature on the positive aspects of past exposure may not fully reflect the reality of lower-income countries. Therefore, rather than casually assuming these types of relationship, it is important to consider the specificity and quirks of the environment. Moreover, policy makers and other development practitioners who want to encourage entrepreneurial start-ups should focus on providing business startup experience and start-up experiences and customizing initiatives that consider the deeper structural elements of society such as gender and ethnicity.

4.3 The Influence of Human, Social and Financial Capital on Entrepreneurial Intentions in an Emerging Economy Context

The third paper examined the effect of human, social and financial capital on entrepreneurial intentions. The study aimed to scrutinize the relationships between the aforementioned variables in an emerging economy context. It aimed to answer the following research question: what is the effect of human, social and financial capital on entrepreneurial intentions in the Kenyan setting? I adopt a resource-based view to argue that human, social and financial capital will be positively related to entrepreneurial intentions. My study produced mixed results. Contrary to expectations, human capital was not related to entrepreneurial intentions. As hypothesized, social capital had a significant and positive association with entrepreneurial intentions. Further, and interestingly, there was a significant and negative correlation between financial capital and entrepreneurial intention. In addition, I examined interaction effects.

The results show that gender moderates the human capital-entrepreneurial intention relationship, in that there is a greater increase in entrepreneurial intentions of female students than for male students (reference group) when they have tacit human capital. Likewise, gender also moderates the financial capital-entrepreneurial intention relationship, in such a way that there is a greater increase in entrepreneurial intentions of female students than for male students (reference group) when they have access to financial capital. Based on the findings, I am able to conclude that given the importance of social capital in our setting, policy-makers and others looking to promote entrepreneurship should look to promote network development strategies. Moreover, they must seek ways to break the social stigma that entrepreneurship is not a prestigious occupation. Furthermore, I believe that given the unique characteristics of many emerging economies research is needed that explores the micro level social processes that influence entrepreneurship. There is a need to conduct studies that operationalize key constructs taking into account context-specific conditions.

4.4 Conflicts and Tension in Curriculum-Making: Sources of Complexity in Inter-System Curriculum Development.

The fourth paper provides a qualitative account of a participatory approach to curriculum reform and focuses on the challenges and contradictions such an approach introduces into a curriculum development activity. I aimed to explore how the process of curriculum reform organized within the UniBRAIN framework and identify what tensions (contradictions) may arise within this setting?

I use activity theory as an analytical framework for identify key components of a participatory curriculum development activity which in turn allowed us to understand how the participatory curriculum activity is organized and its elements interrelated. I was able to provide a rich

description of the activity system based on the activity system nodes: subject, object, artefacts, division of labor, community and rules. Further, I was able to identify several contradictions and tensions underlying the activity system. In particular, I identified contradictions that occurred within the nodes, for example, between the subjects of the activity—‘primary contradictions’; as well as, contradictions that happen between the nodes, for example, between the subject and division of labor—‘secondary contradictions’. Moreover, these tensions stem from the lack of consensus on curricular issues, resource insufficiency, informal relations, rigid rules and organizational structures. Based on these findings, I conclude the curriculum development process is complex and affected by a range of contradictions which should not be viewed negatively but as a source of change and innovation.

5. Implications

The thesis brings to the forefront context-sensitive nature of entrepreneurship and our discussion is a step towards understanding the nature and dynamics of entrepreneurship from a developing country standpoint. While the call for considering context in entrepreneurship research is not new (Welter, 2010), evidence from the developing country context is still scant (Iakovleva et al., 2011). Thus, context-specific investigation offers prospects for providing useful information that can guide developing countries efforts to increase entrepreneurial activity. Like much previous research, our results demonstrate that contextual cues (e.g., culture and gender role orientation) play an important role in entrepreneurship. This means that, for instance, entrepreneurial outcomes, such as entrepreneurial intentions and entrepreneurial self-efficacy are likely biased by a variety of such cues. We must then account for these biases and work with or around such cognitive shortcuts.

Further, my research adds to the discussion on what type of “theory in context” entrepreneurship research requires; that is, whether researchers should aim for customized theory or apply more generalized theory that would be applicable across contexts (Rousseau and Fried, 2001). The present research suggests that the former provides a better opportunity for exploring the depth and dynamism of entrepreneurship. For example, our findings show that the general application of intention models without the appropriate cultural modifications may conceal important variations that may be useful in understanding how and why entrepreneurial mindsets are developed. Therefore, theories on entrepreneurship, if they are to be relevant research concepts may need to be re-conceptualized, as we have seen, in order to reflect the truth.

My study also adds to the literature on entrepreneurial intentions and cognition by uncovering the divergent effects of different antecedents, for example attitude, subjective norms, perceived behavioral control, past business startup experience, entrepreneurial family members, human capital, social capital and financial capital. Although, I only focused on students in a Kenyan

university, I believe that the results may be generalizable to similar settings, in particular in Sub-Saharan Africa. Interestingly, the behavior of these variables does not always follow the patterns commonly found in studies (of a similar nature) that originate from western society. As I show, in certain instances these variables may also inhibit the intention to become an entrepreneur. For instance, an interesting finding of this study was the negative association between family entrepreneurship and entrepreneurial intention. Thus, I believe that when research is conducted in contexts that support entrepreneurship (e.g., advanced societies) the deterministic role of the context sometimes becomes invisible; however, in developing countries, the influence of context cannot be so easily ignored and, it may be necessary to re-examine many of the assumptions held about entrepreneurship.

I also provided a case study account of a participatory curriculum development activity that aimed to create a curriculum that develops employable and entrepreneurial students. The lack of evidence of curriculum reform initiatives in developing countries has profound implications for those wishing to enact efficient curriculum development processes and for educational system in general. In Africa, the use of participatory curriculum development models is not widespread, and in certain instances represents a paradigm shift from the more traditional ‘top-down’, university-centered approach. Thus, research that focuses on the dynamics of curriculum reform is warranted; especially, in light of trying to understand how contextual realities and capacities affect the process. The present study makes a contribution by shedding light on the conditions for participatory curriculum development processes in a super-complex reality. I highlight how the curriculum development activity is constrained by contradictions and provides a snapshot of the multiple aspects that should be considered when initiating reform processes. Moreover, from a methodological standpoint, I show the usefulness of Activity Theory to model complex situations. Activity Theory underscores the need to look at real activity in real situations and in squarely facing the conflux of multifaceted, shifting, intertwining processes that comprise human thought and behavior.

In terms of the practical implications, the question that emerges is: Given my research findings, what can be done in order to help enhance the entrepreneurial mindset and intentions of students? Based on the study findings, I suggest that Higher Education Institutions support students to develop their positive attitude towards entrepreneurship. Especially, to help them move away from the social stigma that wage jobs are better. Entrepreneurship programs should also help students develop their sense of control, as well as human and social capital. From the current research we

can see that one way of accomplishing this task is by providing business start-up experience. As such, entrepreneurship education programs should be designed to provide experiential learning situations. Scholars have long recognized the importance of providing practical entrepreneurial experience (e.g., Gibbs, 2002; Cooper et al., 2004; Corbette, 2005; Politis, 2005). Moreover, the provision of business startup experience may reduce gender-based and tribal-based differences in entrepreneurial intentions. Also, in terms of our study on curriculum reform, our results can inform practitioners and decision makers who seek to design and implement effective collaborative processes. The identification of contradictions has important implications since it is through their resolution that changes or development occurs. Thus, our conceptual tools will enable designers to achieve appropriate design solutions by addressing the root problems identified in this study.

6. Limitations and Future Studies

There are several limitations that suggest caution in assessing our findings. In particular, in Papers 1-3, a cross-sectional approach was adopted, in which all the measurements for a sample member are obtained at a single point in time. Although, cross-sectional studies can be useful in estimating the prevalence of outcome of interest because samples are usually representing the entire population (Levin, 2006), it is difficult to infer causality. According to Scandura and Williams (2000), a cause-and-effect relationship can only be asserted if there is true covariation between the variables under investigation, the procedures used to gather the data demonstrate that the cause preceded the effect, and alternative explanations have been discarded. Hence future studies should look into assuring causality by conducting longitudinal studies, which may allow a researcher to establish that the cause preceded the effect and by adopting experimental designs that would allow for control over the behavioral variables.

Another limitation is our ability to make generalizations. For instance, in Papers 1-3, we investigated students in a single country. In addition, in Paper 4 we explored a single case: UniBRAIN's participatory curriculum development activity. Given that it is possible to improve external validity (ability to generalize) by replicating a study, future research should aim to conduct similar studies in a variety of places, with different samples and at different times.

Lastly, although we used quantitative and qualitative approaches they were for separate studies; therefore we failed to take advantage of the benefits of a mixed methodology approach. Such techniques might be useful in our setting and we believe that when appropriate, for example, when the research questions permit, researchers should consider the advice of Johnson and Onwuegbuzie (2004, p. 18) and "collect multiple data using different strategies, approaches, and methods in such a way that the resulting mixture or combination is likely to result in complementary strengths and non-overlapping weaknesses."

7. References

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8. Annex

Annex 1. Research Questions, Hypotheses, Method of Data Collection and Data Analysis				
Problem	Research question	Hypotheses,	Method of data collection	Data analysis
The influence of culture on entrepreneurial intentions is examined at the indigenous ethnic-group level within the domestic Kenyan context. Kenya is multi-ethnic and therefore multi-cultural and thus, the use of a single national culture to represent a culturally heterogeneous society is likely to be inappropriate. This study examines whether it is necessary to consider indigenous ethnic culture when using intention models	How and to what extent does indigenous ethnic culture influence entrepreneurial intentions models?	<p>H1a: The higher the attitude with respect to self-employment, the stronger is the students' intention to become self-employed.</p> <p>H1b: The higher the subjective norm with respect to self-employment, the stronger is the students' intention to become self-employed.</p> <p>H1c: The higher the perceived behavioral control with respect to self-employment, the stronger is the students' intention to become self-employed.</p> <p>H2: There is a significant difference in the level of entrepreneurial intentions among the Kikuyu, Kamba, Luhya and Luo tribes in Kenya.</p> <p>H3a: Ethnicity moderates the relationship between attitude and entrepreneurial intention, such that this relationship is weaker for students from the Kamba, Luhya and Luo tribes than for Kikuyu students.</p> <p>H3b: Ethnicity moderates the relationship between subjective norms and entrepreneurial intention, such that this relationship is stronger for students from the Kamba, Luhya and Luo tribes than for Kikuyu students.</p> <p>H3c: Ethnicity moderates the relationship between perceived behavioral control and entrepreneurial intention, such that this relationship is weaker for students from the Kamba, Luhya and Luo</p>	Questionnaire	<p>Means, standard deviation and correlations.</p> <p>Ordinal Logistic Regression</p>

		tribes than for Kikuyu students.		
In the developing country context with market quirks such as the predominance of necessity entrepreneurship, informality and resource scarcity, past exposure may have an unpredictable influence on entrepreneurial intention. This study explores the aforementioned issue.	What is the effect of past entrepreneurial exposure on entrepreneurial intentions in an African setting?	<p>H1: Family entrepreneurship will be related to entrepreneurial intentions</p> <p>H2: Past business startup experience will be related to entrepreneurial intentions</p> <p>H3a: The relationship between family entrepreneurship and entrepreneurial intentions will be moderated by ethnicity/gender. That is, there will be a greater increase in entrepreneurial intentions of female Kikuyu students than for male Kikuyu students when they have entrepreneurial parents/siblings.</p> <p>H3b: The relationship between family entrepreneurship and entrepreneurial intentions will be moderated by ethnicity/gender. That is, there will be a greater increase in entrepreneurial intentions of male Luhya students than for male Kikuyu students when they have entrepreneurial parents/siblings.</p> <p>H3c: The relationship between family entrepreneurship and entrepreneurial intentions will be moderated by ethnicity/gender. That is, there will be a greater increase in entrepreneurial intentions of female Luhya students than for male Kikuyu students when they have entrepreneurial parents/siblings</p> <p>Hypothesis 3d: The relationship between past business startup experience and entrepreneurial intentions will be moderated by ethnicity/gender. That is, there will be a greater increase in</p>	Questionnaire	<p>Means, standard deviation and correlations.</p> <p>Ordinary Least Square Regression</p>

		<p>entrepreneurial intentions of female Kikuyu students than for male Kikuyu students when they have past business startup experience.</p> <p>H3e: The relationship between past business startup experience and entrepreneurial intentions will be moderated by ethnicity/gender. That is, there will be a greater increase in entrepreneurial intentions of male Luhya students than for male Kikuyu students when they have past business startup experience.</p> <p>H3f: The relationship between past business startup experience and entrepreneurial intentions will be moderated by ethnicity/gender. That is, there will be a greater increase in entrepreneurial intentions of female Luhya students than for male Kikuyu students when they have past business startup experience.</p>		
Human, social and financial capital are recognized as determinants of entrepreneurial intentions. Yet few studies have operationalized these constructs within the emerging economy context; however, such studies are needed in order to provide evidence that can shape entrepreneurship programs	What is the effect of human, social and financial capital on entrepreneurial intentions in an African setting?	<p>H1a: There is a positive relationship between tacit human capital and entrepreneurial intentions</p> <p>H1b: There is a positive relationship between social capital and entrepreneurial intentions</p> <p>H1c: There is a positive relationship between financial capital and entrepreneurial intentions</p> <p>H2a: The relationship between tacit human capital and entrepreneurial intentions will be moderated by gender, such that there will be a greater increase in the entrepreneurial intentions for female students than for male students when they have tacit human capital.</p>	Questionnaire	<p>Means, standard deviation and correlations.</p> <p>Ordinary Least Square Regression</p>

		<p>H2b: The relationship between social capital and entrepreneurial intentions will be moderated by gender, such that there will be a greater increase in the entrepreneurial intentions for female students than for male students when they have social capital.</p> <p>H2c: The relationship between financial capital and entrepreneurial intentions will be moderated by gender, such that there will be a greater increase in the entrepreneurial intentions for female students than for male students when they have financial capital.</p>		
<p>Little is known about the processes whereby administrators and other leaders make decisions about curricula issues, how they manage the curriculum development process and what contradictions and tensions may arise as they shift from the traditional curriculum to the 21st century curriculum.</p>	<p>How is the process of curriculum reform organized within the UniBRAIN framework?</p> <p>What tensions (contradictions) may arise within this setting?</p> <p>What are the source(s) of these contradictions?</p>		<p>Personal Interviews</p> <p>Video recordings</p> <p>Project reports</p>	<p>Qualitative analyses</p> <p>Activity Theory analytical framework</p>

9. Research Papers

9.1 Entrepreneurial Intentions: A Cultural Perspective

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Abstract

The theory of planned behaviour is widely used to measure entrepreneurial intentions. Thus, we investigate the possible moderating role of indigenous ethnic culture on the attitude-intention, subjective norm-intention and perceived behavioural control-intention relationships. In support of the theory of planned behaviour, attitude and perceived behavioural control have a positive influence on the odds of becoming a nascent entrepreneur. However, subjective norm was not a significant predictor. The inclusion of ethnicity significantly improved the predictability of entrepreneurial intentions. We found that, in comparison with students from the Kikuyu tribe, students from the Luhya and Luo tribes are less likely to have intentions becoming nascent entrepreneurs. Finally, our findings confirm significant moderating effects of ethnicity. We draw a number of implications for the theory and practice of entrepreneurship education.

Keywords:

Intentions; ethnicity; Kenya; theory of planned behaviour; context; students

Introduction

Prior research has demonstrated that entrepreneurship is influenced by contextual factors (e.g., Manolova, Eunni, & Gyoshev, 2008; Noorderhaven, Thurik, Wennekers, & Stel, 2004; Valdez & Richardson, 2013). Among these factors the role of culture has received much attention. According to Krueger, Liñán, and Nabi (2013: 703), ‘a greater understanding of the relationship between cultural issues and entrepreneurial activity is important because of its

implication for national and regional development and growth.’ Research has shown that members of different cultures vary systematically in aspects of their interpretation of entrepreneurship, the importance they place on entrepreneurship, as well as their entrepreneurial behaviour (e.g., Hansen, Deitz, Tokman, Marino, & Weaver, 2011; Mueller & Thomas, 2001; Schlaegel, He, & Engle, 2013). It is assumed that persons are drawn toward entrepreneurship because it is compatible with values to which the individual was previously conditioned (Dana, 1995).

While past studies have provided evidence of the interplay between culture and entrepreneurship, there are still some noticeable gaps in the extant literature. For instance, Liñán, Urbano, & Guerrero (2011) note that cognitive models wishing to explain variations in entrepreneurial intentions among regions do not usually include environmental cognitive elements. Moreover, although the culture–entrepreneurial intentions relationship has been discussed previously (e.g., Liñán & Chen, 2009; Pruett, Shinnar, Toney, Llopis, & Fox, 2009), the issue of tribal and indigenous tribal identity has not been studied. Yet national culture is not the only type of culture that influences entrepreneurship. Instead, entrepreneurial behaviour is influenced by different levels of culture including religion, family and ethnic cultures, among others. For example, (Mungai, 2013) argues that in culturally heterogeneous societies, indigenous ethnic cultures play a more dominant role in moulding the values and perceptions of its citizens than national cultures. However, there is limited empirical research focusing on the influence of ethnic culture on entrepreneurship and even less examining its impact on entrepreneurial intention.

In this study, the influence of culture on entrepreneurial intentions is examined at the indigenous ethnic-group level within the domestic Kenyan context. Kenya is multi-ethnic and therefore multi-cultural and thus, a single national culture to represent a culturally heterogeneous society is likely to be inappropriate (Bochner & Hesketh, 1994). Moreover, given that indigenous ethnic groups can be considered as subcultures within a country, the study of culture by ethnicity within a domestic context is feasible and appropriate since each ethnic group will have its own unique set of cultural values (Kwok & Uncles, 2005). The central question underlying this research is: How and to what extent does indigenous ethnic culture influence entrepreneurial intentions models? To answer this question we utilize the theory of planned behaviour to measure entrepreneurial intentions among students. More specifically, we examine the differences, if any, in entrepreneurial intentions among four

major ethnic groups, namely the Luo, Kikuyu, Kamba and Luhya. We also investigate whether the effects of attitude, subjective norm and perceived behavioural control are the same or different among the four ethnic groups.

This study makes several important contributions to theory and practice. Firstly, although intentions is becoming ubiquitous, the influences of culture has not been widely explored. Thus, by adopting a cultural perspective on entrepreneurial intention, this study addresses one of the limitations of previous studies and helps shed light on the utility of intention models in culturally heterogeneous settings. Secondly, this study is one of the few pieces of research on intentions that empirically measures culture at an indigenous ethnic group level. It aims to provide evidence for the assumption that cultural differences at this level could directly influence intention and/or mediate or moderate the relationships within the model. Thirdly, in terms of the practical utility of this study, few studies have examined entrepreneurial intention in the East African setting; consequently, there is limited empirical evidence to guide decision-makers looking to develop entrepreneurship programs. Most notably, the lack of understanding of motivational factors and barriers to entrepreneurship hinders the development of adequate intervention programs. Authors such as Liñán and Chen (2009) and Kibler (2013) believe that an understanding of the formation of entrepreneurial behaviour before there is any observable action is important, especially when trying to encourage enterprising activity. Thus, our study will contribute to this approach by examining factors that might be relevant in explaining the variance in entrepreneurial intention. Finally, the African continent is under renewed and widespread interest because of its relatively rapid development. In this setting, there is still a great need for research to shed further light on the dynamics and effects of entrepreneurship. We aim to contribute to this area.

Theory Development

Theory of Planned Behaviour

Intention models are commonly used to predict behaviour, especially as they are considered to offer a coherent, parsimonious, highly-generalizable, and robust theoretical framework for understanding and predicting behaviour (Krueger, Reilly, & Carsrud, 2000). Among these models, the theory of planned behaviour is one of the most widely cited (Krueger et al., 2000). The theory helps examine and interpret, from a social cognition perspective, key antecedents to performing behaviour. It is based on the premise that intention can be an

effective predictor of actual behaviour and that behaviour is intentionally planned (Ajzen, 1991). The theory of planned behaviour is increasingly used in entrepreneurship research to predict entrepreneurial intention (e.g., Engle et al., 2010; Lüthje & Franke, 2003) and to explore the antecedents to entrepreneurial behaviour (e.g., Carr & Sequeira, 2007; Díaz-García & Jiménez-Moreno, 2010; Zhao, Seibert, & Hills, 2005). More so, entrepreneurial intention has been considered as the first step to entrepreneurship development (Krueger & Carsrud, 1993).

Given that the theory has been widely discussed in the extant literature, we only present a brief summary of its underlying constructs. The central construct of the theory of planned behaviour is the individual's intention to perform a certain behaviour (Autio, Keeley, Klofsten, Parker, & Hay, 2001). Ajzen (1991) contends that intentions capture the motivational factors that influence a behaviour; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behaviour. The theory views the intention to start a new venture as being dependent on three contextual elements: (1) personal attitude toward outcomes of the behaviour; (2) perceived social norms; (3) perceived behavioural control. The first two constructs (attitude and subjective norms) reflect the perceived desirability of intentions and the third (perceived behavioural control) reflects perceived feasibility of intentions (Urban, Van Vuuren, & Owen, 2008).

Personal attitude towards outcomes of the behaviour is similar to expectancy and refers to the attractiveness of performing the behaviour (Krueger et al., 2000). Attitudes refer to 'the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question' (Ajzen, 1991: 188). As a general rule, the more favourable the attitude towards a behaviour, the greater the intention to perform that behaviour.

Perceived social norms taps perceptions of what important people in respondents' lives think about performing a particular behaviour (Krueger et al., 2000). Social norms refer to the perceived social pressure to perform or avoid a behaviour (Iakovleva, Kolvereid, & Stephan, 2011). Along this line of reasoning, social encouragement and support for entrepreneurship is an essential part of the relevant social capital necessary for graduates to become self-employed.

Perceived behavioural control captures the ability and feasibility to execute a target behaviour (Ajzen, 1991). It stems from one's belief in one's own ability (self-efficacy) and implies the belief that a task is achievable (confidence), due to one's own competences. Therefore, the belief in one's ability to leverage resources (human, social, financial, and other physical resources) to create a venture (controllability) is a key factor in determining whether one views self-employment as feasible or not.

Hypothesis 1a: The higher the attitude with respect to self-employment, the stronger is the students' intention to become self-employed.

Hypothesis 1b: The higher the subjective norm with respect to self-employment, the stronger is the students' intention to become self-employed.

Hypothesis 1c: The higher the perceived behavioural control with respect to self-employment, the stronger is the students' intention to become self-employed.

Ethnicity and intentions

According to Mungai & Ogot (2012) cultural/ethnic values can play a critical role in determining who gets into entrepreneurship and what functional role individuals play in this activity. Portes & Rumbaut (2006) suggest that ethnic group membership can help to explain entrepreneurial outcomes, including values, skills, social capital and resource mobilization. Likewise, Hirschman (1982) argues that an ethnic group's socioeconomic achievements are partly a function of the human capital of individuals in that group, and the motives and ambition they derive from being part of that group. Further, institutional completeness and internal solidarity give members of some ethnic groups an advantage in mobilizing resources (Aldrich & Waldinger, 1990).

In terms of entrepreneurial intentions, given the relationship between ethnicity and entrepreneurship, it seems reasonable to assume that ethnicity also affects entrepreneurial intentions. Research by Wilson, Marlino, & Kickul (2004) shows that significant differences in the self-efficacy and entrepreneurial intentions exist among teen girls of different racial and ethnic identities. Moreover, globally there have been an increasing number of studies that report self-employment intention differences among ethnic groups; however, most of these studies have adopted comparisons national ethnic groupings (e.g., Kristiansen & Indarti, 2004; Liñán & Chen, 2009; Pruett et al., 2009). However, we assume that there will

also be differences in entrepreneurial intentions between indigenous ethnic groups, and that national cultural classifications may mask important intra-cultural diversity within the study population (Bandura, 2001).

Aharonovitz & Nyaga (2008) compare seven major tribes in Kenya: Kikuyu, Luo, Luhya, Kamba, Kalenjin, Kisii, and Meru, and find that the Kikuyu show the highest level of risk taking and education, factors that are closely related to entrepreneurial intent. Further, they found that the Luhya and Luo tribes rated high on altruism and cooperation. Given that entrepreneurial talent is generally selfish (Baumol, 1996), it could be expected that tribes like the Luhya and Luo that rate high in altruism would have lower entrepreneurial intentions than those with a low rating on the altruism/compassion scale (e.g., the Kikuyu tribe). Being disinclined to compete, having consensual decision making, and putting family first are complex issues that do not necessarily sit easy with modern entrepreneurship (Lindsay, 2005). Further, Marris (1968) argues that many of the characteristics and values held by the Kikuyu tribes facilitate entrepreneurship, stimulating the need for it and weakening the inhibitions. These include their adaptability, openness to change and individualism. LeVine, Strangman, & Unterberger (1966) suggest that ethnic groups like the Kikuyu in Kenya are responsive to the economic incentives around them and are likely to retain their status of being perceived as opportunistic and industrious for a long time.

Hypothesis 2: There is a significant difference in the level of entrepreneurial intentions among the Kikuyu, Kamba, Luhya and Luo tribes in Kenya.

Moreover, it seems safe to assume that differences in entrepreneurial intentions among the ethnic groups may be due to the different effects of their attitude, subjective norms and perceived behavioural control. First, in terms of attitude, although little is known about differences in entrepreneurial intentions and attitudes among persons belonging to different cultures and ethnicities (Wilson et al., 2004), research has shown that attitudes towards entrepreneurship may also vary by ethnicity (Lindsay, 2005). Several reasons can be argued to explain the potential ethnic differences in a persons' attitude towards entrepreneurship. For instance, certain cultural values may enhance the positive attitudes towards entrepreneurship, as well as provide legitimacy for such attitudes (Davidsson, 1995) and research has shown that Hofstede's cultural dimensions may correlate with certain personal traits which may or may not lead to a positive attitude towards entrepreneurship. For example, it can be argued that individuals who value personal traits such as independence and autonomy, characteristics

associated with individualistic societies, will have a more positive attitude towards entrepreneurship than those who do not value these traits. Douglas and Shepherd (2002) noted that the intention to start one's own business appears to be driven by more entrepreneurial attitudes to independence and risk. Likewise, individuals in societies high in uncertainty avoidance may place more emphasis on risk avoidance and would have a less favourable attitude towards entrepreneurship than those from societies with low risk avoidance (Liñán & Chen, 2009). Aharonovitz and Nyaga (2008) found that students from the Kikuyu tribe are expected to be more oriented towards risk-taking, whereas, the other tribes (Kamba, Luo, Luyha) are expected to avoid risk. Given that research has shown that individuals with a high risk-taking propensity are more likely to have a positive attitude towards entrepreneurship (e.g., Lüthje & Franke, 2003), we anticipate that the attitude towards entrepreneurship is greater for Kikuyu students than for any of the other tribes. Another reason for the ethnic differences in personal attitude might as a result of the self-efficacy of group members. Self-efficacy engenders a positive attitude toward entrepreneurship and individuals with high levels of confidence in their skills to start a business are more likely to have a positive attitude towards entrepreneurship. Furthermore, Izquierdo and Buelens (2011) argue that having strong self-efficacy stimulates people's motivation to succeed at a given task which, in turn, can have an effect on their attitudes toward a given object. We speculate that the tribal groups which are more entrepreneurial, in comparison to those that are not, are able to provide their members with the life experiences that can build self-efficacy, including different processes, such as enactive mastery, role modelling, social persuasion and judgments (Bandura 1977). Hence, members of these tribes will have greater confidence in their abilities to pursue entrepreneurship and, by extension, have a more positive attitude towards entrepreneurship. Based on these arguments we hypothesize the following:

Hypothesis 3a: The effect of attitude on entrepreneurial intentions is different among the Kikuyu, Luo, Kamba and Luhya tribes.

Further, social norms, which are unwritten rules about how to behave, define appropriate behaviour for every social group and can also influence levels of entrepreneurial intention. It is assumed that the social influences on behaviour are more likely to be stronger among tribes that exhibit collectivistic behaviours than tribes which are more individualistic (Walker Courneya, & Deng, 2006; Moriano, Gorgievski, Laguna, Stephan, & Zarafshani, 2011). This

is because people from collectivistic cultures are more likely to comply with the expectations of their immediate group (House, Hanges, Javidan, Dorfman, & Gupta, 2004). Thus, the level of conformity to social pressure is expected to differ among the Luhyas, Luos, Kamba and Kikuyu, given their differences in cultural characteristics such as individualism and collectivism. According to Aharonovitz and Nyaga (2008), individuals from the Kikuyu tribe are less altruistic/collaborative than other tribes such as the Kamba, Luo and Luhya, and may therefore rely more on their own beliefs for developing entrepreneurial intention. Consequently, the consideration of the expectation of close others and the motivation to comply with such expectations – in short, their subjective norm – will have a relatively weaker influence on the intention to become an entrepreneur than in more altruistic/collaborative cultures. Krueger et al. (2000) speculated that it is possible that social norms may only be important in ethnic groups that have strong traditions of entrepreneurship. Thus, members of the Kikuyu tribe, which has a culture of business-related activities and which is less rurally oriented than the Luo and the Luhya (Foeken & Owuor, 2001), may feel more social pressure to undertake entrepreneurial activities. Further, another reason why social norms may be important is based on the fact that the prestige that different social norms attribute to occupations can affect occupational choice (Giannetti & Simonov, 2004). Due to the fact that “the prestige that attaches to certain occupations and the lack of respect for others are like-wise culturally manipulable” Sudarkasa (1982: 286), we expect certain tribes to hold entrepreneurship in higher esteem than others. Subsequently, we hypothesize:

Hypothesis 3b: The effect of subjective norms on entrepreneurial intentions varies among the Kikuyu, Luo, Kamba and Luhya tribes.

Lastly, perceived behavioural control is a strong motivational factor that can help enhance entrepreneurial intentions. In past studies, perceived behavioural control has been closely linked to self-efficacy. In fact, according to (Godin & Kok, 1996), self-efficacy is viewed as a notion that is conceptually related to perceived behaviour-al control. People who exhibit high levels of self-efficacy strongly believe in their ability to complete a job or a specific set of tasks (Bandura 1977). Moreover, differences in self-efficacy may be due to cultural vagaries. Mau (2000) noted that the societies that are more individualistic are more conducive to fostering self-efficacy, while a collective-oriented culture may inhibit the development of self-efficacy. Moreover, in areas where uncertainty avoidance is higher, individuals would feel less capable of coping with the uncertainty of start-ups, even if they have the necessary

skills. Thus, perceived behavioral control would be a weaker predictor of entrepreneurial intention in those areas than in areas of lower uncertainty avoidance (Liñán and Chen, 2009). It is argued that individuals with a high risk propensity are likely to anticipate experiencing less debilitating anxiety about an entrepreneurial career, perceive a greater sense of control over outcomes, judge the likelihood of receiving positive rewards more highly, and thus possess higher perceived behavioural control (Zhao et al., 2005). Along this line of reasoning, Kikuyu students who, according to the literature, are more oriented towards taking risks, are expected to have a greater likelihood of pursuing an entrepreneurial career than students from the Kamba, Luhya and Luo tribes because they feel more confident in their ability to be an entrepreneur due to their own competences. Additionally, self-efficacy is developed from several sources, including enactive mastery and role modelling (Bandura, 1977). According to Gushue (2006: 87) “culture may influence the kinds of learning experiences to which a young person has (or is encouraged to seek) access, which affect the development of career self-efficacy beliefs and outcome expectancies.” It is assumed that the cultures which are more business-oriented are better able to provide these learning experiences than others. Empirical evidence supporting this argument is provided by Ketter and Arfsten (2015) who found that in Kenya there were significant differences among the ethnic communities in total entrepreneurial self-efficacy, with the Kikuyu participants having the highest scores. On the other hand, it is also possible that individuals from the tribes with more business experience are able to express more realistic perceptions of their control over becoming entrepreneurs due to having greater exposure to business activities. They may be less likely to exhibit overconfidence, which is an unrealistically positive self-evaluation (Greenwald, 1980). Research has shown that overconfidence decreases with experience (e.g., Menkhoff, Schmidt, & Brozynski, 2006). In contrast, it may be that individuals with less experience are more likely to exhibit overconfidence, which replaces lack of information by overestimating ability (Salamouris, 2013). Given these arguments and other evidence, we hypothesize the following:

Hypothesis 3c: The effect of perceived behavioural control on entrepreneurial intentions varies among the Kikuyu, Luo, Kamba and Luhya tribes.

Methods

Setting and participants

This study was conducted in Kenya in 2014. Given our major objective of identifying ethnic differences in entrepreneurial intentions, the Kenyan setting was appropriate due to its high level of cultural heterogeneity. For the purpose of this study, we investigated whether or not there are differences in entrepreneurial intentions among university students from four of the largest Kenyan tribes: Kamba, Kikuyu, Luhya and Luo. Together, these tribes account for approximately 60% of the Kenyan population. The Kikuyu tribe is the largest ethnic tribe in Kenya, representing about 22% of the country's population. Traditionally, they have enjoyed great economic success, are well educated and have adopted many aspects of modern culture. The Luhya are Kenya's second largest ethnic tribe and they account for 14% of the Kenyan population. Traditionally, they have been linked to agriculture, growing crops like sugar-cane, maize and wheat. The Luo tribe is the third largest community in Kenya and makes up close to 13% of the entire population. In the rural area, freshwater fishing in Lake Victoria is the most important economic activity. The Kamba are the fifth largest tribe, accounting for about 11% of Kenya's total population. Traditionally, they have been involved in artistic works (for example, handcrafts) as well as activities such as hunting, farming and pastoralism.

We targeted students at a major Kenyan University. It is worthwhile to use students as a sample in pre-startup entrepreneurship research, given that students show a higher propensity towards firm creation (Liñán & Santos, 2007). De Clercq, Honig, & Martin (2013: 9) argue that "students are ideally suited to the study of entrepreneurial intentions, as opposed to actual entrepreneurial behaviours because reflections on the out-comes that they want to achieve in their future careers are likely in the forefront of their minds; they are relatively homogeneous with respect to their prior work experience; and compared with a general adult sample, they are less likely to have actual entrepreneurial experience – a factor which might confound the level of entrepreneurial intentions." Table 1 depicts the descriptive characteristics of the sample in terms of gender, age, experience, parental income and ethnicity.

Survey Instrument

The survey instrument was developed using as a frame of reference previously validated questionnaires. Before administering the questionnaire, a focus group interview was used to examine the validity of the instrument, in terms of wording, structure and clarity. Respondents' feedback was reincorporated into the survey instrument. We used multi-item

measures to examine the study constructs. The use of multi-item measures is in keeping with recommendations by authors such as Nunnally and Bernstein (1994: 67) who note that ‘measurement error averages out when individual scores are summed to obtain a total score.’ Before the survey instrument was administered, we explained the relevance of the survey and that participation was voluntary. Furthermore, following the work of De Clercq et al. (2013: 10), precautions were taken in order to “minimize bias responses due to social desirability, acquiescence or consistency with ‘assumed’ research hypotheses.” As such, respondents were given the opportunity to complete the survey anonymously. Also, they were guaranteed complete confidentiality and were constantly reminded in the survey instrument to answer the questions as honestly as possible, since there were no wrong or right answers.

Table 1. Descriptive statistics.

		Frequency	Percentage (%)
Gender	Male	261	63.04
	Female	153	36.96
Age	Below 20	37	8.92
	20–25	298	71.81
	Above 25	80	19.28
Exposure	No	148	35.75
	Yes	266	64.25
Parental monthly income	Low	60	15.08
	Middle	80	20.10
	High	258	64.82
Ethnicity	Kamba	73	17.59
	Kikuyu	209	50.36
	Luhya	57	13.73
	Luo	76	18.31

Construct Measures

Dependent variable.

Behavioural intention was measured using three items (see Table 2) taken from Kolveried (1996). An average of these items was used to represent the intention index score.

Independent variables.

We assessed attitudes towards a career as self-employed by adapting a belief-based scale proposed by (Kolveried, 1996). Our measure included indexes that represent reasons in favour of self-employment (challenge, autonomy and self-realization) and reasons favouring organizational employment (security and avoidance of responsibility). Following Kolvereid's instruction, an indicator attitude was calculated as the numerical difference between the average of the two index scores for self-employment attitude and the average of the two index scores for employment attitude. A high score indicated a favourable attitude towards becoming self-employed.

Subjective norm was measured using six items drawn from Kolveried's (1996) measurement scale. Three items measured the normative belief and three items represented the motivation to comply. Normative beliefs were measured by asking respondents to rate whether persons who are important to them think they should pursue a career as an entrepreneur. Motivation to comply was measured by assessing how willing the respondents were to comply with the wishes of people who are important to them. The overall belief-based measure of subjective norm was calculated by multiplying each participant's normative belief items by their respective motivation to comply items, and then averaging these scores

Perceived behavioural control was measured drawing from a scale developed by (Kolveried, 1996). We used three indicators that took into consideration different aspects of perceived behavioural control (self-efficacy and controllability). Self-efficacy was measured by making reference to perceived difficulty of performing the behaviour, while controllability was assessed by examining the level of control individuals had in enacting the behaviour. A composite score was generated by averaging these items

We also attempted to characterize respondents based on their ethnic/tribal background. For purpose of this study we examined differences among the four most-mentioned ethnic groupings.

Control variables.

Age (Kautonen, Tornikoski, & Kibler, 2011; Lévesque & Minniti, 2006), gender (Haus, Steinmetz, Isidor, & Kabst, 2013; Wilson, Kickul, & Marlino, 2007), past exposure to business (e.g., Carr and Sequeira 2007; Kolvereid 1996;) and parental income (Bhandari, 2006; Kothari, 2013; Lindquist, Sol, & Van Praag, 2015) were used as control variables in order to account for two types of potentially confounding factors, those that affect the overall perception and those related to the underlying unobserved heterogeneity of individuals. These variables have been shown to exert direct and indirect effects on entrepreneurial intentions. Age was recorded as a continuous variable. A dummy variable was created to represent gender: male (1) and female (2). Past exposure was recorded as '0' without business exposure and '1' with business exposure. Monthly parental income was classified into three groups, namely in the lower (KSH 10,000 and below), middle (KSH 10,000–30,000) and upper (Above KSH 30,000) income brackets. The income brackets were created with the assistance of key informants embedded in the context. The lower income category was used as the reference category.

Reliability and validity of measures

We tested the reliability of the measurement scale using Cronbach's alpha which provides a measure of the internal consistency (i.e. the extent to which all the items in a test measure the same concept or construct). Additionally, we used Confirmatory Factor Analysis (CFA) to assess the soundness of the factorial structure of the measure (Goethner, Obschonka, Silbereisen, & Cantner, 2009; Kline, 2014). We used both convergent validity and discriminant validity to ensure the substantive validity of the model (Liñán & Chen, 2009). Convergent validity was assessed by examining the composite reliability of constructs and average variance extracted (AVE).

Gefen, Straub, and Boudreau (2000) recommend that the composite reliability be higher than 0.70 and Hair, Black, Babin, and Anderson (2009) mention that the AVE should be above the recommended level of 0.50. Additionally, an item with t-value > 2.0 also provides evidence of convergent validity (Gerbing & Anderson, 1988). Discriminant validity was assessed looking at correlations. It is accepted that items should correlate more strongly with their own construct than they do with others. This is an indication that they are perceived as belonging to the same theoretical construct (Liñán & Chen, 2009; Messick, 1998). In Table 2, we list

the measures used in our analyses, with their individual items, overall reliability estimates (Cronbach's alpha, composite reliability) and average variance extracted (AVE).

Model specification

To estimate our model, we conducted a linear regression analysis. We also used T-tests and Wald tests to check for statistically significant differences among the ethnic groups. Further, a potential dilemma from using five psychological and behaviour variables in a model is the possibility of multicollinearity. Therefore, to reduce the risk of suppressor effect, we tested for multicollinearity via the variance inflation factors (VIF). As a general rule, VIF below 10 indicates multicollinearity is insignificant (Hairs, Anderson, Tatham, & Black, 1998). Other authors, such as Allison (1999) suggests a threshold of 2.40 as the cut-off point beyond which multicollinearity might become an issue. Further, we checked for multicollinearity after running after the OLS regression.

Results

In testing the validity and reliability of our measurement scale, we conducted a confirmatory factor analysis (CFA) using AMOS 21. The result showed factor loadings, greater than 0.40. Furthermore, our measurement model had good fit: $\chi^2 = 204.02$, goodness-of-fit index (GFI) = 0.96, Tucker-Lewis index (TLI) = 0.98, confirmatory fit index (CFI) = 0.98 and root mean squared error of approximation (RMSEA) = 0.03. Convergent validity (CR >.70; AVE >.50; T >2.0) was established (see Table 2). Discriminant validity between the constructs was also established, since the AVE estimates of the constructs are greater than the squared correlations between the corresponding pairs of constructs.

Table 2. Factor loadings, reliability and validity of the constructs.

Construct	Factor Loading	T-value
Entrepreneurial intention (a = 0.85; CR =0.86; AVE = 0.68):		
I am very interested in setting up my own business	0.89	—
I strongly consider setting up my own business	0.93	21.20
I am likely to set up my own business	0.64	14.40
Attitude towards the behaviour		

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Security ($\alpha = 0.80$; CR = 0.82; AVE = 0.70):

Job security	0.97	—
Job stability	0.69	5.29

Avoid responsibility ($\alpha = 0.70$; CR = 0.70; AVE = 0.53):

To avoid responsibility	0.74	—
To not have too much responsibility	0.72	6.12

Challenge ($\alpha = 0.76$; CR = 0.77; AVE = 0.62):

To have an exciting job	0.71	—
To have an interesting job	0.86	7.68

Autonomy ($\alpha = 0.78$; CR = 0.78; AVE = 0.64):

Freedom	0.76	—
Independence	0.84	8.28

Subjective Norms

Normative beliefs ($\alpha = 0.90$; CR = 0.90; AVE = 0.74):

My closest family thinks that I should not pursue a career as self-employed	0.81	—
My closest friends think that I should not pursue a career as self-employed	0.90	22.94
People who are important to me think that I should not pursue a career as self-employed.	0.81	20.16

Motivation to comply ($\alpha = 0.91$; CR = 0.90; AVE = 0.76):

I care a lot about what my closest family thinks about whether or not to pursue a career as self-employed.	0.81	—
I care a lot about what my closest friends think about whether or not to pursue a career as self-employed.	0.92	21.86
I care a lot about what people who are important to me think about whether or not to pursue a career as self-employed.	0.89	21.18

Perceived Behavioural Control ($\alpha = 0.76$; CR = 0.77; AVE = 0.52):

If I wanted to, I could easily pursue a career as self-employed.	0.68	—
As self-employed, I would have complete control over my situation	0.75	11.24
If I become self-employed, the chances of success would be very high	0.73	11.15

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Correlations, means, and standard deviations for all study measures are presented in Table 3. The results indicate that entrepreneurial intentions in this study were correlated with attitude ($R = 0.14$, $p < 0.01$), perceived behavioural control ($R = 0.34$, $p < 0.01$) and ethnicity ($R = -0.09$, $p < 0.10$). Among these significant correlative variables, perceived behavioural control was most important factor correlated with entrepreneurial intentions. In regards to the control variables, gender ($R = -0.14$, $p < 0.01$), age ($R = 0.11$, $p < 0.05$) and past business exposure ($R = -0.09$, $p < 0.10$) were significantly correlated with entrepreneurial intentions. Furthermore, in terms of multicollinearity, no variable violated the 0.40 threshold suggested by statisticians. The variance inflation factors were low (Table 4), alleviating our concerns with regards to multicollinearity.

Table 3. Correlations, Means and Standard Deviations.

	1	2	3	4	5	6	7	8	9	Mean	SD
1. Entrepreneurial intentions	1									4.41	0.77
2. Attitude	0.14***	1								1.57	1.82
3. Subjective norm	-0.03	-0.25***	1							-3.95	14.46
Perceived behavioural control											
4. control	0.34***	0.10*	0.06	1						3.84	0.91
5. Ethnicity	-0.09*	-0.02	0.03	-0.01	1					1.95	1.11
6. Gender	-0.14***	-0.09*	0.08	-0.04	-0.00	1				1.37	0.48
7. Age	0.11**	-0.07	0.19***	-0.00	-0.00	-0.02	1			21.75	2.40
8. Parental monthly income	-0.05	0.07	-0.16***	-0.04	-0.18***	0.07	-0.18***	1		2.50	0.74
9. Past experience	-0.09*	0.22**	-0.35***	-0.10*	-0.01	-0.08	-0.14***	0.14***	1	0.64	0.48

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 4. Multicollinearity Analysis.

Variable	VIF	1/VIF
Attitude	1.12	0.89
Subjective norm	1.23	0.81
Perceived behavioral control	1.05	0.95
Luo	1.14	0.88
Kamba	1.17	0.85

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Luhya	1.12	0.89
Female	1.03	0.97
Age	1.08	0.93
Middle income	1.95	0.51
High income	2.04	0.49
Exposure to business	1.21	0.82
Mean VIF	1.29	

The linear regression analysis results are shown in Table 5. The control variables were entered in Model 1. Of these, age, income and past business exposure were significant predictors of entrepreneurial intention. Females had lower entrepreneurial intentions than their male counterparts ($\beta = -0.21$, $p < 0.05$). Also, entrepreneurial intentions increased as a function of age ($\beta = 0.03$, $p < 0.10$). Further, in terms of income, in comparison to the reference group (low income group) individuals from the middle income bracket ($\beta = -0.30$, $p < 0.05$) had a lower intent to pursue an entrepreneurial career. Finally, the entrepreneurial intentions of persons who were exposed to business ($\beta = -0.18$, $p < 0.05$) was lower than those who did not have business experience.

In Model 2, the three proximal predictors and control variables were fitted. In terms of the controls, the results were similar to Model 1. As it regards the proximal predictors, we found that entrepreneurial intention was positively associated with attitude ($\beta = 0.04$, $p < 0.05$) and perceived behavioral control ($\beta = 0.29$, $p < 0.01$); hence, Hypotheses 1 and 3 were fully supported. In other words, the higher the attitude and perceived behavioural control with respect to entrepreneurship, the stronger is the students' intention to become entrepreneurs.

In Model 3, we tested the effect of ethnicity. In comparison to the Kikuyu tribe (reference group), students from the Luhya tribe ($\beta = -0.24$, $p < 0.05$) had lower entrepreneurial intention, after accounting for our control variables and controlling for the proximal variables (attitude, subjective norms and perceived behavioural control).

Table 5. OLS regression results (Dependent variable = Entrepreneurial intentions).

	Model 1		Model 2		Model 3	
Female	-0.205**	[0.080]	-0.148*	[0.076]	-0.153**	[0.076]
Age	0.029*	[0.016]	0.036**	[0.015]	0.034**	[0.015]
Middle income	-0.304**	[0.134]	-0.216*	[0.126]	-0.232*	[0.125]
High income	-0.117	[0.114]	-0.089	[0.107]	-0.131	[0.108]
Exposure to business	-0.182**	[0.083]	-0.195**	[0.082]	-0.188**	[0.082]
Attitude			0.043**	[0.021]	0.041**	[0.021]
Subjective norms			-0.004	[0.003]	-0.004	[0.003]
Percieved behavioral control			0.285***	[0.041]	0.282***	[0.041]
Luo					-0.154	[0.100]
Kamba					-0.111	[0.101]
Luhya					-0.239**	[0.113]
Constant	4.105***	[0.396]	2.720***	[0.412]	2.874***	[0.417]
Pseudo LL	-451.179		-422.482		-419.534	
N	393		393		393	
DF	5		8		11	

* p<0.1, ** p<0.05, *** p<0.01

The results indicate the possibility that significant differences exist in the entrepreneurial intentions of the ethnic groups. Thus, in order to verify such differences, we ran a two-sample t-test. The result of this analysis is presented in Table 6. While we saw differences, in most cases they were not statistically significant. However, we did find a significant difference in entrepreneurial intentions when comparing the Kikuyu and Luhya tribes. This result, in part, confirms our suspicions that there are ethnic differences in the level of entrepreneurial intentions.

Table 6. The t-test of paired tribal groups on intentions.

	N	Mean	Mean Diff.
Kikuyu	209	4.480	0.147
Luo	76	4.333	
Kikuyu	209	4.480	0.051
Kamba	73	4.429	
Kikuyu	209	4.480	0.246**
Luhya	57	4.234	
Luo	76	4.333	-0.096
Kamba	73	4.429	
Luo	76	4.330	0.009
Luhya	57	4.234	
Kamba	73	4.429	0.195
Luhya	57	4.234	

* p<0.1, ** p<0.05, *** p<0.01

Lastly, we wanted to test whether the effect of attitude, subjective norms and perceived behavioural control differ across groups (Hypothesis 3a, 3b and 3c, respectively). We ran a separate regression analysis for each ethnic group. The results are summarized in Table 7. From the results, it appears that the effects of the three proximal predictors are fairly uniform across the ethnic groups. Neither attitude nor subjective norms predicted entrepreneurial intentions. On the other hand, perceived behavioural control was a strong predictor of entrepreneurial intention among all the ethnic groups ($\beta = 0.21$, $p < 0.01$; $\beta = 0.28$, $p < 0.01$; $\beta = 0.39$, $p < 0.01$ and $\beta = 0.42$, $p < 0.01$ for the Kikuyu, Lou, Kamba and Luhya tribes, respectively). Interestingly, the results also hinted at the possibility of differences in the effects of the control variables. Given that apparent differences in coefficients across groups may be due to sample variability, we performed a more formal test (Wald test).

Table 7. OLS regression results (Dependent variable = Entrepreneurial intentions).

	Kikuyu		Luo		Kamba		Luhya	
	β	SD	β	SD	B	SD	β	SD
Female	-0.08	[0.11]	-0.07	[0.22]	-0.16	[0.15]	-0.51**	[0.25]
Age	0.04*	[0.02]	0.04	[0.05]	0.10**	[0.04]	0.02	[0.04]
Middle income	-0.08	[0.22]	-0.59**	[0.29]	-0.26	[0.20]	0.04	[0.36]
High income	0.06	[0.18]	-0.50*	[0.26]	-0.13	[0.20]	-0.13	[0.31]
Exposure to business	-0.28**	[0.12]	-0.19	[0.23]	0.20	[0.17]	-0.44*	[0.26]
Attitude	0.01	[0.03]	0.07	[0.05]	0.06	[0.05]	0.00	[0.07]
Subjective norms	-0.00	[0.00]	-0.01	[0.01]	-0.01	[0.01]	-0.00	[0.01]
Perceived behavioral control	0.21***	[0.06]	0.28***	[0.10]	0.39***	[0.10]	0.42***	[0.12]
Constant	3.01***	[0.60]	2.88**	[1.31]	0.76	[0.91]	2.74**	[1.052]
Pseudo LL		-209.52		-78.62		-57.66		-56.66
N		199		71		71		52
DF		8		8		8		8

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The results (see Table 8) show that although the effects of the proximal predictors are fairly stable across the ethnic groups, slight differences do exist. For example, the effect of perceived behavioural control was different when comparing the Kikuyu and Kamba tribes ($\chi^2 = 2.82$, $p < 0.10$). Further, the Wald test confirmed that the effects of the control variables are dissimilar among the ethnic groups. The coefficient for female is significantly different for the Kikuyu and Kamba tribes ($\chi^2 = 3.17$, $p < 0.10$). Further, the pairwise comparison of Kikuyu and Luo show that the coefficients for middle income ($\chi^2 = 3.29$, $p < 0.10$) and high income ($\chi^2 = 7.17$, $p < 0.01$) are different. Lastly, the coefficient for exposure to business is dissimilar in two cases: between the Kikuyu and Kamba ($\chi^2 = 6.00$, $p < 0.05$) and Kamba and Luhya ($\chi^2 = 6.25$, $p < 0.05$).

Table 8. The Wald test of paired tribal groups on intentions.

	Kikuya	Kikuyu	Kikuyu	Luo	Luo	Kamba
	vs	vs	vs	vs	vs	vs
	Luo	Kamba	Luhya	Kamba	Luhya	Luhya
Attitude	1.44	0.83	0.01	0.05	1.20	0.75
Subjective norms	0.21	0.23	0.00	0.01	0.12	0.10
Perceived behavioral control	0.25	2.82*	2.00	0.75	0.74	0.04
Female	0.00	0.20	3.17*	0.11	2.01	1.89
Age	0.00	1.90	0.20	1.08	0.13	2.42
Middle income	3.29*	0.55	0.10	1.26	2.20	0.57
High income	7.17***	0.98	0.30	3.27*	1.15	0.00
Exposure to business	0.15	6.00**	0.48	2.49	0.79	6.25**

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The results of the study demonstrate the use of the theory of planned behaviour to measure entrepreneurial intentions in a culturally heterogeneous society, and also provide a warning regarding variations according to sub-cultural relationships. Attitude and perceived behavioural control are significant predictors of, and positively related to, entrepreneurial intent. The result is consistent with a growing number of studies which have shown attitude and perceived behavioural control as predictors of entrepreneurial intention in the African setting (e.g., Ayuo & Kubasu, 2014; Gird & Bagraim, 2008; Malebana, 2014).

Another finding of this article is that the role of subjective norms appears insignificant, which is inconsistent with previous studies conducted in a similar setting (e.g., Ayuo & Kubasu, 2014; Kilonzo & Nyambegera, 2014). Our findings do not represent a disconfirmation of the theory of planned behaviour model, but suggest that entrepreneurial intention, in our case, is not primarily under normative control. It may be that the influence of subjective norms may be indirect, through its modification of both the attitude and perceived behavioural control constructs (Liñán & Chen, 2009). More-over, in the opinion of Krueger et al. (2000) in the minds of subjects, social norms can be hopelessly confounded with other attitudes (attitude toward the act and perceived feasibility). The relative importance of attitude, subjective

norm and perceived behavioural control in the prediction of intention, is expected to vary, depending on the behaviour in question and its context (Ajzen, 1991).

In terms of the direct effect of ethnicity on entrepreneurial intentions, studies by authors such as Mungai (2013) fail to confirm the hypothesis that there are significant differences in entrepreneurial intentions between different indigenous ethnic groups. Our research, on the other hand, demonstrates that entrepreneurial intentions vary based on ethnicity. More specifically, in our study, the Luhya and Luo tribes were less likely to have entrepreneurial intentions when compared with the Kikuyu tribe. Such findings are partially expected, given that the Kikuyu tribe has been cited as being more entrepreneurial than the others (Elkan, 1988; Mungai, 2013).

Finally, our result showed that the effects of attitude, subjective norms and perceived behavioural control appear fairly similar across ethnic groups. Hence, our result partially verifies the generalizability of the intention model (Krueger 2000).

However, this result may be driven by the fact that university students may develop a culture of their own, which is different from that of their tribal grouping (Mungai, 2013). Interestingly, we also detected a slight difference in the effect of perceived behavioural control, which suggests that the antecedents to intentions may be modified by ethnic variations. Moreover, contrary to our expectations, the effect of perceived behavioural control on the intention to be entrepreneurs was stronger in the Kamba students than for the Kikuyu students. A possible explanation may lie in the fact that students from the Kikuyu tribe, in comparison with those of the Kamba tribe, expressed a more realistic perception of their control over becoming entrepreneurs as a result of having had greater exposure to business activities. They were less likely to exhibit overconfidence, which is an unrealistically positive self-evaluation (Green-wald, 1980). Research has shown that overconfidence decreases with experience (e.g., Menkhoff, Schmidt, & Brozynski, 2006). In contrast, it seems that the Kamba students are more likely to exhibit overconfidence, which replaces lack of information by overestimating ability (Salamouris, 2013).

Implications

We specifically tested the cross-ethnic generalizability of the theory of planned behavior. Our result provides further evidence for the utility of the theory of planned behaviour in predicting entrepreneurial intention in our setting. In general, the attitude and perceived

behavioural control constructs appear to have the potential to explain the variance in students' entrepreneurial intention. These findings are consistent with prior research, suggesting the importance of having a positive attitude towards entrepreneurship as well as the perception that the task is achievable through one's own effort.

While our findings seem to suggest that the use of the theory of planned behaviour is possible in culturally heterogeneous settings, the fact remains that attitude, subjective norms and perceived behavioural control explained a limited proportion of variance in the regression models. Thus, the addition of other variables to the model may improve its predictive capability. Further, our study shows that there exist differences in the entrepreneurial intentions of the ethnic groups, even as the effects of attitude, subjective and perceived behavioural control are, in general, uniform across groups. Again, this result suggests that other contextual elements may be exerting an effect on entrepreneurial intentions. In our case, for example, we see that gender, income and past exposure to entrepreneurship may account for some of the differences in intention among the tribes. Given these findings, we caution against adopting measure of intentions that rely solely on the proximal predictors. Instead, we argue that it may be necessary to consider the effect of deeper structural elements of society when undertaking intentions research. Ajzen (2014) argues that the theory of planned behaviour does not preclude the inclusion of other variables and that unless perfectly reliable and valid measures are used to measure attitude, subjective norm and perceived behavioral control, it is possible that the additional variables will be identified. However, like O'Keefe (2002), we caution against abstractly adding new predictors to the theory of planned behavior framework and suggest that researchers consider the five criteria proposed by Ajzen (2011) for including other explanatory variables.

In terms of culture, we detected differences in the effect of perceived behavioural control. In settings where there is substantial cultural heterogeneity (i.e. at the ethnicity and acculturation levels), ethnic aggregation may mask considerable variation in culture and values within particular subgroups. This variation, in turn, may have implications for any potential association with economic behaviour. Therefore, any study that fails to account for sub-national variations may run the risk of producing skewed results. We believe that at the very least, it is necessary to identify the appropriate level of specificity when measuring entrepreneurial intention. For instance, Mungai and Ogot (2012) suggest that in the majority of sub-Saharan countries, ethnic cultures play a more dominant role in moulding the values

and perceptions of its citizens than national cultures. Therefore, an understanding of intra-societal ethnic differences may be equally or even more important than identifying national variations, especially as those interested in using entrepreneurship as a development tool attempt to provide targeted programs intended to motivate new venture creation.

On a more practical side, the research has implications for stakeholders interested in encouraging self-employment among students. As attitude and perceived behavioural control are significant predictors of intention to start a new business, it is important that stakeholders who are looking to promote entrepreneurship among students understand the factors that influence the attitude of students toward the creation of new ventures, as well as gain better insight into the conditions necessary to build perceptions of self-efficacy and controllability. Moreover, special attention should be paid to the ethnicity of the target population, given the differences between ethnic groups with regard to entrepreneurial intentions. Culturally ‘tailor-made’ interventions that take these differences into consideration are warranted.

Limitations and future studies

First, the use of a cross-sectional design weakens our ability to prove causality between our predictor and outcome variables; as such, a longitudinal approach would have been better suited for our study. Future research should adopt a longitudinal approach in order to prove causality as well as strengthen the explanatory power of the model. Second, we only focused on the attitude, subjective norm, and perceived behavioural control–intention relationship. While intentions are an important step in the process of pursuing entrepreneurial action, it is vital that future research moves beyond the antecedents to intentions, and examines the intention–behaviour side of the model, especially as it relates to the conditions necessary to translate intentions into action. Lastly, while it was not our aim to test all possible exogenous factors affecting entrepreneurial intention, the fact that a large portion of the variance in entrepreneurial intention remains unexplained may be a signal that other relevant exogenous variables were omitted. It would be useful to examine other salient variables that could improve the predictive power of the theory of planned behaviour, for example, social capital and self-efficacy. However, such variables must be examined taking into consideration Ajzen’s criteria for including additional predictors. Additionally, given our results, it is important that future research evaluate moderators of the theory of planned behaviour relationships and identify how the theory’s predictors perform under different contextual situations.

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9.2 The Influence of past exposure on entrepreneurial intentions: developing country perspective.

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Abstract

Entrepreneurship in developing countries bears little resemblance to the 'romanticized' entrepreneurs of western society. Here, more often than not, the entrepreneur emerges by necessity and as such, entrepreneurship could be considered a survival strategy in the face of unemployment. Moreover, it is often considered as an undesirable career path. What then is the influence of exposure to necessity entrepreneurship on students' entrepreneurial intentions? In this article we seek to answer this question by examining the relationship between family entrepreneurship, prior startup experience and entrepreneurial intentions. The results showed that family entrepreneurship was negatively related to entrepreneurial intentions. In contrast, prior startup experience had a positive relation. The study could prove useful when customizing initiatives that seek to enhance entrepreneurial behavior.

Keywords

Family entrepreneurship, Startup experience, Intentions, Kenya

Introduction

There has been abundant empirical evidence that past entrepreneurial exposure stemming from parental self-employment and past startup experience is positively related to an individual's entrepreneurial intention (e.g., Crant, 1996; Fairlie and Robb, 2007; Laspita et al., 2012). Yet, even though there is widespread agreement on the positive influence of parental self-employment on their offspring's subsequent entry to self-employment, the vast majority of these studies were undertaken in western society, which presents a different set of reality from the developing world. For example, in this setting there is greater likelihood that the individual will be exposed to necessity entrepreneurship where individuals who have no other viable option for licit income are forced to start a small income generating activity (Brewer, 2014). Moreover, more often than not, these nascent entrepreneurs will operate in the informal sector, which presents its own unique set of problems, such as low earning and long work hours (Rosa et al., 2006). Hence, there are lingering question as to whether exposure to entrepreneurship in this scenario will work to heighten

entrepreneurial intentions. Further, to date there is a dearth of literature investigating the past exposure model within an African cultural context, thus the significance of findings which shows a positive correlation between past exposure and entrepreneurial intention is debatable in terms of applicability to an African context. Additionally, generally, the past exposure model fails to consider cultural complexities and whether the experiences that individuals have undergone may contribute to their propensity to pursue an entrepreneurial career or not. This issue appears to warrant further empirical investigation. As such, in this study, we undertake an exploratory study to investigate the relationship between past exposure and entrepreneurial intentions in a context in which past exposure may not necessarily equate with greater entrepreneurial intentions.

We use family entrepreneurship and past startup experience as proxies for measuring past exposure. Research has consistently shown that individuals who are exposed to entrepreneurship at an early age are more likely to be self-employed (Laspita et al., 2012). A common theoretical explanation for this result is based on social learning theory (Bandura, 1977), which assumes that experience (e.g., enactive mastery or vicarious experience) may amplify or inhibit entrepreneurial outcomes, based on whether the experience is positive or negative (Minniti and Bygrave, 2001). For example, theorists using the pro argument insists that a family tradition of business ownership presumably exposes the young potential entrepreneur to 'role models' and to the educational experience of learning what is involved in owning and managing a business (Cooper and Dunkelberg, 1986). In comparison, having parents who are entrepreneurs could also limit entrepreneurial endeavors. Zhang et al. (2013) concluded that prior exposure to negative entrepreneurial experiences such as failure or setback from other role models may strengthen the perceived fears and risks of self-employment and as such may have a negative impact on students' entrepreneurial intention. Further, while the socialization perspective offers a reasonable explanation of how entrepreneurial intentions are formed, other mechanisms, such as the provision of resources have been cited as also being important to entrepreneurship. This resource-based perspective depicts individuals who have entrepreneurial parents/siblings and past startup experience as having greater stocks of human and social capital (e.g., Anderson and Miller, 2003; Walter et al., 2013; Dyer et al. 2014). These capitals could serve to enhance entrepreneurial intentions (e.g., Davidsson and Honig, 2003; Liñán and Santos, 2007) and business creation (Lindquist et al., 2012). In this study, we combine these two approaches to highlight some of the mechanism that may underlie the past exposure – entrepreneurial intentions relationship.

Moreover, we consider the impact of our exposure variables based on ethnic/gender differences. Several studies describe entrepreneurial activity according to ethnic/gender classifications. For instance, Urban (2006) found that there is a significant difference among entrepreneurial rates of different ethnic groups, which may occur in spite of relatively modest differences among their economic and institutional characteristics. As we are not certain that past exposure (family entrepreneurship and prior startup experience) have the same effect across gender and ethnic group. Few studies explore the influence of ethnic tribal variables on entrepreneurial outcomes such as entrepreneurial intentions. Yet tribal values may be an important moderator or mediator of the relationship between entrepreneurial antecedents and entrepreneurial intentions. Moreover, gender is another fundamental sociocultural dimension that influences entrepreneurial intentions (Wilson et al. 2007). Based on socio-cultural conditioning, entrepreneurship has traditionally been a male occupation and in entrepreneurship research gender has been found to be a powerful moderating variable (e.g., Wilson et al., 2007; BarNir et al., 2011; Berger and Myhrer, 2012; Karimi et al., 2013). Thus, including ethnic/gender as a moderator of relationships between the determinants and entrepreneurial intention may help us get a better understanding of the underlying cognitive phenomena related to students' entrepreneurial intentions and identify sources of differences in entrepreneurship.

Despite researchers have long recognized the importance of understanding the influence of past exposure on firm formation academics have only recently emphasized the need for a more contextualized view of entrepreneurship to enhance our knowledge of when, why, and how entrepreneurship evolves in certain settings (Welter, 2011). The present study aims to further our theoretical understanding of the dynamic processes involved in the startup phase, particularly in a developing country context and among tribal groups. Nabi and Holden (2008) noted that although there is a body of literature on entrepreneurial intentions, more studies are needed that take into consideration different regional and international contexts. Likewise, Devonish et al. (2010) believe that intentions-based models are likely to vary across cultures, and there is a need to test (challenge) current models of entrepreneurial intentions. Further, an understanding of past exposure's influence on entrepreneurial intentions (gained from having entrepreneurial parents/siblings and from one's own startup activities) is important because it may provide an alternative explanation for the differences in entrepreneurial behavior of individuals and should help to explain residual effects over and above what other perspectives (e.g., trait models and economic models) can explain.

Theory Development

Self-employment in developing countries

Low labor productivity, high income inequality, huge public sector, wage and poor functioning labor markets are among the characteristics of the developing countries (Yavuz, 2009, p. 2). In such a setting, traditionally, the preference is towards having a formal wage employment (Bennett and Rablen, 2012). Wage employment, such as government jobs, is considered more secure (Bellante and Link, 1981; Frank and Lewis 2004). For instance, government jobs may provide additional benefits such as some form of social protection coverage (e.g., social security and pension scheme) (Bacchetta et al., 2009) and as such are highly desirable. However, access to waged jobs (formal or informal) may be rationed in the sense that the number of workers who are willing to work for the equilibrium wage (at a given skill level) exceeds the number of available jobs. For many individuals, when wage work is not available, and in absence of social protection or family transfers, self-employment may be a means of survival. In general, individuals, who are rationed out of formal wage jobs, can choose between informal wage employment and self-employment. In many cases, these individuals choose informal wage employment; however self-employment is becoming increasingly important. For example, recent statistics show that in Kenya out of those in wage jobs, one quarter is in the informal sector and likewise, one in four workers is self-employed (Kaane, 2014). Further, in this setting, if an individual who is rationed out of a formal wage job chooses self-employment, this is involuntary in the sense that it is not the individual's first choice (Bennett and Rablen, 2012).

Moreover, the extant literature paints an uninviting picture for firms created by reluctant entrepreneurs. These individuals are often limited to projects requiring low levels of capital. They also have very low opportunity costs and performance thresholds which allows them to perseverance in self-employment despite limited financial returns (Gimeno et al., 1997). Moreover, firms created by necessity entrepreneurs are considered less efficient, they are more likely to have difficulties accessing finance, and are more likely to suffer from infrastructure bottlenecks such as power outages (Amin, 2010). While it is true that necessity entrepreneurship can lead to entrepreneurial freedom and the possibility of upward mobility, in many cases with low earnings, long working hours, high stress level and high rates of business failure, it can also be a nightmare. Moreover, necessity entrepreneurship is most often associated with informality (informal firms), which is marked by precarious working conditions (Tokman, 2007). Temkin (2009) characterized

the informally self-employed as being less happy, less healthy, less satisfied with life. Further, they do not see themselves as persons who are creative or autonomous. More importantly, to the author, the informally self-employed attribute less importance than waged workers to the value of independence and determination as qualities to be taught to their children.

Entrepreneurial intentions

Given that entrepreneurial intention is a first step to undertake a behavior, in order to understand the venture formation process, we must first examine an individual's entrepreneurial intention. For Bird (1988, p. 442) intentionality is "a state of mind that directs attention toward a specific object or pathway to achieve it." An intention is a representation of a future course of action to be performed. It is not simply an expectation or prediction of future actions but a proactive commitment to bringing them about (Bandura, 2001). "Intentions are assumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior. As a general rule, the stronger the intention to engage in a behavior; the more likely should be its performance" (Ajzen, 1991, p. 181).

In terms of students' entrepreneurial intentions, career intentions of students can either be for wage employment (formal and informal) or self-employment. From a rational choice perspective an individual decision-maker rationally estimates available employment options in order to maximize fulfilment of personal interests. This is because (based on rational choice) most human decisions are grounded in maximizing a person's own benefits while minimizing losses. However, while individuals exercise personal autonomy in their employment choice, they are also influenced by the unique social context to which they belong to and an assessment of such conditions plays a major role in shaping the career decision (Harren, 1979; Lent et al. 2000). Along this line, while in many instances, the preference is towards waged employment (Devi 2002); the high levels of unemployment facing graduates have turned self-employment into a rational alternative. In Kenya, the rate of unemployment for youth (15-34 years) stands at about 67% (Kaane, 2014). Moreover, annually, over one million young people enter into the labor market without university or technical and vocational training (TVET). A further 155,000 join the labor market annually after completing training in TVET or at the university (Kaane, 2014). As such, the intention to pursue self-employment might be particularly high. Yet, given the conditions in the African setting it is

necessary to ask whether exogenous factors such as past exposure will heighten entrepreneurial intentions as commonly hypothesized. This question forms the heart of this research paper.

Family entrepreneurship and entrepreneurial intentions

Several studies acknowledge the positive influence of family entrepreneurship on entrepreneurial behavior in the developed world's cultural orbit (e.g., Matthews and Moser 1996; Drennan et al., 2005). For example, Laspita et al., (2012) argues that entrepreneurial parents can trigger their offspring's entrepreneurial intentions through role modelling. Parents serve as significant role models in their children's career choices by influencing their offspring's aspirations and work values in adolescence and early adulthood (Mungai and Velamur, 2011). In effect, from the repertoire of role models to which we are exposed as children, parents are critical influences in terms of future attitudes, behaviors, and beliefs (Greene et al. 2013). Further, children may gain exposure to entrepreneurship which may be crucial in developing their self-efficacy; that is, an individual's task and goal-specific self-confidence (Drnovsek et al., 2010).

In addition, from a resource-based perspective, parents may be a source of resources - human, social, and financial that can have important implications on the entrepreneurial activities carried out by an individual given that entrepreneurship is ultimately about the arrangement of resources into productive activities (Foss and Klein, 2011). Thus, exposure to family entrepreneurship can be especially important to nascent entrepreneurs and may increase the likelihood of engaging in entrepreneurial activities (Aldrich and Cliff, 2003). For instance, Dyer et al., (2014) argue that families create human capital by handing down the knowledge of "how to do business," particularly from one generation to the next. In accordance to human capital theory (Becker, 1964), greater levels of knowledge, skills, and other competencies is associated with greater performance outcomes. Thus, in terms of entrepreneurship, increased stocks of human capital will increase opportunity recognition and entrepreneurial success (Anderson and Miller, 2003; Kim et al., 2006). Moreover, according to Handwerker and Pratt (1990) "family and friends continue to be a source of loans, capital, and labor. If necessary, they may provide a place to live or a job until it is possible to begin again. Friends or kin who are also in business exchange information, perform services for each other, and may provide loans either at no interest or at low rates.

On the other hand, not all studies support the pro argument concerning the influence of family entrepreneurship. Recent studies suggest that entrepreneurial parents/siblings who have experienced

failure in the past may also suppress entrepreneurial intentions (e.g., Nishantha, 2009; Mungai and Velamuri, 2011). Scherer et al. (1989) argues that low parental performance in self-employment may have a “negative role model” effect in their offspring’s choice of a self-employment career. Zhang et al. (2013) concluded that prior exposure to negative entrepreneurial experiences such as failure or setback from other role models may strengthen the perceived fears and risks of self-employment and as such may have a negative impact on students’ entrepreneurial intention. Further, Marques et al. (2012) who found a negative correlation between family entrepreneurship and offspring’s entrepreneurial intention concluded that “such entrepreneurial activities frequently do require some sacrifices and frequently at the cost of family life and therefore students, having perceived themselves as deprived of their nearest and dearest at certain points in their upbringing may not wish to continue with this same cycle.” (p. 667).

Likewise, successful entrepreneurs may encourage their offspring/siblings to pursue an elite profession or formal wage employment. This might be particularly relevant in the African setting where occupation represent an important marker of social class or socioeconomic status (Conger et al., 2010). Udofia and Essien (2013) argued that in this setting most parents wanted their offspring to pursue prestigious occupations like medicine, law and engineering. Moreover, it can be argued that the offspring from wealthier parents go to better schools, and have a better chance of getting those desirable formal salaried jobs, thus their entrepreneurial intention may be low. In such instances entrepreneurial parents/siblings who experience success may not contribute to raising entrepreneurial intentions.

As we aim to understand the influence of family entrepreneurship in our context, and given the possibility that there might be a positive or negative influence, we do not hypothesize about the direction of the relationship. However, we propose that

H1: Family entrepreneurship will be related to entrepreneurial intentions.

Past startup behavior and entrepreneurial intention

From a social cognition perspective, career choice is a cognitive process driven by beliefs, attitudes and experiences (Sharma and Madan, 2014) and individuals tend to choose actions that replicate, or are closely related to, the ones they have already taken, thereby exploiting their preexisting knowledge (Politis, 2005). Practical experience (enactive mastery) is a key contributor to building self-efficacy, which in turn is related to entrepreneurial intentions. For example, Boyd and Vozikis

(1994) saw self-efficacy as an important explanatory variable in determining the strength of entrepreneurial intentions and the likelihood that those intentions will result in entrepreneurial actions. Thus we expect that past startup experience (enactive mastery) to have important implications in developing entrepreneurial intentions. According to Boyd and Vozikis (1994) practical experience provides confirming experiences that contribute to estimations of future performance. Dimov (2007) believe that previous experience with starting and managing entrepreneurial ventures can provide considerable expertise related to identifying and undertaking the steps as well as navigating through the uncertainties associated with establishing and managing a new venture. Moreover, individuals with prior startup experience may incorporate their experiences, such that their attitudes and behaviors towards entrepreneurial action are shaped positively or negatively towards business ownership (Carr and Sequeira, 2007). Prior experience is related to the development of self-efficacy, a key determinant of entrepreneurial intentions (e.g., Boyd and Vozikis, 1994; Zhao et al., 2005; Sequeira et al., 2007). It is assumed that prior success increases an individual's entrepreneurial self-efficacy, and; while, on the other hand, failure would have the opposite effect (Minniti and Bygrave, 2001); in other words, entrepreneurial failure which is associated with negative emotions such as anxiety and stress may cause individuals to shy away from subsequent entrepreneurial activities (Hsu, 2011).

Further, from a resource-based perspective prior startup experience typically offers benefits in terms of developing knowledge, skills and networks, which makes it easier for the person to assess the possibilities of starting a new firm (Hmieleski and Baron, 2009). Prior work experience may help create the human and social capital that may impact entrepreneurial intentions. For instance, studies have demonstrated that founder's managerial and technical skills (Wiklund & Shepherd, 2003) are positively related to setting up a new business. Likewise, Fitzsimmons and Douglas (2005) argue that "some individuals possess the knowledge, skills, and contacts that should allow them to be 'good' at entrepreneurship, and after recognizing this they form the intention to become an entrepreneur."

However, although the extant literature generally views past startup experience in a positive light, studies also highlighted its negative effect. Direct experience with the entrepreneurial behavior may expose one to the outcomes that may negatively impact on the decision to choose an entrepreneurial career. For example, Sharma and Madan (2014) found that students who had an earlier experience of doing business were seen to be less inclined towards taking up entrepreneurship as a career

choice indicating bad experience and unfeasible business environment. Given these arguments, and taking into account that past startup experience could be positively or negatively related to entrepreneurial intentions, we hypothesize:

H2: Past startup experience will be related to entrepreneurial intentions.

Moderating effect of tribal ethnicity/gender

Ethnic differences have been used to classify entrepreneurial activities. However most studies that highlight ethnicity generally focuses on cross-nation analyses or racial variations (e.g., Urban, 2006). However, while the body of literature on indigenous ethnic differences in entrepreneurship is limited, recent evidence suggests that there are significant variations among these groups. First, research have shown that the level of self-efficacy differ among tribes. For instance, based on social identity theory people define themselves in terms of their social group membership and enact roles as part of their acceptance of the normative expectations of in-group members, thus, the concept of role is subsumed under the concept of group (Turner et al., 1994; Stets and Burke, 2000). Thus, students are expected to follow careers that are congruent with the social beliefs and values of their tribe and to acquire skills for that career.

In our setting, it is well known certain ethnic groups are over represented as business founders (Handwerker and Pratt, 1990; Mungai, 2013); more specifically, the Kikuyu tribe is noted as being more involved in entrepreneurial activities than other tribes (Mungai and Ogot, 2012). Further, because Kikuyu tribe members are more prone to be risk-takers and less prone to be altruistic (Mungai and Ogot, 2012), as well as have greater levels of self-efficacy in comparisons to other tribes, such as the Luhya (Ketter, 2015); then it could be expected that there might be a gap in entrepreneurial intentions between students from the Kikuyu tribe and students from the Luhya tribe. In this scenario, the effect of past exposure will not be the same among these two tribes. In the case of the Kikuyu students, past startup experience and role models will work to reinforce and stabilize their beliefs. In comparison, for the more communal Luhya tribe, we expect that past startup experience and role models will help build more agentic types of behaviors and as such the change in the entrepreneurial intentions of students from the Luhya tribe will be more profound, given the lower threshold of entrepreneurial intentions from which this tribe started.

A similar argument can be made in the case of gender-based differences. That is, given that it is less probable that females will engage in startup activities or possess a similar other (other female)

within their immediate family who has engaged in entrepreneurial activity then their entrepreneurial intentions will be lower than that of men (e.g., Kennedy and Drennan, 2002; Wilson et al., 2012). Thus, we expect the impact of past startup experience and role models to lead to a larger change in women's entrepreneurial intentions than in men. Thus we hypothesize:

H3a: The relationship between family entrepreneurship and entrepreneurial intentions will be moderated by ethnicity/gender. That is, there will be a greater increase in entrepreneurial intentions of female Kikuyu students than for male Kikuyu students when they have entrepreneurial parents/siblings.

H3b: The relationship between family entrepreneurship and entrepreneurial intentions will be moderated by ethnicity/gender. That is, there will be a greater increase in entrepreneurial intentions of male Luhya students than for male Kikuyu students when they have entrepreneurial parents/siblings.

H3c: The relationship between family entrepreneurship and entrepreneurial intentions will be moderated by ethnicity/gender. That is, there will be a greater increase in entrepreneurial intentions of female Luhya students than for male Kikuyu students when they have entrepreneurial parents/siblings

H3d: The relationship between past startup experience and entrepreneurial intentions will be moderated by ethnicity/gender. That is, there will be a greater increase in entrepreneurial intentions of female Kikuyu students than for male Kikuyu students when they have past startup experience.

H3e: The relationship between past startup experience and entrepreneurial intentions will be moderated by ethnicity/gender. That is, there will be a greater increase in entrepreneurial intentions of male Luhya students than for male Kikuyu students when they have past startup experience.

H3f: The relationship between past startup experience and entrepreneurial intentions will be moderated by ethnicity/gender. That is, there will be a greater increase in entrepreneurial intentions of female Luhya students than for male Kikuyu students when they have past startup experience.

Methods

Data

The data was collected in 2013. The observations are taken from an initial random sample of students from a large university in Kenya. De Clercq et al. (2013, p. 660) argue that “students are ideally suited to the study of entrepreneurial intentions, as opposed to actual entrepreneurial behaviors because reflections on the outcomes that they want to achieve in their future careers are likely in the forefront of their minds; they are relatively homogeneous with respect to their prior work experience; and compared with a general adult sample, they are less likely to have actual entrepreneurial experience – a factor which might confound the level of entrepreneurial intentions.”

To test the hypotheses, data was collected on the study constructs, including their entrepreneurial intention and background information (e.g., parent occupation and past entrepreneurial experience). In addition, we also collected demographic information pertaining to the individual, such as age, gender academic year and ethnic group. Respondents had a mean age of 21.74 years (± 2.61). In terms of the ethnic/gender makeup 47.62 % of the respondents were Kikuya male, 30.48 % Kikuyu female, 13.02 % Luhya male and 8.89 % Luhya female. Further, 21.73 % of the respondents are first year students, 34.50 % are in their second year. 28.75% are in their third year, 13.10% are in their fourth year and 1.92 % are in their fifth year of study.

Measures

Dependent variable

The intention construct was developed using as reference a scale proposed by Kolvereid (1996). Three items measured entrepreneurial intention, including “I am very interested in setting up my own business” and “I strongly consider setting up my own business” and “I am likely to set up my own business.” Cronbach’s alpha for the three-item subscale was 0.85

Independent variables

Students were asked whether either of their parents owned or owns a business: a dummy variable took the value one if any of the student’s parents is/was an entrepreneur, zero otherwise. Likewise, past startup experience was a binary yes/no variable.

A categorical variable represented gender/ethnicity: Kikuyu male (1); Kikuyu female (2); Luhya male (4), and Luhya female (4).

Control variables

Finally, to assess the strength of an independent link between dependent and independent variables age, academic year and gender/ethnic groups were used as controls. The controls attempted to account for confounding factors that may affect the overall perception and those related to the underlying unobserved heterogeneity of individuals. Age has been identified as one of the most important determinants of entrepreneurship (Parker 2009); although, the relationship is often reported as non-linear (e.g., Georgellis et al., 2005). Some studies have suggested that entrepreneurial intent increases up to a certain age then decreases, although the cut-off age is inconclusive (e.g., Schwarz et al., 2009). In addition, the academic year of the individual can also be a motivator. Varamäki et al. (2011) and Joensuu et al. (2013) found that students that were closer to graduation were more likely to exhibit greater or lesser intentions to start their own businesses. Age was recorded as a continuous variable. Academic year is a categorical variable with four levels representing whether the students were in the first, second, third or fourth year of their university career.

Analysis

We examined the effects of having parents in business and prior experience on entrepreneurial intentions.

$$Y_i = \beta X_1 + \beta X_2 + \dots + \beta X_n + \varepsilon \quad (\text{Eq. 1})$$

where: Y_i = entrepreneurial intention (dependent variable), $X_1 - X_n$ are explanatory variables, β is the parameter estimates for the explanatory variables and ε = error term.

Results

The means, standard deviations, and correlations for each of the study variables are shown in Table 1. The results of the hierarchical regression analyses are presented in Table 2. With regard to Pearson's correlation matrix, the result show that the correlation between family entrepreneurship and entrepreneurial intentions is negative and significant ($R = 0.01$ $p < 0.1$) and that the correlation

between prior entrepreneurial experience and entrepreneurial intentions is positive and significant ($R = 0.22$, $p < 0.01$).

Table 1. Pearson correlation, Means and Standard Deviations

	1	2	3	4	5	6	Means	S.D
1. Entrepreneurial intention	1						4.38	0.83
2. Entrepreneurial parent	-0.1*	1					0.66	0.47
3. Prior startup experience	0.22***	0.07	1				0.20	0.40
4. Ethnicity/Gender	-0.15***	0.02	0.04	1			1.83	0.97
5. Age	0.12**	-0.08	0.08	0.01	1		21.74	2.61
6. Academic year	0.02	0.08	-0.03	0.03	0.34***	1	2.39	1.03

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In Model 1, we found that students from higher academic grades express greater entrepreneurial intentions than their counterparts in lower academic grades. We also observed that the four ethnic/gender groups differ in their entrepreneurial intention scores; in particular, female Luhya students significantly differ from male Kikuyu students. In other words, we found that female Luhya students express lower entrepreneurial intentions than male Kikuyu students.

In Model 2 we test Hypotheses 1 and 2 which suggest a significant relationship between family entrepreneurship and past startup experience (respectively) on the likelihood to become a nascent entrepreneur. The results of the analyses conducted confirmed both hypotheses. However, in terms to the relationship between family entrepreneurship and entrepreneurial intentions, the coefficient is negative and significant ($\beta = -0.20$ $p < 0.05$). In contrast, the result indicates a significant positive association between prior experience and entrepreneurial intentions ($\beta = 0.49$ $p < 0.01$).

Finally, we examined the role of past exposure (family entrepreneurship and prior startup experience) and how it might interact with ethnicity/gender to influence entrepreneurial intentions in Hypotheses 3a – 3f. We only found a significant relationship in the case of Hypothesis 3f ($\beta = 0.88$; $p < .05$); in other words, prior startup experience significantly increased and heightened the entrepreneurial intention of female Luhya students in comparison to the Kikuyu male students. In order to clarify the nature of this significant interaction effect, we plot it in Figure 1. Entrepreneurial intention and past entrepreneurial experience appear in the vertical and horizontal axes, respectively.

Table 2 Influence of study variables (ethnicity/gender, past startup experience and entrepreneurial parents) on entrepreneurial intentions

	Model 1		Model 2		Model 3	
Age	0.04**	(2.20)	0.03	(1.59)	0.031	(1.63)
Academic year	-0.02	(-0.44)	0.00	(0.07)	0.00	(0.03)
Female Kikuyu	-0.08	(-0.76)	-0.083	(-0.79)	-0.20	(-1.09)
Male Luhya	-0.07	(-0.47)	-0.09	(-0.66)	-0.18	(-0.68)
Female Luhya	-0.55***	(-3.27)	-0.56***	(-3.40)	-0.82***	(-2.88)
Entrepreneurial parents			-0.20**	(-2.09)	-0.25*	(-1.75)
Prior startup experience			0.49***	(4.30)	0.29*	(1.73)
Kikuyu Female*Entrepreneurial parent					0.11	(0.50)
Luhya Male*Entrepreneurial parent					0.04	(0.14)
Luhya Female*Entrepreneurial parent					0.12	(0.37)
Kikuyu Female*Prior startup experience					0.24	(0.91)
Luhya Male*Prior startup experience					0.28	(0.87)
Luhya Female*Prior startup experience					0.88**	(2.18)
Constant	3.60***	(9.06)	3.84***	(9.65)	3.88***	(9.35)
N	310		309		309	

* p<0.1, **p<0.05, ***p<0.01; T statistics in parentheses

Discussion

The intention to start a new business represents an important step in the process of becoming an entrepreneur (Krueger and Carsrud, 1993; De Clercq et al., 2013). We investigate the role of two variables – family entrepreneurship and past nascent behavior which although important have only received cursory attention, especially in studies originating from developing countries. The present study raises questions about the common representation of the past exposure as having a positive influence on entrepreneurial intentions, especially in a context where the experiences gained from such exposure may not be entirely positive.

While we did not hypothesize on the direction of the relationship between family entrepreneurship and entrepreneurial intentions, most past studies have found this relationship to be positive. For example, according to Fairlie and Robb (2007) children of self-employed parents are three times more likely to become self-employed than children whose parents are not self-employed. Our result, though an exception to the rule, lends credence the argument that the frequent claim that past exposure supports entrepreneurial intentions is not generalizable to all settings. Our results seem to suggest the presence of ‘inverse role models’, that is, a negative influence of entrepreneurial role models and a positive influence of non-entrepreneurial role models on entrepreneurial intentions. While we are unsure as to what mechanisms govern this finding, it may be that students whose parents are entrepreneur are exposed to the negative aspects of entrepreneurship. For instance, necessity entrepreneurs may become ‘trapped’ in a state of necessity in which long hours are needed to earn a survivalist living (Rosa et al., 2006). Individuals who have gained such exposure are likely to be aware of these impacts and would make reference to these negative vicarious experiences when evaluating career options. Further, according to Zellweger et al. (2011), students raised in a family business environment vicariously experience the constraints and personal sacrifices imposed on their parents. Additionally, in the case of successful entrepreneurs, it could be that they are able to provide their offspring with a higher level of education which would put them in line to access those highly desired government or professional jobs. Further, to elevate their elite status, offspring are encouraged to enter professional or elitist occupations (Udofia and Essien, 2013).

Second, we find a significant positive relationship between prior startup experience and entrepreneurial intentions, which is in keeping with past studies (e.g., Carr and Sequiera, 2007; Dimov, 2007). Prior experience provides tacit and explicit knowledge, role familiarity, and social

networks that can further entrepreneurial aspiration (Farmer et al., 2011, p. 251). Moreover, enactive mastery is a powerful source of self-efficacy. Individuals with high self-efficacy will try harder to master the challenge. They also seem to respond to negative feedback with increased effort and motivation (Kumar, 2008). Chen et al. (1998) argues that even if people perceive an identical reality consisting of uncertainties, risks, and hardships, those with high entrepreneurial self-efficacy would feel more competent to deal with that reality than those with low self-efficacy. “An objectively negative experience (e.g., bankruptcy or economic loss) from which an individual learned might be rated as positive because that individual would discard ineffectual actions in the future in order to avoid repeated mistakes” (Zhai, 2007, p. 14).

In terms of interaction we also found that prior exposure makes more of a difference on entrepreneurial intention for female Luhya students than it does for male Kikuyu students, which could point to a gap in the self-efficacy between these groups. According to Urban (2004) ethnic and gender differences in career choice (including self-employment) is largely explained by self-efficacy, which is informed by both vicarious and enactive mastery experiences. Thus, female Luhya students having a lower self-efficacy rating than male Kikuyu students have less intention to follow an entrepreneurial career, since people tend to get drawn towards occupations in which they feel competent, and avoid those in which they feel ineffectual (Berger and Myhrer, 2012). Hence, past startup experience which is the prime source of self-efficacy beliefs is having important positive implications on female Luhya students’ entrepreneurial intentions. Moreover, our results seem to lend support to the notion that that males’ intention are somewhat more contingent on perceptions of entrepreneurs’ societal contribution, while females’ intentions are slightly more contingent on perceived know-how (Davidsson, 1995).

Contributions

The core theoretical contribution is that we provide empirical evidence on the African context that has been weakly studied. In the developing country context, past entrepreneurial exposure has not received significant scholarly attention in regards to its influence on entrepreneurial emergence. Most of the studies examining these variables hail from the developed country context, which presents quite a different set of dynamics than those found in developing countries. By focusing on a developing country context we were able to answer the calls for studies that employs a more contextualized and multi-layered approach that enhances our knowledge of when, why, and how entrepreneurship evolves in certain settings.

Also, we add to the growing stream of research which investigates the importance of past exposure to entrepreneurial intentions. In addition, the finding concerning the influence of family entrepreneurship and prior startup experience has wider theoretical implications regarding the role of these factors in entrepreneurship. For instance, it is generally argued that family entrepreneurship can transmit the taste for entrepreneurship. Yet our study shows that in the African setting, which is characterized by high level of necessity entrepreneurship and work relations in the informal sector, the inverse is also possible; that is, the family entrepreneurship may inhibit the entrepreneurial propensity of their children. Therefore, the focus in the extant literature on the positive aspects of parental role modelling does not fully capture the reality of many low-income countries. This finding has important implications since it shows that the theorized positive relationship between family entrepreneurship and entrepreneurial intentions is highly dependent on the context. Therefore, rather than casually assuming these types of relationship, it is important to consider the specificity and quirks of the environment.

Third, in our setting, while vicarious experience gained from having parents/siblings worked to limit students' intention to pursue an entrepreneurial career, past startup experiences amplified entrepreneurial intentions. It would seem that the important thing here is that students gain entrepreneurial experience through enactive mastery. Our result has implications for policy makers and other development practitioners who want to encourage entrepreneurial startups. For example, in terms of entrepreneurship education the focus should be on learning-by-doing and experientially acquired human capital. Entrepreneurship education should be workplace embedded. The setting should replicate the existing business environment and be designed or manipulated in such a way that students can learn from the demands of this environment. In this setting learning can be experiential as "knowledge is created through the transformation of experience" Kolb (1984, p. 41).

Finally, given the importance of entrepreneurs in creating new business ventures, information about nascent entrepreneurs is important for understanding crucial aspects of the economy. This study suggests that there is a need to consider the different structural and demographic context within which potential entrepreneurs are embedded. Policy-makers and practitioners could improve their support for entrepreneurship by customizing initiatives that consider the deeper structural elements of society. Gender and ethnicity are two such considerations. In promoting entrepreneurship not only should we consider the content of entrepreneurship programs but also gender and cultural differences of the target group. Though entrepreneurship teaching approaches and methods seem

amenable to diverse settings it is essential to consider the effect of culture (Schaper 2001). As McLoughlin and Oliver (2000, p. 2) argues "culture pervades learning, and in designing instructional environments there needs to be a serious debate about issues concerning the social and cultural dimensions of task design, communication channels and structuring of information".

Limitations and Implications for further research

The findings should be interpreted within the limitations of the study. First, the contextual study design limits our ability to make casual claims. However, our results provide a useful insight into the dynamic process of leading to the formation of entrepreneurial intention. Future research should consider longitudinal testing of our assumptions. Second, in examining past exposure we only tested two constructs: family entrepreneurship and prior startup experience. By failing to account for experience gained by being exposed to businesses started by other relatives or friends as well as working in someone else's small business we may have omitted relevant explanatory variables. Our results show that there is room for additional research that focuses on further defining the dynamic role past exposure plays in the formation of entrepreneurial intention. Future studies should include these omitted variables in order to provide more conclusive support for our assumptions. Another limitation of this study is the use of self-reported data. Future research should aim at using more adequate measures and should triangulate both subjective and objective measures.

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9.3 The Influence of Human, Social and Financial Capital on Entrepreneurial Intentions in an Emerging Economy Context

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Abstract

The influence of human, social and financial capital on entrepreneurial intentions is examined for a group of students from a university in Kenya. We find no relationship between tacit human capital and entrepreneurial intentions. In contrast, there is a positive correlation between social capital and entrepreneurial intentions, which support earlier research on the importance of social capital in heightening intentions. Further, we find that contrary to our expectations, financial capital reduces entrepreneurial intentions. In terms of gender, we find that human and financial capitals heightened entrepreneurial intentions more for women than it did for men. Interestingly, our results show that financial capital lowered the entrepreneurial intentions of men. Implications of the study are discussed and areas for future research outlined.

Introduction

Human, social and financial capital have emerged as important constructs for understanding entrepreneurial milestones and action and a body of evidence supports their positive influence on entrepreneurial outcomes (e.g., Anderson and Miller, 2003; Davidsson and Honig, 2003; Kim et al., 2006; Evald et al., 2011). It is assumed that people's likelihood of becoming an entrepreneur is influenced by their access to valuable and unique resources (e.g., Alvarez and Busenitz, 2001).

According to Lin (2000), differences in distribution of various types of capital across different groups in society lead to inequalities in career aspirations. Likewise, Light and Dana (2013) noted the important role of the context in determining the influence of capital. In their study they conclude that “the literature has relied overmuch on prevailing social contexts in which cultural capital supports entrepreneurship, thus concealing the supportive role of cultural capital” (p. 2). This conclusion leads us to speculate on the role of human, social and financial capital in a non-western setting, where cultural capital may not be supportive.

In general, the study of entrepreneurship in emerging economies is noticeably lacking. In an introductory article on a special issue of *Entrepreneurship Theory and Practice* that focuses on entrepreneurship in the emerging economies, Bruton et al. (2008) argued that little is known about entrepreneurship in emerging economies, and concluded that future research needs to look deeper to see what the impact of context is on entrepreneurship. For example, in their words “there is a great need to understand the actual role of culture. Issues such as how culture impacts transaction costs, resources, and cognitive maps of entrepreneurs should be explored” (p. 8). Moreover, these authors believed that what is known from the world’s developed economies may not readily apply to entrepreneurship in emerging economies, thus, there is a strong need to develop an understanding of entrepreneurship in emerging economies.

Although there are exceptions (e.g., Honig, 1998; Bhagavatula et al., 2010), most entrepreneurship research examining human, social and financial capital have been conducted in western societies, where the socioeconomic and cultural dynamics are quite different from that of the developing world. Yet, studies have shown that the context matters in terms of entrepreneurial intentions (e.g., Pruett et al., 2009; Moriano et al., 2011). Thus, in this study, we conduct a context-oriented study that explores the relationship between human, social and financial capital and entrepreneurial intentions. We also investigate the impact of a variable that differs according to culture: gender.

Gender is considered a socially constructed concept, which asserts that the expectations, capabilities and responsibilities of men and women are not always biologically determined (Njogu and Orchardson-Mazrui, 2006). Due to socialization processes, women and men

assume different roles in society and gender stereotypes influence the career and occupational aspiration of men and women (Mueller and Data-Oh, 2008). The gender variable has been reported as having an influence on entrepreneurial intentions (Gupta et al., 2008; Gupta et al., 2009; Díaz-García and Jiménez-Moreno, 2010). Thus, in this study, we aim to investigate the role human, social and financial capital play in influencing the entrepreneurial intentions of female students in comparison to their male counterpart. Clear gender differences exist in entrepreneurial intentions, with women tending to have lower intentions than men (Crant, 1996). As such, it is important to understand why young women tend to possess lower levels of entrepreneurial intentions relative to their male counterparts and understand what mechanisms guide this result, particularly in different cultural contexts.

The central question the present study seeks to answer is: in a developing country context, how does an individual's stock of human, social and financial capital influence their entrepreneurial intent? Additionally, we aim to understand whether gender moderates these relationships. To answer these questions we adopt a resource-based view and rely on human, social and capital theory to highlight the mechanism through which entrepreneurial intentions can be developed. Further, for the purpose of this study we use a student sample from a Kenyan university. Kenya represents a culturally diverse emerging economy that provides a unique, quasi-experimental setting for testing existing theories. This view is supported by Bruton et al (2008) who suggest that contextual factor such as cultural values and norms, religion, and educational systems shape individual and organizational behavior including entrepreneurship and that emerging economies provide a fascinating testing ground for studying the impact of these items over time. There are a substantial number of studies that focus on the entrepreneurial intent of students and its antecedents (e.g., Tkachev and Kolvereid, 1999; Lüthje and Franke, 2003; Souitaris et al., 2007; Pruett et al., 2009; Nabi et al., 2010), such studies are based on the assumption that students can be an important source of entrepreneurship.

We provide two distinct contributions to the entrepreneurship literature. First, we provide a better general understanding of the mechanisms affecting the formation of entrepreneurship intentions in an emerging economy where the cultural and institutional structures can vary greatly from those in mature economies. This is important since emerging economies have

distinctive characteristics such as country's history, size, munificence of their economy and their economic development paths that might affect the pathways to entrepreneurship; therefore there is a need to develop an understanding of these differences and their impacts (Bruton et al., 2008). Second, although entrepreneurship is widely recognized as an attractive and worthwhile career for women, the rate of entrepreneurship among women remains much lower than men (Gupta et al., 2009). Thus, we explore the role of gender since a more complete understanding of the interplay between gender, entrepreneurial intentions is important to improving the participation rate of women in entrepreneurial activities. Moreover, gender roles in developing countries are very different than in developed, even more so in Africa, where patriarchal practices shape and perpetuate gender inequality (Kambarami, 2006) and the role of women are that of "mother and wife – caring roles and obligations that often extend outside the immediate family" Mordi et al. (2009, p. 9). For example, according to Chitsike (2000) "in Zimbabwe women are traditionally brought up to associate making money with immorality: the Shona expression anoda mari sehure ('she wants to make money like a prostitute') expresses utmost disgust." Hence, women pursuit of entrepreneurial action is frowned upon (Mungai and Ogot, 2012). Thus, we contribute to the extant literature by responding to the call from authors such as Gupta et al. (2009), who believed that entrepreneurship researchers should pursue a broader research agenda that uses a "lens of gender" to study how the way gender and entrepreneurship are constructed in society can influence the rate and type of entrepreneurial activity.

Theory Development

Human, social and financial capital and Entrepreneurial Intentions

Entrepreneurial intention refers to the state of mind that directs and guides the actions of the individual toward the development and implementation of the business concept (Bird, 1988; Boyd and Vozikis, 1994). In other words, it refers to intentions of setting up one's own business in the future (Van Gelderen et al., 2008) or the proclivity or the potentiality of starting a new business (Uddin and Bose, 2012). Intentions have proven to be one of the best predictors of behaviors (Krueger et al., 2000); and entrepreneurship intention models "offer us a significant opportunity to increase our ability to understand and predict entrepreneurial activity

(Krueger et al., 2000, p. 412). It is argued that greater stocks of human, social and financial capital can raise intentions. For instance, Hindle et al (2009, p. 40) noted that “a person’s human and social capital is literally a source of the information used to form or not to form entrepreneurial intentions and, eventually, to go on to entrepreneurial commitment.”

Human capital and entrepreneurial intention

Human capital represents the knowledge and skills that individuals bring to a task they set out to perform (Dimov, 2010). Human capital theory states that the cognitive ability of individuals is increased by the accumulation of knowledge stocks which allows them to be better at performing a particular task (Becker, 1975; Schenkel et al., 2007). Knowledge is presented as the stock of creative ideas that provides individuals with strengthened competences, behavioral characteristics and cognitive skills allowing them to develop a more productive and efficient potential activity (Baptista and Leitão, 2015). Within this framework two types of knowledge are identified: explicit and tacit. According to Davidsson and Honig (2003) explicit knowledge (know-what) refers to information carried out in procedures, processes, formal written documents and educational institutions. In contrast tacit knowledge (know-how) includes ‘non-codified’ activities such as experience obtained on the job (Polyani and Sen, 1967). The integration of both types of knowledge is believed to facilitate individuals’ decisions to act entrepreneurially (Davidsson and Honig, 2003; Alrumaithi et al., 2015).

Human capital attributes – including education, experience, knowledge, and skills – have long been argued to be a critical resource for entrepreneurship (e.g., Davidsson and Honig, 2003). Human capital has been linked with heightened entrepreneurial intentions. For example, in terms of education, a positive association has been found between students who undertake an entrepreneurship course and their entrepreneurial intentions, that is, students who have undertaken an entrepreneurship course have higher intentions to start a business than those who have not taken entrepreneurship courses (Galloway and Brown, 2002). Also, Martin et al. (2013) who conducted a meta-analysis of 42 independent samples (N=16,657) found a significant relationships between entrepreneurship education training and human capital assets and entrepreneurship training and entrepreneurship outcomes. Similarly, past experience,

which not only helps in acquiring procedural task related knowledge and skills but also help in developing tacit human capital, has been positively linked to entrepreneurial intention. Kolvereid (1996) notes that individuals with prior experience in entrepreneurial activities have higher entrepreneurial intentions compared to individuals with no prior experience. For purpose of this study, we focus on tacit human capital, which in the entrepreneurship literature has received much less attention than explicit human capital and we hypothesize:

H1a: There is a positive relationship between tacit human capital and entrepreneurial intentions

Social capital and entrepreneurial intention

Social capital represents the ability of actors to extract benefits from their social structures, networks, and memberships (Davidsson and Honig, 2003) and Nahapiet & Ghoshal (1998, p. 242) define it as the “sum of the actual and potential resources embedded within, available through and derived from the network of relationship possessed by an individual or social unit.” The social capital literature typically distinguishes between structural, cognitive, and relational social capital (Nahapiet and Ghoshal, 1998). Structural social refers to the social capital gained through an individual’s personal network (network of relatives, friends, mentors, etc. (Širec and Močnik, 2011). Cognitive social capital refers to the capability of actors to develop mutual interpretive frameworks based on language, codes and narratives (Nahapiet and Ghoshal, 1998; Lee and Jones, 2006). The relational dimension describes the kind of personal relationship, developed through a history of interactions and focuses on aspects that influence the behaviors, like: respect and friendship, which are going to decide to sociability, acceptance and prestige (Macke and Dilly, 2010). The basic tenet of social capital theory is that social relationships matters. Resources, both actual and prospective, are inherently linked to networks and relationships that can be used as opportunities (Rumala, 2012).

Social capital has been used to predict entrepreneurial intentions (e.g Liñán and Santos, 2007; Mosey et al., 2012; Palma-Ruiz et al., 2013). Liñán and Santos, 2007, p. 451 propose that cognitive social capital “transmits values, beliefs, and attitudes through the individuals’ relationships, determining perceptions and, therefore, intentions to start a firm.” Social

networks play a key role in socialization toward entrepreneurship. Individuals may learn the values, attitudes, information and skills associated with entrepreneurship from their network which subsequently could assist them in developing a predisposition toward entrepreneurship (Light and Bonacich, 1988). Social capital may facilitate access to information, which is a critical component of entrepreneurial opportunities (Shane & Venkataraman, 2000). Moreover, social capital maximizes the value of other resources such as financial capital (Baron and Markman, 2003). Sequeira et al. (2007) noted that social networks can “provide access to specific information and resources necessary for business start-up. They are able to provide information regarding the applicable laws, necessary permits, potential sources of financing and emotional support. Since nascent entrepreneurs are challenged with limited resources, encouragement from strong ties that acquisition of needed resources is feasible can greatly influence entrepreneurial intentions in a positive way.” Given these arguments we propose that

H1b: There is a positive relationship between social capital and entrepreneurial intentions

Financial capital and entrepreneurial intention

Access to financial capital is important for entrepreneurship (Marlow and Patton 2005; Kim, et al., 2006). A larger amount of financial capital provides entrepreneurs with more flexibility to undertake a wider array of strategies to start and manage their businesses (Pena 2002). For instance, entrepreneurial decisions are shown to be positively related to individuals' household incomes (Arenius and Minniti, 2005). According to Kim et al. (2006) persons who are financially advantaged (greater wealth and income) are likelier to pursue entrepreneurship. Similarly, Raijman (2001) found that individuals with any type of savings were 2.9 times more likely than respondents without financial investments to be designated potential entrepreneurs. In terms of entrepreneurial intentions, studies have shown that financial resources in the family have direct bearing on entrepreneurial intentions (Ahmed et al., 2010). Moreover, the effect of family wealth tend to be bimodal, in that, students from the less wealthy households may have high entrepreneurial intentions due to necessity and students from the more wealthy households may also have high entrepreneurial intentions because he or she perceives that his or her family

possesses the financial means to assist with the creation of the venture (Davis and Peake, 2014).

Further, according to Mulongo (2013), in Kenya, entry to university education is mostly dependent on a student's socio-economic background; for example at the University of Nairobi, about 84% of students come from high income potential areas. Thus, to a certain degree university students can be considered an elite or wealthy segment within the Kenyan society. Therefore, we hypothesize that:

H1c: There is a positive relationship between financial capital and entrepreneurial intentions

Gender Considerations

Because gender differences are typically reported in studies of entrepreneurial intentions, we investigated whether the mechanism in which entrepreneurial intentions is developed differs as a function of gender. For example, scholars argued that socially constructed and learned ideas about gender and entrepreneurship limit women's ability to accrue social, cultural, human, and financial capital (Gupta et al., 2009). Thus gender might influence intention in an indirect way and may even have interaction effects on the relationships between these variables and entrepreneurial intention.

First, in terms of human capital, education and prior experience are the critical components. Manolova et al. (2007) believe that "higher levels of education and extent of prior experience are likely to increase the belief that the effort put into an entrepreneurial initiative will not be misdirected, but will, instead, lead to a desired outcome." In Kenya, although female access to high school and university education has increased they are still disadvantaged. For instance according to the Kenyan National Bureau of Statistics (2014) in 2010, 767,800 females were enrolled in secondary school compared to 885,500 males. In 2013, the figures improved to 976,600 for females and 1,127,700 males. The same trend can be seen in the case of universities, with female enrolment oscillating around 40%. Mwobobia (2012) argued that such gender inequity in access to education may translate into a lack of entrepreneurial skills amongst women. Similarly, Bowen et al. (2009) noted that in Kenya women are less educated

than men making them less equipped to manage a business. Further although the Kenyan government has created specific programs targeting women, for example the Women Enterprising Project (WEP, women may fail to participate in these programs due to family commitments. Mwobobia (2012) noted that when business training is available, women may not be able to take advantage of it because it is held at a time when they are looking after their family. Thus, women may lack opportunities to develop entrepreneurial human capital through education. Further, in terms of developing human capital through experience, the opportunities for women to gain tacit human capital may be limited due to gender stereotypes. "Social roles consistent with gender stereotypes may anchor women in a gendered social view" (Lewis et al. 2014, p. 14), and may exclude them from participating in entrepreneurial activities since entrepreneurship has traditionally been considered a male vocation (Greene et al., 2001; Gupta et al. 2009). Lavy (2008) believe that such gender stereotypes may have far reaching implications and consequences regarding gender differences in human capital investment and outcomes. Thus in Kenya, which has strong gender stereotypes, women have lower participation rates in entrepreneurship than men (Gatakaa, 2006) and consequently less opportunities to develop tacit human capital. Now, because women are disadvantaged regarding the accumulation of human capital we argue that human capital is a more important resource for female than for male in building entrepreneurial intentions. We propose the following hypothesis:

H2a: The relationship between tacit human capital and entrepreneurial intentions will be moderated by gender, such that there will be a greater increase in the entrepreneurial intentions for female students than for male students when they have tacit human capital.

Second, studies have shown that the people whose social networks include entrepreneurs are more entrepreneurially-oriented and are more likely to become entrepreneurs themselves (Klyver et al., 2007). However, females are disadvantaged when it comes to accessing and making use of social capital. Kenyan female social networks are partially constrained due to the cultural characteristics of the country. For example, Behrman et al. (2002) noted that the cultural ideals of the Luo tribe, such as the discouragement of informal interaction between the sexes, resulted in women social networks being less developed than that of men. Further, the

composition of women's entrepreneurial social network may make their network less valuable than that of men. For instance women tend to have more strong ties than weak ties and also have a great cohesion to family networks, which makes them less likely to receive important information and assistance than men (Kyalo et al., 2014). More importantly, the social networks of female are less likely to include entrepreneurs than the social networks of male entrepreneurs (Klyver et al., 2007). Thus, the fact that women are embedded in social networks with fewer entrepreneurs and valuable contacts than men allows them to generate lower returns from social capital. Moreover, Omwenga et al. (2013) noted that in Kenya even if various associations have been created to assist women in establishing networks and well as to provide training and other means of support, women still faced a shortage of peer support networks compared with men. Perhaps this is because women may not join these associations as they might be overloaded with business and family responsibilities. Based on these arguments, we expect that entrepreneurial networks are likely to be particularly important for women. Thus we hypothesize

H2b: The relationship between social capital and entrepreneurial intentions will be moderated by gender, such that there will be a greater increase in the entrepreneurial intentions for female students than for male students when they have social capital.

Third, access to financial capital has been mentioned as one of the main constraints to female entrepreneurship. The situation is no different in Kenya. In 2013, while 32.7% of the adult population was able to access financial services from the formal, prudentially regulated financial institutions, only 26.4% of women accessed these formal institutions in comparison to 39.5% of men (FSD Kenya, 2013). Women lack access to external funds due to their inability to provide tangible security (Gatakaa, 2006). For instance only 3% of the land is owned by women (CEDAW, 2011). Moreover, lending institutions consider women as smaller, less experienced and therefore less attractive clients, which contributes to their difficulties in accessing finance (Fletschner, 2009; Makena et al., 2014). Furthermore, women generally have less wealth and income than men. For instance Wanjala and Were (2009) highlight that Kenyan women spend less time in wage employment and devote more time to household production than Kenyan men. Also, even when employed they are disadvantaged. Suda (2002, p. 302)

noted that “most women in Kenya are concentrated in low paying, low status occupations with poor fringe benefits and carried out under poor working conditions and therefore hold very little prospect for poverty reduction and upward mobility.” Moreover, traditional practices discriminated against women in inheritance matters, and men inherited most of the family wealth. Thus, lacking personal wealth and disadvantaged when accessing formal credit, women often start a business with their own money or money borrowed from family or friends (Stevenson and St-Onge, 2005). Thus we expect financial capital to be more important to men than to women.

H2c: The relationship between financial capital and entrepreneurial intentions will be moderated by gender, such that there will be a greater increase in the entrepreneurial intentions for female students than for male students when they have financial capital.

Methodology

Setting, participants and recruitment procedures

To test our predictions we used a dataset consisting of 395 students in a Kenyan University. The students belong to several different faculties. To explore entrepreneurial intention, students form an appropriate sample group since “reflections on the outcomes that they want to achieve in their future careers are likely in the forefront of their minds De Clercq et al. (2013, p. 660)”

Data collection

The survey instrument was developed using as a frame of reference previously validated questionnaires (e.g., Kolvereid, 1996). We used a multi-item measures to entrepreneurial, given that single item are often plagued by issues of validity, accuracy and reliability. The use of multi-item measures is in keeping with recommendation for authors such as Nunnally and Bernstein (1994, p. 67) who note that “measurement error averages out when individual scores are summed to obtain a total score.” For the intention measure a 5-point Likert scale is used, ranging from 1 (strongly disagree) to 5 (strongly agree).

Additionally, we attempted to minimize the effects of common-method bias, as a result of using a single-respondent survey to generate our dataset. We carefully constructed all survey items, and wherever possible, used pre-tested, valid multidimensional constructs (Huber and Power, 1985). Thus, because all of our constructs were of a higher order nature assessed by established multiple-item measures, this reduces the likelihood of respondents artificially inflating relationships among them (Simsek et al, 2007). Furthermore, following the work of De Clercq et al. (2013, p. 661) precautions were taken in order to “minimize bias responses due to social desirability, acquiescence or consistency with 'assumed' research hypotheses.” As such respondents were given the opportunity to complete the survey anonymously. Also they were guaranteed complete confidentiality and constantly reminded in the survey instrument to answer the questions as honestly as possible since there were no wrong or right answers.

Measures

Dependent variables

The entrepreneurial intention construct is based on a scale proposed by Kolvereid (1996). Three items measured entrepreneurial intention: “I am very interested in setting up my own business” “I strongly consider setting up my own business” and “I am likely to set up my own business.” A composite score was generated by averaging these items. The Cronbach alpha was 0.86.

Independent variables

For this study we adopt a measure of human capital that is specific to venturing efforts: entrepreneurial experience. Such experience could be useful in providing tacit knowledge of the entrepreneurial process. We asked respondents: “Have you started your own business in the past?” A binary yes/no variable was used to represent their response.

To measure social capital, we asked the respondents three questions: “Do you have close friends and/or family that have started a business?” “Do you have any contacts within a business support organization (e.g., Bank, SACCO, Business incubator)?” and “Have you ever

gotten involved with any business network or service club (e.g., trade association, business incubator, Rotary club, Lions club)?” Responses ranged from 0 – 3.

Financial capital was measured by using a proxy which represents family wealth. The respondents were asked whether they had attended a private or public secondary school. We assume that students with private schooling come from wealthier families. Private secondary schools in Kenya are generally high cost. Nishimura and Yamano (2013) estimated that the average annual expenditure for children attending public schools was 31 USD per pupil in 2007, while the figure was 130 USD for those attending private schools, thus, the expenditure was about four times more when children attended a private school than when they attended a public school. Further, the Development Policy Management Forum (DPMF, 2012) found that the income distribution of workers in Kenya is in the form a pyramid. For instance they found that for workers employed in the formal sector, the bottom 90% earns about 15,000 KSHS (approximately 162 USD) monthly; 9% (the middle income bracket) earns about 100, 000 KSHS (approximately 1,077 USD) monthly and the top 1% earn beyond KSHS 100,000 a month. So as noted by Nishimura and Yamano (2013) households that sent their children to private schools were likely to be relatively affluent.

Students were also asked to report their gender. A dummy variable represented their response. Men were coded as 1, and women were coded as 2.

Estimation Approach and Control Variables

To analyze the association between human resource management self-efficacy and entrepreneurial intention we estimate the following model (Hypotheses 1):

$$\text{Entrepreneurial Intentions} = \alpha + \beta_1(\text{HC}) + \beta_2(\text{SC}) + \beta_3(\text{FC}) + \varepsilon \quad (\text{Eq. 1})$$

The outcome variable is entrepreneurial intention and the unit of analysis is the student (s). The independent variable is human capital (HC), social capital (SC) and financial capital (FC). We are concerned with the influence of potentially confounding factors, as such we include controls, represented by δ_s . To estimate the model we used ordinary least square regression. To

avoid multi-collinearity the independent and moderating variables were mean centred (Aiken et al., 1991).

As it regards the control variables, age (e.g., Georgellis et al., 2005; Parker, 2009), academic year (e.g., Varamäki et al. 2011; Joensuu et al. 2013) and ethnicity (e.g., Pushkarskaya, 2008; Agbim et al., 2013) have been used in past studies to account for two types of potentially confounding factors, those that affect the overall perception and those related to the underlying unobserved heterogeneity of individuals; Age, an indication of how old a respondent was at the time taking the survey in years was recorded as a continuous variable. Academic year, an indication in which year of higher education is the respondent enrolled, was a categorical variable with six levels: First year, Second year, third year, Fourth Year, Fifth and Sixth year. Ethnicity which represented the students' tribal ethnicity was a categorical variable representing 4 ethnic groups: Kamba, Kikuyu, Luhya and Luo.

In terms of reliability and validity of measures, following the recommendation of Hair et al. (1998), we use Cronbach's alpha to provide a measure of the internal consistency. Nunnally et al. (1994) noted that alphas (α) > 0.7 indicates satisfactory internal consistency reliability. Our multi-item measures of intention was above the 0.7 threshold (0.86)

Results

Correlations, standard deviations are presented in Table 2. In general, the participants in the study had a mean age of 21.78, SD ± 2.79) and 61.65 % were male. Social capital correlated positively with entrepreneurial intention; the relationship was significant at the 1% level ($\beta = .14$, $p < .01$). In contrast, financial capital had a negative correlation with entrepreneurial intention ($\beta = -.11$, $p < .05$). Among the control variables, intentions had a significant positive correlation with age ($\beta = .10$, $p < .05$) and academic year ($\beta = .09$, $p < .1$); as well a negative correlation with ethnic tribe $\beta = -.09$, $p < .1$).

Table 1. Correlations, Means and Standard Deviation

	1	2	3	4	5	6	7	8	Mean	SD
1. Intention	1								4.36	0.81
2. Age	0.10**	1							21.78	2.79
3. Tribal Ethnicity	-0.09*	-0.02	1						1.92	1.10
4. Academic year	0.09	0.33***	-0.01	1					2.43	1.08
5. Gender	-0.07	-0.10**	-0.02	0.03	1				1.38	0.49
6. Human capital	0.06	0.04	-0.08	0.05	-0.03	1			0.27	0.44
7. Social capital	0.14***	0.05	0.07	0.13***	-0.07*	0.11**	1		0.61	0.32
8. Financial capital	-0.11**	0.05	-0.05	0.10**	0.05	0.01	-0.10**	1	0.19	0.40

* p<0.1, ** p<0.05, *** p<0.01

In our study the variance inflation factors were all lower than two which is far below the critical value of 10 (Hair et al., 1998), which implies that multi-collinearity may not be an issue in our analyses. In Table 3, we provide the regression results for several models. Model 1 contains only the control variables. Of the controls age had a positive correlation with entrepreneurial intention ($\beta = .04$, $p < .05$); in other words, the entrepreneurial intentions of the students increased as a function of their age. Tribal ethnicity was also significant. More specifically, students from the Luhya tribe ($\beta = -0.27$, $p < 0.05$) had significantly less entrepreneurial intention than students from the Kikuyu tribe (reference group). Additionally, in terms of academic year, only second year students' entrepreneurial intentions differed from that of the reference group (First years). The findings show that second year students had greater entrepreneurial intentions than first year students ($\beta = 0.28$, $p < 0.05$). Finally, female students exhibited less entrepreneurial intentions than their male counterparts ($\beta = -0.15$, $p < .05$)

In model 2 we tested the hypothesis that the relationship between human, social and financial capital and entrepreneurial intention will be significant and positive (Hypothesis 1, 2 and 3, respectively). The results failed to confirm a positive and significant main effect between human capital and entrepreneurial intention ($\beta = 0.02$, n.s). Hence Hypothesis 1 is not upheld. In addition, we detected a significant a positive association between social capital and entrepreneurial intentions ($\beta = 0.35$, $p < 0.01$). Thus hypotheses 1b was confirmed. In terms of financial capital, contrary to our expectations, the variable had a significant and negative

correlation with entrepreneurial intentions, suggesting that as wealth increases, entrepreneurial intention decreases. Thus hypothesis 1c was not upheld

In model 3 we tested the impact of our interaction variables. Hypothesis 2a, 2b and 2c was meant to examine the possible moderating effect of gender on the relationship between the human, social and financial capital and entrepreneurial intention. Significant interactions were detected in two cases. First, the human capital/gender interaction had a significant positive effect on entrepreneurial intentions ($\beta = 0.35$, $p < 0.1$). To examine the nature of this interaction was plotted it in Figure 1 and can appreciate that as hypothesized the relationship between tacit human capital and entrepreneurial intentions will be moderated by gender, such that there is a greater increase in the entrepreneurial intentions for female students than for male students when they move from low to high tacit human capital. Also, the financial capital/gender interaction was significantly associated with entrepreneurial intentions ($\beta = 0.35$, $p < 0.1$). The results showed that financial capital augmented the entrepreneurial intentions of female students, while it lowered the entrepreneurial intentions of male students. Thus Hypothesis H2c was also confirmed. Figure 2 displays the interaction effect.

Table 2. Regression Analyses for Testing The Relationship Between Human , Social and Financial Capital and Entrepreneurial Intentions (Dependent variable = Entrepreneurial intentions)

	Model 1		Model 2		Model 3	
Age	0.04**	[0.02]	0.04**	[0.02]	0.04**	[0.02]
2nd year	0.28**	[0.11]	0.26**	[0.11]	0.30***	[0.11]
3rd year	0.14	[0.12]	0.12	[0.12]	0.15	[0.12]
4th year	0.2	[0.14]	0.18	[0.14]	0.20	[0.14]
5th year	-0.17	[0.28]	-0.2	[0.28]	-0.18	[0.28]
6th year	0.95	[0.81]	1.02	[0.80]	0.94	[0.80]
Luo	-0.18	[0.11]	-0.14	[0.11]	-0.14	[0.11]
Kamba	0.00	[0.11]	-0.02	[0.11]	-0.02	[0.11]
Luhya	-0.27**	[0.12]	-0.26**	[0.12]	-0.26**	[0.12]
Gender	-0.15*	[0.08]	-0.12	[0.08]	-0.12	[0.08]
Human Capital			0.02	[0.09]	0.03	[0.09]
Social Capital			0.35***	[0.13]	0.32**	[0.13]
Financial capital			-0.20*	[0.10]	-0.21**	[0.10]
Human capital X Gender					0.35*	[0.19]
Social capital X Gender					0.25	[0.25]
Financial Capital X Gender					0.35*	[0.20]
Constant	3.64***	[0.41]	3.38***	[0.42]	3.42***	[0.38]
No of Obs	395		391		391	
Equation F	2.57***		2.93***		2.89***	
R-square	0.06		0.09		0.11	

Figure 1. Moderating Effect of Gender on the Human Capital - Entrepreneurial Intentions Relationship

Figure 2. Moderating Effect of Gender on the Financial capital - Entrepreneurial Intentions Relationship

Discussion

It is generally agreed that greater stocks of human, social and financial capital heightens the intent to undertake entrepreneurial action. We wanted to know whether this was true within the

Kenyan setting, hence we explored the aforementioned relationships using a student sample from a Kenyan university. First, we find that human capital was not related to entrepreneurial intention which is inconsistent with previous research. For example Schenkel et al. (2007) found that previous start up experience had a strong relationship with entrepreneurial intentions in both the short and longer term. In our case, while we expected that the tacit, contextual knowledge gained through prior startup experience would serve as an important catalyst to entrepreneurial intentions, this was not the case. A possible explanation for this finding may lie in the fact that in our setting entrepreneurship is not viewed as a prestigious or desirable occupation. In fact, the general preference is towards wage paying jobs and some of the self-employed may be viewed as forming a queue for salaried employment (Haywood and Falco, 2011). In this setting where there is not widespread social support for entrepreneurship as a desired occupation, students did not convert their tacit human capital into entrepreneurial intentions.

Consistent with social capital theory, we find that social capital heightened the students' entrepreneurial intentions. Research suggests that social capital might be especially important in emerging markets where individuals have fewer resources (Peng and Zhou, 2005). Emerging economies are characterized by poorly developed financial markets, weak institutions for distribution of capital, and volatility in economic development. Moreover, capital generally has low availability and high costs and hence, there is normally a resource gap (Hitt et al., 2000). Thus, in our setting, which is characterized by a resource gap, social capital which allows individuals to access complementary assets within the wider network (Bruton et al., 2003), fosters entrepreneurial intentions since individuals are more willing to engage in entrepreneurship activities if they perceive that the environment of business is favorable and that they have support in accessing capital, business information etc. (Ismail et al., 2009).

Our research shows that financial capital had a negative correlation with entrepreneurial intentions. Past studies differ as to the role of income in shaping entrepreneurial intentions. It is largely assumed that wealth allows individuals to engage in riskier income-generating activities. For instance Millman et al. (2010) found a positive relationship between household income and intentions. Yet in our setting, this is not the case. Students from wealthier

households were less prone to desire entrepreneurial activities than their counterparts from less wealthy households. It is possible that for wealthier households, individuals are not pushed into self-employment since they can survive off their household wealth while awaiting a wage job.

Furthermore, the greater entrepreneurial intention of the lower income groups is an indication that many of these individuals will be forced to pursue an entrepreneurial career out of necessity (Pushkarskaya, 2008). The developing country context is characterized by high level of unemployment, particularly by limited opportunities in formal sector employment. As such, individuals who do not have the financial flexibility that comes from belonging to a higher income household (e.g., the ability to rely on their parent's income for support while they search for a job) will have greater entrepreneurial intentions as entrepreneurship is the only avenue available to them to earn some income.

Finally, in terms of gender, our findings show the gendered nature of entrepreneurial intentions and highlight the need to deeply examine gender-based differences in the construction entrepreneurial intentions. Based on our results, gender moderates the human capital – entrepreneurial intentions relationship, as well as the financial capital – entrepreneurial intentions relationship. First we conclude that human and financial capital are more important in the development of female students' entrepreneurial intentions than for their male counterparts. Moreover, interestingly, we saw that financial capital decreased the entrepreneurial intentions of male students. This may be due to the patriarchal influence in Kenyan society, where the role of women is seen as child-bearing, care-taking, agricultural, and domestic (Machira, 2013), while men are expected and encouraged to be breadwinners and to elevate their status by entering socially accepted and elitist occupations (Udofia and Essien 2013). Thus, male students are pressured to follow non-entrepreneurial careers or, likewise, those with money and access to money are not expected to be entrepreneurs, but to take jobs in the professions. Sewell et al. (1957) suggest that youth from families of higher socioeconomic statuses were more likely to select professional occupations

Contribution

A unique contribution of this study was the exploration of the relative importance of human, social and financial capital in the development of students' entrepreneurial intentions in a developing country context. We were able to provide empirical evidence of the nature of these relations in a context, which is structurally and culturally different than Western society context, where these relationships are normally tested. Thus, our study has both theoretical and practical implications. From a theoretical standpoint, we respond to the call to conduct research in emerging economies, not only in hopes of gaining a better understanding of these economies, but also with the aim to expand our theoretical understanding of entrepreneurship in general. As Bruton et al (2008) suggest "the exploration of entrepreneurship in the context of emerging economies will allow for the extension and revision of theories through the consideration of new contextual variables. This in turn enables researchers to fine-tune theories by developing context-specific conditions and operationalization of key constructs, which allows researchers to develop new theories and constructs that are generalizable to research in other contexts." Thus we are able to contribute towards this end.

Our study also speaks to the literature on human, social and financial capital. We show that the hypothesized positive relationship between capital and entrepreneurial milestones is not automatic or universal, but is context dependent. For instance, we show that tacit knowledge and financial capital does not automatically translate into greater entrepreneurial intentions when there is not widespread social acceptance of entrepreneurship. It would seem that human and financial capital requires supportive cultural capital that directs them towards entrepreneurship. Every culture does not value entrepreneurship, and human and financial capital will not transpose into entrepreneurship where entrepreneurship is not valued.

Moreover, given that women are relatively disadvantaged in terms of human, social and financial capital in most countries, we found it necessary to draw clear distinctions between women and men with respect to the process of entrepreneurial intentions' formation. Our interesting finding in terms of financial capital reveals that in our setting having financial capital constrain entrepreneurial intentions of males. We believe this result is governed by the

fact that, in our setting, males feel the social pressure (much more than women) to have wage-paying careers (which in our setting is a sign of status). Once again this result suggests that entrepreneurial behavior is culturally bounded and, as such as Hindle (2010, p. 639) suggest “we need to define and approach entrepreneurship in a manner capable of dealing theoretically and practically with the influence upon entrepreneurial process of the human and physical contextual factors prevalent in the community where the entrepreneurial process actually or potentially takes place.”

Limitations

Our findings should be interpreted within the limitations of the study. However by addressing these limitations various opportunities exist to advance our knowledge of entrepreneurial intentions. We only focus on one sub-dimension of human and financial capital, which might dilute the multi-dimensionality of the constructs; however, the opportunity exists to conduct other studies that take into consideration other sub-dimensions. For example, future research could investigate the influence of explicit human capital gained through entrepreneurship education. Additionally, we adopted a cross-sectional design which weakens our ability to make casual inferences. Likewise, we could not rule out the possibility of reverse causation; a longitudinal approach would have been much better suited for these purposes. Lastly, we relied on self-reported data and the possibility exists that students’ projections of their future behavior may be biased. As, Straub et al., 1995 note, studies that rely on subjective measures may not be uncovering true, significant, effects. Future studies should look towards including more objective measures of self-efficacy and entrepreneurial intentions.

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9.4 Conflict and tension in curriculum-making: sources of complexity in inter-system curriculum development

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Abstract

The complex nature of the curriculum context and development processes has attracted substantial scholarly attention. However, studies of tensions and contradictions among stakeholders involved in curriculum-making are relatively rare. The objective of this article is to contribute to a better understanding of such tensions and contradictions. A case study was used to scrutinizing an international curriculum development process spanning six universities across four countries in Africa. We use cultural-historical activity theory as a framework for exploring the scope and nature of the institutional, social and material context of a curriculum development system. Data collection was based on semi-structured interviews, video recordings of stakeholder discussions, and project reports. Data was analysed using content analysis. The results show that tensions arise from difficulties in managing stakeholder relations, organizational rules and structures and resource insufficiency. The present study not only contributes to the literature on activity theory, but also it indicates what elements of the curriculum development activity must change in order to achieve a more efficient participatory process.

Keywords: Curriculum development, Stakeholder inclusion, Activity theory, Contradictions

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Introduction

After several decades where international agencies and national policy makers paid scant attention to higher education in developing countries, higher education systems have after the turn of the century entered the international policy agenda. This is partly due to the need for transforming educational systems from being a product of the industrial revolution and post-colonial politics to becoming an engine in contemporary knowledge-based societies (Bloom, 2006; World Bank, 1999, 2000, 2009; UNESCO, 1998). In developing countries, there has been a growing awareness among policy-makers, educators, and the general public of the importance of adopting inclusive curriculum reform initiatives to support this transformation. For example, the African Union's Second Decade for Education for Africa (2006-2015) Action Plan states that one of the means for achieving the plan's developmental goals is "The development of dialogue, networks, cooperation, collaboration and partnerships between African Higher Education and public, civil society and corporate sectors" (African Union, 2006, p. 9). The expectation is that multi-stakeholder interaction generated by participatory activity can result in the discovery of more sustainable and relevant solutions to contemporary educational challenges.

The collaborative approach to curriculum development and reform provides both opportunities and challenges. For instance, the inclusion of multiple players offers outside expertise that provides key knowledge, inform, advice, and inspire students and staff alike; however on the other side of the spectrum, the management of curriculum development programs and processes involving various partners is more problematic (McKeown et al., 2006). Furthermore, as is often the case with social systems, much potential goes unrealized because of tensions and contradictions manifested as problems, challenges, hurdles, etc. that arise in social action. These tensions and contradictions oftentimes result in unintended consequences, especially when they are not carefully analyzed and understood. As Jaffee (2011, p. 2) argues "these contradictions must be recognized and acknowledged in order to understand the challenges facing implementation, the pace and rhythm of organizational change, and the obstacles to the successful realization of intended purposes."

The super-complex society (Barnett, 2000) is characterized by multiple interpretations, tolerance of diversity, resistance to universals, and acceptance of ambiguity. Curriculum reforms engaging institutional changes and enacted in such contexts are challenging endeavours (Keesing-Styles et al., 2013). In general, curriculum change is a multidimensional and multidisciplinary affair that includes certain amount of associated chaos such as breakdowns, conflicts, or misfits, and these reform activities require a thorough understanding of the processes affecting curriculum development (Johnson, 2001). In this light, the relative lack of debate and attention paid to curriculum issues is problematic (Barnett and Coate, 2005). Especially, insight into the dynamics of curriculum reform and its implementation in the context of developing countries higher education systems is lacking (Altinyelken, 2010). Understanding such dynamics is important as the scope of change is frequently underestimated because local cultures and contextual realities and capacities as much as implementation requirements seem to be overlooked (Chisholm & Leyendecker, 2008).

Thus, while educators and decision makers acknowledge the role of broader society in higher education curriculum development, the scientific literature has paid limited attention to participatory curricula reform processes, and little is known about the processes whereby development agencies, educational developers, administrators, teachers, students, private sector representatives and other stakeholders jointly make decisions about and influence curricula issues, how they manage the curriculum development process and what contradictions and tensions arise in this process. The scientific literature that explicitly discusses participatory approaches to curriculum change is scant. The Food and Agriculture Organization of the United Nations (FAO) and international development cooperation agencies has promoted the practice of participatory curriculum development in agricultural education (e.g., FAO, 1998; Taylor, 2001; Taylor & Beniast, 2003). Practical applications based on this approach are reported by, for example, Taylor (2000). Meyer and Bushney (2008) suggest a generic multi-stakeholder-driven model aiming at integrating stakeholder based on a quality management approach (Hendel & Lewis, 2005). The authors provide a comprehensive list of stakeholders and reasons for their inclusion in the curriculum development process. This literature largely remains normative and only to a limited extent discusses the inherent complexity identified in the

growing body of literature that draws attention to the fact that curriculum change is a complex process that unfolds in a super-complex reality, i.e., a world of change where:

[N]othing can be taken for granted, where no frame of understanding or of action can be entertained with any security.... [A] supercomplex world is one in which the very frameworks by which we orient ourselves to the world are themselves contested” (Barnett, 2000, p. 257).

To address these issues, we examine the case of a collaborative curriculum design process in the African setting. Our aim is to identify the challenges that surface when a participatory curriculum development process is instigated through an inter-organizational international cooperation-funded collaboration by asking the following questions:

1. How does participatory curriculum development occur in social interaction and context?
2. Which contradictions characterize the curriculum development process?
3. Can these contradictions constitute learning opportunities for the involved parties?

While conceptualizing the curriculum change process as an activity system, we apply the methodological and analytical lens of cultural-historical activity theory (Engeström, 1987) to answer these questions. Cultural-historical activity theory is chosen for this study in order to reflect the complexity of the curriculum development system being studied. Lee (2011) highlights five arguments for using cultural-historical activity theory in educational change research. The methodology enables us to a) pay close attention to culture and history, b) capture the complexity and overlaps with other activity systems, c) grasp issues of the power and politics and identify how they can become catalysts for learning, d) understand emotions and identities and how these influence motives and activities, and e) simultaneously analyse both micro and macro-level elements of change (Lee, 2011). Cultural-historical activity theory is a frequently used methodology in educational research (see, e.g., Arnseth (2008), Chikunda (2014), Fanghanel (2004) and McMillan (2011) and has demonstrated its ability to accommodate the above-mentioned supercomplex contextual realities.

We chose the Danish International Cooperation (Danida) funded Universities, Business and Research in Agricultural Innovation (UniBRAIN) program as our case study. This program aimed to create an inclusive curriculum design environment introducing a new collaborative approach with the expectation that the inclusion of participants from the wider stakeholder community would help provide expertise, experiences and ideas that could prove relevant when producing a curriculum that enhances employability and fosters entrepreneurship. The case study is relevant because it involves a highly complex organizational setting, five universities across four countries and different educational systems. Moreover, the case comprises tensions between top-down (program defined) and bottom-up (local university departments) aspirations and priorities. Finally, although being a donor-supported process, the involvement of university departments was expected to be largely self-propelled and without external funding thereby emphasizing the need for perceived relevance among participants.

Our study has important implications. By focusing on tensions and contradictions within the process of curriculum reform we provide an insight of “the multiple aspects of activity that must change for reform-oriented pedagogies to realize their potential” (Levine, 2008, p. 10). This study is useful to curriculum designers, as it sheds light on the complexities associated with curriculum change and provides the avenue for identifying problematic aspects of curriculum reform involving participatory approaches. Furthermore, the study provides insights on possible design strategies that accommodate different interests, thus fulfilling the stakeholders’ objectives and supporting their needs (Lin et al., 2012; Berge, 2006).

Participatory curriculum development

Participatory curriculum development refers to a curriculum design approach where the curriculum is developed through the interchanges of experience and information between key actors related to the curriculum subject (Taylor, 2000; Taylor, 2005). The central tenet of a participatory approach is that curricula must emerge from and be responsive to the particular context of each group of participants (Auerbach, 1992). The process involves a wide range of stakeholders at every step of the way, including during needs assessment and design, and through implementation and evaluation. The different stakeholders are assumed to be the

experts on their own reality and, moreover, by taking ownership of the full learning process, they have the potential to make important contributions in terms of making learning more relevant and more effective (Taylor, 2005).

Participatory approaches represent a departure from the norm and require a fundamental reconceptualization of curriculum development. Whereas, in the traditional approach, curriculum design is often led by an expert or experts that are embedded within the university system; in the participatory paradigm, expertise can come from anywhere within the wider stakeholder community. In such a setting roles are interwoven and the power relations changes, which may have important implications for the curriculum development process itself, particularly where curriculum development is centralized (Taylor, 2005).

There are benefits to adopting participatory approaches to curriculum development. For example, Taylor (2005) notes that it avoids the possibility of a marginal, unrepresentative group mandating all of the processes and outcomes. In addition, the approach allows the expertise of professionals who best know their context and teaching situation to have voice in the curriculum development. These individuals often have a contextualized perspective as to where knowledge and skill gaps exist and are able to contribute to the development of strategies to target these disparities. Likewise, Taylor (2000) listed several limitations. For example, in comparison to more traditional or systematic approaches, participatory processes increase the demand on time and other resources. Moreover, because of the high resource demand, it is often difficult to cultivate and maintain the interest and commitment of various stakeholders. Lastly, due to different perceptions, experiences, educational backgrounds and understandings of the wider curriculum development process, creating a mechanism by which various stakeholders can work and interact on an equal basis is quite complex.

These limitations and constraints potentially have serious implications. For instance, if a participatory curriculum development approach is only possible when time and resources, both human and financial, are abundant, then it will become unsustainable, and hence have little applicability in most contexts (Taylor, 2000). Hence, it makes sense to examine the constraints

and limitations of a participatory curriculum development process, especially in a context in which it is largely untested.

Cultural-historical activity theory

We conceptualized the process of curriculum change using the activity theory framework, originating in the work of the Russian psychologists Vygotsky and Leont'ev. The theory, although first proposed in the early 20th century has remained in the background until recently (Peachey, 2005). It is increasingly used in the fields of human-computer interaction (Kuutti, 1996; Carroll, 2013), artificial intelligence (Lindblom, 2013), and education (Welch, 2007; Hu and Webb, 2009; Levine, 2010). In terms of curriculum development, it allows researchers to examine the process of curriculum reforms, and most importantly to identify the tensions and contradictions underlying the activity. Activity theory captures the intricacies of the activity, which is part of a complex system and involves a rich human texture (Bakhurst, 2009). In order words, it provides a framework for micro-level analysis of the human interaction with its environment (Mishra et al., 2011).

Cultural-historical activity theory draws upon two perspectives that are relevant for the process of curriculum development: systems view and social constructivism. It takes into account that activities are open systems (Engeström, 2001). According to Hjørland and Nicolaisen (2005), the concept of open systems implies a holistic perspective in which the elements of a system interact to determine their respective functions. It underscores the importance of keeping in mind the 'bigger picture' as none of the system's elements operate in isolation. Cultural-historical activity theory also incorporates elements of social constructivism. Applying cultural-historical activity theory highlights how and why social context matters (Barton et al., 2004). Postholm (2008, p. 37) argues that activity theory and social constructivism share the epistemological approach in that active individuals construct knowledge in social interaction using mediational means. It highlights the importance of considering the context, in order to understand the nature of societal dynamics, given that meaning is co-constructed through an active and dynamic process between agents and environments (Ogawa, 2006).

Description of the context

The context of an activity is analyzed in terms of various influencing forces embedded in the environment in which the activity takes place. Activity theory emphasizes how tools mediate action between any number of subjects and an object. The contextual analysis also examines the impact of the surrounding community, explicit and implicit rules, and the division of labor. These tenets altogether comprise an activity system. Figure 1 portrays an activity system (Engeström, 1987).

Figure 1. An activity system (Engeström, 1987)

The subject represents the individual or group of actors engaged in the activity. These subjects act on an object which represents the problem space. To achieve their goal subjects rely on tools, which can be anything used in the transformation process. The use of these tools and the subsequent action of the subjects will produce an outcome. The subjects do not work in isolation but within a community, which comprises of other individuals and subgroups that share the same general object. Within this context there are differentiated roles and responsibilities within the community (division of labor). Such division of labor can run horizontally as tasks are spread across members of the community with equal status, and vertically as tasks are

distributed up and down divisions of power. Finally the relationships are governed by rules and constrained by the formal, informal (idiosyncratic adaptation), and technical (mandated and, potentially, written) rules, norms, and conventions of the community. This notion of context underlies a major strength of the theory – the ability to see the big picture. Oftentimes, curriculum change research has been criticized for its failure to fully analyze the context and in essence producing an uncritical and underdeveloped conception of the context (Hargreaves, 2005). For instance, Barab et al. (2004, p. 25) acknowledged that ‘it is common for researchers of educational technologies to publish case studies that report the character of systems they develop in terms of a unitary, coherent and refined entity. Although these end-product characterizations provide a useful exemplar, they fail to portray (and acknowledge) the complex dynamics that are characteristic of the making and use of these systems.’ Activity theory overcomes these weaknesses by introducing a range of features, such as the recognition of actors, mediation, historicity, constructivity, dynamics, and others (Kuutti, 1996).

Contradictions in the activity system

A main contribution of activity theory is its ability to identify contradictions between nodes in an activity system (Mishra et al., 2011). Contradictions are defined as ‘a misfit within elements, between them, between different activities, or between different developmental phases of a single activity’ (Barab et al., 2002, p. 80). Contradictions emerge as “problems, ruptures, breakdowns, clashes” in activities (Kuutti, 1996, p. 34). They result in double binds in everyday practices (Murphy and Rodriguez-Manzanares, 2008), in which an individual receives “two messages or commands which deny each other” (Engeström, 1987, p. 174). Because these contradictions hinder the effective implementation of the activity, they have to be addressed by reassessing and redefining each component of the activity systems (Lim and Hung, 2003).

Engeström (2001) identifies four sets of contradictions: (1) primary, (2) secondary, (3) tertiary, and (4) quaternary. The primary contradictions occur within the elements of activity systems when activity participants encounter more than one value system attached to an element within an activity that brings about conflict. Secondary contradictions arise between the nodes within an activity system. Tertiary contradictions occur when activity participants face conflicting

situations in adopting new and advanced method to achieve an objective, and quaternary contradictions occur between the central activity system and outside activity systems when changes to an activity generates conflicts with adjacent activities.

Contradictions, as a basic principle of cultural-historical activity theory assist in identifying the tensions and conflicts that emerge in the process of curriculum development. This aspect of the theory is particularly relevant to educational change, because it offers a new way to understand curriculum renewal as a contradiction-driven process. Tensions produce disturbances within the system and eventually drive the system to change and develop (Barab, 2002). Moreover, while contradictions may create conflicts, interruptions, and clashes, it is through their resolution that change or development occurs (Gedera and Williams, 2013). Contradictions reveal opportunities for creative innovations, for new ways of structuring and enacting the activity (Foot, 2001). They are ‘lenses through which participants in an activity can reflect on the developmental trajectory of the activity system and understand its dynamics’ (Foot, 2001, p. 12). By modelling contradictions in activity systems researchers can identify the developmental changes by, for example, developing new tools or reorganizing the division of labor (Engestrom, 2001).

Possibility for expansive learning

In addition it is possible to focus on the roots and origins of the problems in order to gain an understanding of why certain changes cannot be fully brought to fruition (Bonneau, 2013). These root causes can stem from internal, external, organizational and cultural forces (Stark and Lattuca, 1997; Oliver and Hyun, 2011). Internal forces could include the attitudes of teachers who are responsible for implementing the curriculum (Cronin-Jones, 1991). External forces could include the national agenda (Brock-Utne, 2003), globalization trends (Astiz et al., 2002), and societal trends (Van den Akker, 2003). Organizational forces could include the structure of the organization (Innes, 2004) and cultural forces may include the educational beliefs and the disciplines of the curriculum developers (Toombs and Tierney, 1991). Engestrom (2000) argues that the collaborative analysis and modelling involved in the identification of the root causes of problems is an important precondition for the creation of a shared vision for the expansive

solution of the contradictions. Using the cultural-historical activity theory framework for analysis enables researchers to identify these contradictions and to suggest possibilities for expansive learning. Such expansive learning occurs when to resolve the contradictions, individual participants, or the collective, begin to question and deviate from its established norms in a deliberate collective change effort (Engeström, 2001). In this way “an expansive transformation is accomplished when the object and motive of the activity are reconceptualized to embrace a radically wider horizon of possibilities than in the previous mode of the activity (p. 137).

Methods

Study setting

The curriculum revision process analyzed in our study was a result of the recommendations of the Danish African Commission launched by the Danish Government in 2008. In its final report the commission stated that ‘African universities are not sufficiently geared to meet the needs of industry. Graduates often cannot find employment, while many small businesses lack staff with the education and skills needed to drive innovation. Essentially, the relationship between the demands of the private sector and what universities teach is too weak’ (MFAD, 2010). UniBRAIN, a Danish International Development Agency (Danida) funded program was launched in 2011 with the Forum for Agricultural Research in Africa (FARA) as the implementing organization. With the overall objective of creating employment and growth, the project aimed at establishing agribusiness incubators and support tertiary educational institutions in producing agribusiness graduates with the potential to become efficient entrepreneurs (UniBRAIN, 2010). During 2011 five agribusiness innovation incubator consortiums were identified as the initial batch of projects to be funded. Each consortium included a research institute, a private sector business partner, and a university. The universities included Makerere University and Chambogo University, Uganda, Jomo Kenyatta University of Agriculture and Technology, Kenya, University of Ghana, Ghana, University of Zambia and Mulungushi University, Zambia.

UniBRAIN engaged the African Network for Agriculture, Agroforestry and Natural Resources Education (ANAFE) to support the agribusiness curriculum reform process. ANAFE is a pan-African network launched in 1993 including more than 130 agricultural colleges and universities in 35 African countries with the objective to strengthen the capacity of tertiary agricultural institutions, their staff and graduates and to work with key agricultural and rural development stakeholders. Thus, the UniBRAIN initiated curriculum change process included an inter-organizational process across the involved universities aimed at the development of an exemplary agribusiness curricula as well as activities conducted by local curriculum reform teams at each university.

Research design

A case study approach was used to explore the curriculum reform process. The case study approach is appropriate when a phenomenon is not well understood. It allows researchers to delve deeper into the complex process of curriculum reform and are an appropriate research design in the study of contradictions. Rather than considering individuals in isolation, cultural-historical activity theory situates individuals within the activity system(s) in which they are involved (Murphy and Rodriguez-Manzanares, 2008). Thus, the use of a case study approach was appropriate since it assists in understanding ‘a contemporary phenomenon within its real-life context’ (Yin, 2003, p. 14). In addition, case studies provide the additional advantage in that it allows researchers to benefit from the previously developed theoretical propositions to guide data analysis (Murphy and Rodriguez-Manzanares, 2008).

Data collection

To ensure the credibility, trustworthiness, reliability, and believability of the findings (Basharina, 2003), we used multiple data sources following the recommendation of Patton (1990). Cultural-historical activity theory itself ensures triangulation by requiring the examination of many facets of a broader activity (Jaradat et al., 2010, p. 24). Thus, we combined semi-structured interviews, video recordings, and project reports (see Appendix 1).

Our data was collected from stakeholders across the variety of organizations engaged in the curriculum development process and relied on key informant interviews as described by Gilchrist (1999). Key informants possess special knowledge or have access to perspectives, experiences, or observations that are not directly available to the researcher (Hudelson, 2005). In addition to allowing new ways of conceptualizing and analyzing problems of interest, this approach facilitates the discovery of phenomena that might not have been considered otherwise.

In order to generate our interviews, we relied on purposeful sampling and identified informants based on three criteria. The informant should 1) hold a managerial role with respect to educational development, 2) play an active role in the curriculum development process, and 3) be involved in the activities of the UniBRAIN program. We reasoned that individuals who had advanced to more senior positions or who had participated in the curriculum development activity within their own organizations were likely to have had a broader range of experiences. In addition, Fetterman (1989) and others have recommended that ideally key informants should be individuals who are articulate, thoroughly enculturated, and currently active within the domain-of-interest.

The personal interviews were supplemented by data from videotape recordings of three panel discussions on the ‘Process of Curriculum Review and Reforms in Tertiary Agricultural Education Institutions.’ The panel discussions were side events on Curriculum reforms during the FARA Science week held from 15-20 July 2013 in Accra, Ghana. It featured key stakeholders in the curriculum development process, including representatives from governments, universities, research institutions, private sector and NGOs. The purpose of these workshops was to provide a forum in which partners could discuss key aspects of curriculum innovation, reform, and delivery.

Data analysis

We employed a content-analytical approach based on methodological guidelines provided by Barab et al. (2004). As a first step we conducted a priori coding using categories established prior to the analysis. These categories were based on the six components of the activity system. In a second step, we coded for contradictions following the procedure used by Murphy and

Rodriguez-Manzanares (2008). These include: 1) defining a contradictions as a tension, contrast, denial, or opposition between two propositions; 2) assigning only one contradiction to a unit of meaning; 3) reporting the contradiction in as few sentences as possible, with the subject of the sentences being the same; and 4) the sentences are reported using the actual words of the interviewee as much as possible.

For purposes of this study, we only concentrated on the tensions that occurred within the nodes of an activity system (primary contradictions) and those that occurred between elements in an activity system (secondary contradictions). Given that the collaborative curriculum development activity means reconfiguring the traditional curriculum system, it was apt that we focused on the contradictions occurring within the elements of the activity system. Moreover, it was also important to identify the contradictions between the elements of the activity system since these contradictions lead subjects to question and change their practices, by providing opportunities for subjects to analyze their activities and design solutions (Bonneau, 2013). Contradictions were identified when there was a double bind, or two forces pulling in opposite directions in the unit being coded. Following the example of Bonneau (2013), we did not conduct an exhaustive discussion of all the tensions in this activity system, but rather highlight those that regularly appear in the discourse. Once this initial set of contradictions had been prepared, we reviewed them carefully, referring frequently to the original transcripts. In this way, we identified six primary contradictions and five secondary contradictions. Finally, to identify root causes of contradictions, we searched the data for common ‘threads’ between the contradictions by asking the following ‘generative’ question as a schema: ‘why did the contradiction happen?’ Through a number of iterations we identified four root causes of contradictions.

To ensure reliability, we agreed upon a preliminary coding scheme and conducted a detailed analysis of a transcript. Subsequently, we compared the independent analysis of the two researchers and divergence in the classification of concepts was resolved through multiple discussions between the authors, following suggestions to reach inter-coder agreements (Creswell, 2012). Comparison of independent analysis showed a substantial agreement between the independent analyses conducted by the researchers. In cases where the level of agreement was not acceptable, the two researchers discussed the problematic item(s) until consensus was

reached on interpretation of the data. The revised coding scheme was then used to systematically review the remaining transcripts. We regularly checked the coding scheme during this iteration and made minor alterations based on variations found in the data. Alterations were accepted only after there was consensus in the viewpoint of the two researchers.

Findings

Before addressing the two research questions, we first present a brief description of the research context.

Research context

Figure 2 provides a schematic representation of the structure/context of the curriculum reform activity. The subject of the activity is the curriculum developers and decision-makers, who lead the curriculum development activity. The primary outcome of the curriculum reform activity is the creation of a cadre of graduates who are more employable, and who are able to apply their knowledge to venture creation in society. The object of an activity system is the purpose of the activity. In this case, the curriculum developers' purpose was to develop an agribusiness curriculum which will enable the production of entrepreneurial graduates from tertiary education institutions. The mediating artefacts or tools used by the curriculum developers and wider stakeholder community to manipulate the object so that they achieve their goal or outcome includes meetings and workshops. For instance, the UniBRAIN consortium organized a curriculum development workshop with the purpose of discussing key elements of an innovative agribusiness curriculum framework. The community of the curriculum reform activity is comprised of all stakeholders who have an interest in the curriculum reform process. For example, the previously mentioned workshop included participants such as heads of departments, deans of faculties, principals of colleges, private sector representatives, consultants, lecturers, researchers, and NGOs. The activity is organized according to a particular division of labor: The local university-level curriculum reform teams worked within the larger setting of the university, which in turn is subjected to the influences of external players, such as ANAFE who facilitated the inter-organizational process as well as lobbying for change with

university-level leadership Finally, the activity is governed by formal and informal rules. For example, most universities reported a system whereby new or reformed curriculum has to go through several administrative stages (e.g., department meetings, dean’s committee, and accreditation board) before final approval. The rules that govern the curriculum activity are diverse and both internal and external to the university.

Figure 2. Curriculum development activity system

Tensions within nodes of an activity system

The subject node’s primary contradiction involves the use of a curriculum development team comprised of university agents versus the use of an ‘integrated’ team comprising of members from both the university setting and the wider stakeholder community. For instance, certain groups felt they lacked a voice in the process. As one student argued:

Students are the key stakeholders in this curriculum reform process because we are the users of the curriculum. I think that as much as we keep speaking about curriculum development here, as much as we want to reform the curricula, we should involve students in this since it will impact on my life.

[ST1]

Furthermore, the lack of formal arrangements and resource scarcity made it difficult for the larger stakeholder community to integrate into the curriculum development team. Along this line, one university representative noted:

Our universities are out of step with what is happening in practice; it will be good if we have formal arrangements or agreements with the private sector in terms of student attachment and internship; to assist us to build on theoretic content that we give to the students. [D3]

The primary contradiction manifested within the object node existed due to disagreements over the pedagogic content necessary to promote self-employment and in the disagreement among decision makers regarding the balance between theory and practice or between agricultural content and business content.

In most cases in African countries, we try to pattern our curricular to follow the western curricular, but we are not yet there. Our curricula should be meeting the situation of Africa and that we learn to do things according to Africa's situation. [L2]

We are told that, even though the students graduate with an agribusiness degree, first and foremost they are agriculturalist and, therefore agricultural subjects should be compulsory. So it takes out some of agribusiness and agricultural economic courses, and we are left with just a few. And that is one of the challenges. [H1]

The primary contradiction in the instrument node was found between the university-based platform for discussion on curriculum matter (strategic workshops among university departments) and the UniBRAIN-facilitated forums of discussion (participatory meetings and workshops, involving the wider stakeholder community). Although partners recognized and accepted that the consultation meetings and workshops should be participatory; oftentimes, they were compelled to conduct smaller discussion forums, due to the lack of financial resources. As one participant noted:

Now from my experience, it is not that people do not know about that the curriculum development process needs to be participatory. When you talk about that everybody just shake their head in approval but, like all the participatory processes, it is quite a resource intensive fair. And that is why many of the curriculum review in most places tend to be comprised of small groups of about five or so different discipline, and you come up with a draft document. [SL1]

Moreover, there existed challenges when getting the university to accept the concept of having participatory curriculum design, which in itself represented a shift of paradigm from the traditional system.

One big problem is how to convince the university to accept the curriculum, to ensure that this UniBRAIN concept of bringing research, university and business together is accepted, and also to ensure that we talk more to the business community so that we can bring them to be partners in this whole UniBRAIN idea. [D1]

The rule's primary contradiction involved a discrepancy between the traditional university rules and the introduced UniBRAIN procedures. While the UniBRAIN consortium facilitated the curriculum reform process, local curriculum developers still had to comply with the formal and informal rules and guidelines within their own university setting. Following both sets of rules, at times, proved difficult for the curriculum developers. As seen from the excerpt below:

The UniBRAIN consortium has to realize that the universities have their own systems, and they have their own approved procedures even for program formulation and implementation and monitoring. [D2]

The primary contradiction in the community relates to the fact that the newly expanded community was constrained in several ways. For example, power relations and the persistence of the top-down approach constrained the activities of actors. In the words of a dean:

So, they cannot just make something out there and then come and impose it. So what I've been advising them is that what they should do is to recommend. [D3]

The primary contradiction manifested in the division of labor node concerned the fact that the introduction of a collaborative curriculum development approach reconfigured the division of tasks, giving partners external to the university a bigger role in the curriculum revision process. This is in contrast to an existing system which is highly hierarchical, and in general, relying on a top-down approach in which the management defined important element of the curriculum structure and content. As a dean pointed out:

The senate forced all the programs, including our agriculture program, to adopt certain courses such as entrepreneurship. So each program has to offer entrepreneurship, microeconomics, ICT and study skills. Again these are forced into our programs whether you like it or not. [D4]

Tensions between elements of an activity system

As previously mentioned, secondary contradictions take on the form of tensions between the elements of the activity system. Moreover, these secondary contradictions lead subject to question and change their practices and design solutions which will give rise to a new activity configuration (Bonneau, 2013). At least five contradictions were clearly visible: 1) between the rules and object, 2) between the community members and object, 3) between the artefacts and community, 4) between the rules and division of labor, and 5) between the object and division of labor.

The contradiction between the rules and the object emerged as a result of challenge of meeting the objective of creating timely (where the curricula accounts for the often complex and shifting priorities of society), relevant curricula and simultaneously complying with universities accreditation processes and quality assurance rules, which usually made the curriculum development a prolonged process. This contradiction led partners to question whether it was possible to produce a timely curriculum while following the directives of the university. Several participants commented on this paradox, as seen from the following excerpt:

How can we design tailor-made programs and courses that are responding to immediate needs while having to go through the [university's] formality? [C1]

The contradiction between the community members and the object arose due to the multi-voiced nature of the curriculum development process. The presence of partners with varying and, at times, contrasting goals meant that it was difficult to find a shared perspective as to the object of the activity. Furthermore, within the different organizations not all members were fully aware of the UniBRAIN's objective:

Even though they are partners, it is the bottom that is the partner and not the top. So this issue of curriculum review has become difficult because the top is thinking differently of what the UniBRAIN idea is all about. [SR1]

The contradiction between the artefacts and the community emerged as the instruments did not allow the full participation of all stakeholders. This contradiction was especially evident where cost concerns made the decision to conduct ‘convenient’, smaller events (workshops and meetings) more compelling.

Do we involve various stakeholders? I would say the level of involvement is low. Initially, when we started the curriculum development process we had some consultation but now it is more informal than formal. We are also still tweaking a lot of our courses and things. It will be expensive to go back to these stakeholders for formal gatherings, so it is less so. [D2]

Finally, there was a contradiction between the community and division of labor as unclear roles affected the ability of the curriculum development team and the wider community to achieve the object of the activity. More specifically, partners’ lack of agreement on their roles in the process affected the scope and degree of accomplishment of the object.

The UniBRAIN consortium got an external consultant and the consultant went, and found out what is happening in the universities and made their own opinion. And now, they wanted to form this program and call it agribusiness, and then make universities take this. And then we said it can never work like that. [D1]

Learning opportunities for improving the participatory curriculum development activity

When contradictions are present, in order for the system to return to balance and a common object to take hold in practice, participants will need to resolve these contradictions. A key step to eliminating the contradictory positions is identification and resolution of the root causes of these contradictions. From our analysis the contradictions were mainly rooted in issues concerning stakeholder relation, rules rigidity and resource availability.

First, several contradictions emerged due to the inadequate management of stakeholder relationships due in part to diverging agendas, insufficient communication among stakeholders, the informality of stakeholder relationships and role ambiguity. For instance, the informality of

relations meant that partners often lacked commitment to the process. Private sector actors lamented the fact that universities did not have the structures in place to promote and facilitate their active participation. As argued by a private sector actor:

It is true the private sector is not actively engaged. We may say that they are not participating, they are not supporting. I just want to say from experience about the engagement. What strategy does the university have in place to engaging the private sector? The engagement is very informal, that's the reality. [C1].

Yet these issues provide learning opportunities and their resolution paves the way for achieving a more efficient system. The participatory curriculum development activity was affected by communication issues, informal relationships and role ambiguity. Thus, a key step to improving the participatory curriculum development process will be through the efficient management of stakeholder relations. Barnes et al (2002) believe that the dialogue among stakeholders can be improved by including measures to encourage the development of a clear communication strategy, setting out the frequency of meetings and the basis on which a meeting would be called. Likewise, the formalization of stakeholder working relationship will be necessary in order for the results to be aligned with local policy processes and organizational decision making and thus have relevance in practice (Moellenkamp et al., 2010). In addition, Barnes et al., 2002) suggest resolving the problem associated with role ambiguity by ensuring that the role of each partner in the collaboration and their responsibilities to the activity are clearly communicated and agreed upon from the very beginning of the process. The authors also believe that a non-hierarchical structure should be developed, where “participants' work overlaps (but doesn't require everyone to do everything), decisions are made together and expertise is developed collaboratively” (Auerbach, 1992, p. 29).

Second, paradoxes like those that existed between the requirements of accreditation systems (which generated a time-lag) and the general objective of producing a timely curriculum demonstrated the mismatch between the current rules and the collaborative approach. For instance, the current curriculum development process involved various steps and procedures which are considered necessary by the university in order to ensure program quality and

legitimacy. Yet, to other stakeholders, these same procedures and practices are considered as administrative red tape, which decelerated the process. One stakeholder noted:

If it is going to take three years for it [the new curriculum] to go through the bureaucracy to come back and be implemented, by that time the component you want to integrate, it has been passed by time. So it becomes very irrelevant. [S1]

Therefore, it is essential that curriculum developers pay attention to the rules and structures that govern curriculum development, to ensure flexibility (Shore, 1993). A flexible curriculum framework would not only enable curriculum developers to respond with speed to the requirements of key stakeholders, but will also foster broad stakeholder participation by providing flexible work-related provisions.

Third, the perceived lack of resources (financial, human, infrastructure, etc.) was the cause of several of the contradictions that emerged. For example, as one Dean stated noted:

So, we could talk about teaching, we could talk about practice, we could talk about outreach. Also all those things that you will need to do with student research. But, it so happens that without adequate funding, you have to do some of those things, maybe not in the way you wanted. The way we teach here, probably would not be that way, if we had the resources. [H2].

However, opportunities exist for moving the activity system towards a more efficient state by addressing this issue. Collaborations of this nature entail significant costs to participating agents and participatory activities can be costly not only for an organization or a project, but also for local people themselves (Campilan, 1996). Moreover, new training needs will emerge as a result of the introduction of participatory curriculum development and certain groups may need special support in order that they may participate more fully and meaningfully (Taylor, 2005). Hence, more appropriate funding models should be included, such as cost sharing among stakeholders. Further, donors should keep in mind that when external funding is depleted, it is local resources that underpin the implementation of a participatory curriculum development process; wherefore, existing incentive structures need to be considered in change programs aiming to achieve actual impact.

Implications

There is a growing interest in practice-based research and theorizing, and, as such, the use of middle-range practice-based theory as frameworks for (re)shaping professional and academic practices has also grown (Foot, 2014). Activity theory is one such theory that offers a way to examine complex practices. In this study we attempted to apply activity theory to the field of education, particularly curriculum development. The results have both theoretical and practical implications.

First, this study contributes to curriculum theory by expanding our understanding of the curriculum reform process, particularly, the forces underpinning the process and provides a rare account of collaborative curriculum from a developing country perspective. Furthermore, the study highlights how the curriculum development activity is constrained by contradictions and provides an explanation of the multiple aspects that should be considered when initiating reform processes.

In addition, cultural-historical activity theory can make significant contributions to organizational studies given its analytical strength. In the present study, we expand the use of activity theory to the curriculum development scenario and have demonstrated its robustness and usefulness in providing a thorough analysis of this complex activity. Curriculum design is a multifaceted and multi-voiced endeavor that is embedded in a social context; as such it is a practice that is well suited for analysis under the theoretical lens of activity theory. The present study shows that activity theory is an appropriate tool for analyzing and evaluating curriculum design processes.

In terms of the practical implications of the study, we have responded to recent calls for a better understanding of curriculum design. The promotion of participation and inclusion in curriculum development requires that people understand the context in which they operate; the dynamics of the relations within that system, as well as the many forces that inhibit or facilitate the achievement of goals. In this study we developed a representational framework that will help capture the aforementioned elements. Additionally, through an analysis of contradictions we were able to identify the critical tensions underlying the curriculum reform activity system, as

well as discover the root causes of these tensions. Our results can inform practitioners and decision makers who seek to design and implement effective collaborative processes. For example, one of the central contributors to the ‘analysis paralysis’ issue was the inability to gain consensus on a variety of curricular issues. However, decision makers can attempt to break decision deadlocks by building understanding of and support for the central agenda (Levin and Fullan, 2008). One way of achieving this shared understanding is by having improved information flows both internally and externally given that adequate and frequent communication of individuals’ needs and actions is key to gaining a shared understanding of the object (Rapert et al., 2002), and is a necessary ingredient for building consensus. In summary, the identification of sources of contradiction is necessary since it is through their resolution that changes or development occurs, our conceptual tools will enable designers to achieve appropriate design solutions by addressing the root problems identified in this study.

Conclusion

It is believed that the collaborative approach to curriculum reform is the key to developing learning objectives and environments that are relevant in the 21st century. However, the present study illustrates the complexity of managing curriculum reform activities when several organizations and viewpoints are involved. The use of activity theory enabled a detailed investigation of the curriculum development community. From this perspective, we captured and clarified the nature of the collaborative activities, including the ways in which curriculum development is dependent on factors such as the nature of the activity, the rules governing the activity, the tools facilitating the activity, the interaction between individuals as well their roles within this activity system.

In this study we focused on the contradictions and systemic tensions within the curriculum development activity. Using activity theory as an analytical tool, we examined the ways in which contradictions are experienced by decision makers within the system. As such, we were able to identify the root causes of problems. In general, effects of the lack of consensus on curricular issues, the institutional framework and rigidity of the formal and informal rules, the lack of resources, and the informality of their relationship, and poorly defined roles, all seemed

to jeopardize the curriculum reform activity. Nevertheless, while the contradictions identified in this study resulted in less than efficient curriculum reform activities, they should not be viewed only in light of their disruptive nature but also as a roadmap that specifies new ways of organizing work in order to solve these tensions.

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Annex 1

Annex 1. Overview of interviews

Code	Respondent		Organization	Data Source	Discussion Topic
H1	Head of Department		HEI1	Personal interview	Agribusiness and entrepreneurship
H2	Head of Department		HEI1	Personal interview	Curriculum reform
D1	Dean		HEI2	Personal Interview	Curriculum reform
D2	Dean		HEI3	Personal interview	Curriculum reform; collaboration
D3	Dean		HE4	Video	The process of curriculum review and reform
D4	Dean		HE5	Video	The process of curriculum review and reform
SL1	Senior Lecturer		HE1	Personal interview	Curriculum reform; challenges
SR1	Senior researcher			Personal interview	Curriculum reform
ST1	Student		HE1	Video	Curriculum Review and Reform Reality and Delivery
SL2	Senior Lecturer		HEI5	Video	Curriculum Review and Reform Reality and Delivery
C1	CEO		PS1	Video	Curriculum Review and Reform Reality and Delivery
A1	Senior Research Advisor		NGO1	Video	Curriculum Review and Reform Reality and Delivery