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Exploring The Antecedents Of Individual-Level Entrepreneurial Orientation Among Graduate Students In Kenya

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Abstract: *Entrepreneurship has been given increasing recognition for the recent global economic expansion. Many business schools in many universities has attempted to expand their graduate programs to offer entrepreneurial courses in Kenya. The aim of this study was to identify the antecedents of entrepreneurial orientation among graduate students in Kenya. 200 graduate students of private university were selected randomly to be the respondents. A set of questionnaire on Entrepreneurial Orientation constructs which consisted of 14 measures was used for data collection. The data was analyzed using descriptive statistics and inferential statistics. The findings revealed that the construct that contributes the most to entrepreneurship Orientation are innovativeness, pro-activeness and risk taking respectively. Understanding antecedents of entrepreneurial orientation at the individual level could be valuable to future business owners, to business incubators and to potential investors who are considering supporting business proposals as well as the faculty so that they can rework on their programs to impart these converted behaviors.*

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I. Introduction

The growing awareness of the importance of entrepreneurial activity for nations' economic development and social growth has triggered streams of research on the fundamentals of entrepreneurship as a method (Brancu, Guðmundsdóttir, Gligor&Munteanu, 2015). This is because it provides an avenue that drives technological innovation, creates employment and impact economic growth at the national, regional and society levels, which is vital for economic transformation, sustainability and advancement (Hathaway &Litan, 2014; Carree&Thurik, 2003). Entrepreneurship is also globally viewed today as an important stimulus of positive outcomes at both firm and individual levels (Ireland & Webb, 2007).

On the other hand, entrepreneurs today are considered as growth agents of any country and region because they bring changes to technological, economical and organizational environments (Gaddam, 2008). As a result, several researchers agree that entrepreneurs contributed positively to their countries through new sustainable enterprises and jobs creations (Fayolle, 2007). As such, governments around the world over have elicited various efforts to encourage their people to engage in entrepreneurial activities. Kenyan government has initiated various supporting schemes such as funding, physical infrastructure and business advisory services to promote entrepreneurial activities in both the country and counties levels. Universities and tertiary institutions as well have put forth various efforts to encourage entrepreneurship among young adults though it still remains a challenging task (Hamidon, 2012). Therefore, understanding of what make an individual to become an entrepreneur is important in fostering and developing nascent entrepreneurs' particularly in our universities and tertiary colleges. This is due to the fact that entrepreneurship is a complex process that involves entrepreneurial cognition and entrepreneurial actions (Hisrich et al., 2013). As such, there is a need to further scrutinize entrepreneurial orientation of young adults.

II. Theoretical Framework and Hypotheses Development

2.1 The concept of entrepreneurial Orientation

In the recent past, Entrepreneurial Orientation (EO) has become a salient concept within strategic management as well as entrepreneurship literature (Morris, Kuratko&Covin 2008; Rauch *et al*. 2009). This concept (EO) originated from Miller (1983), who identified three key dimensions-pro-activeness,innovativeness and risk-taking. Covin and Slevin (1989) thereafter, popularized the concept by categorizing these three dimensions as a unidimensional construct-entrepreneurial strategic posture (ESP), which they found particularly essential for enterprises to maintain their performance in the dynamic and volatile business environments. The EO concept was then further reconceptualized by Lumpkin and Dess (1996), whereby they refined EO as a multidimensional construct that consists of five

independent salient dimensions- innovativeness, risk-taking, pro-activeness, autonomy and competitive aggressiveness.

Lumpkin and Dess (1996), define Entrepreneurial Orientation as the processes, practices and decision-making styles of enterprises that act entrepreneurially. They criticized the original construct developed by Miller (1983) and operationalized by Covin and Slevin (1989, 1991). They argued that EO fails to describe the full entrepreneurial process, and therefore propose to include the two additional dimensions to further expand Entrepreneurial Orientation construct. They further suggested that, the relationship between all the five dimensions of EO and firm performance combined indicate the extent to which a firm is entrepreneurial. They also theorized that, the relationship between the dimensions and performance is context specific and posit that the various dimensions of Entrepreneurial Orientation may show different combinations, vary independently and can have a different relationship with entrepreneurial outcomes.

A firms' Entrepreneurial Orientation at organizational level is defined as "the set of policies, strategy-making processes, practices and decision making activities that provide organizations with a basis for entrepreneurial decisions and actions" and reflects the propensity to pursue new market opportunities and to rejuvenate existing operations (Rauch *et al.,* 2009). This result in innovation, understanding innovation as a new entry into a new business, either within or outside of the current firm, or as the renewal or revival of an existing business (Slater &Narver 1995). EO is rooted in the notion that specific management philosophies and strategy-making processes together represent an organizing structure through which knowledge is combined and embodied in new products, processes, and operational activities (Wiklund& Shepherd, 2005).

Many existing studies focuses on entrepreneurial orientation at firm-level and several studies (e.g., Lumpkin &Dess, 2001; Wiklund& Shepherd, 2005; Covin*et al.,* 2006; Mareno& Casillas, 2008; Rauch, et al., 2009; Lee, Lim & Pathak, 2011;Hafeez et al. 2011; Grande et al. 2011; OlyNdubisi& Agarwal, 2014; Gupta & Gupta, 2015; Gupta &Batra, 2015) have indeed shown that firms with a strong EO perform better than firms with a weak EO. While EO was originally considered a firm-level characteristic, it is important to note that EO is not only measured at the firm level and it does not only influence the performance of businesses. Elenurm (2012); Kollmann, Christofor, and Kuckertz, (2007); Krauss, Frese, Friedrich, and Unger, (2005) expressed and argued that EO is a concept that can be translated and studied also at individual level.

In light of the above, some few studies exist that addresses EO at the individual level such asChien, (2014); Bolton, (2012); Robinson andStubberud, (2014); Goktanand Gupta, (2015).Unfortunately, the concept of individual entrepreneurial orientation (IEO) which views pro-activeness,innovativeness and risk-taking as entrepreneurial competencies has not been fully explored in the Kenyan context. The goal of this study is therefore to address this gap in the literature, by empirically exploring the individual EO dimensions and trying to develop a solution among graduate students whose transformation into entrepreneurs has become a major concern to the government and scholars (Lucky &Minai, 2011). In fact, most graduates' students who are more mature and understand the prevailing unemployment circumstance still prefer white collar jobs and are quiet adamant to take entrepreneurship as an alternative career despite its numerous advantages (Akanbi, 2013). As a result, developing economies as well as Kenya as a country continue to face high unemployment as well as high poverty rates (Olotu*et al.*, 2015). In this research the three unidimensional constructs of EO as introduced by Miller (1983) and popularized by Covin and Slevin (1989) are applied to assess the university graduate students in Kenya.

2.2 The Dimensions of entrepreneurial Orientation Concept

***Pro-activeness*:** According to Rauch *et al.* (2009), pro-activeness is an opportunity-seeking, forward-looking perspective characterized by high awareness of external trends and events and acting in anticipation thereof. Pro-activeness has been associated with pioneering behavior (Covin&Slevin, 1989) and initiative taking to pursue new opportunities (Lumpkin &Dess, 1996), and entails the tendency to take the initiative and achieve a first mover advantage (Covin*et al.*, 2006). These elements-acting in anticipation, taking control, and self-initiation-are also present in the individual-level intrapreneurship literature. Proactive behavior at individual-level is defined as 'self-initiated and future-oriented action that aims to change and improve the situation or oneself' and typically includes a range of behavioral constructs (Parker, Williams & Turner, 2006). This leads to:

Hypothesis 1: Pro-activeness forms an important and independent dimension of EO in individual students.

Innovativeness: Schumpeter is one of the researchers who firstly emphasized the importance of innovativeness in entrepreneurial processes and defined innovativeness as doing new things or doing existing things in new ways (Schumpeter, 1947). According to Drucker (1985), innovativeness is the most important subject and key component of entrepreneurship. Lumpkin and Dess (1996), define

innovativeness as the"Predisposition to support creativity and experimentation in introducing new products/services, and novelty, technological leadership and R&D in developing new processes". Covin and Miles (1999) believed that innovation is an essential part of a strategy and that entrepreneurship cannot exist without it. The innovativeness ability help to renew the market offers and therefore crucial when product and business model life cycles are shortening (Pérez-Luño, Wiklund& Cabrera 2011). Hult, Hurley *et al.,* (2004) suggested that innovativeness plays a significant role in solving business problems and challenges, which in turn provides the ability to succeed. Similarly, Ireland, Hitt*et al.,* (2003) and Otero-Neira, Lindman*et al.,* (2009) emphasized the importance of innovation in creating a competitiveness that will lead to superior performance.This leads to:

Hypothesis 2: Innovativeness forms an important and independent dimension of EO in individual students.

Risk-Taking: Since Cantillon (1755), who was among the first to define an entrepreneur as a person who bears the risk of profit or loss, risk-taking is considered a fundamental element of entrepreneurship (Antoncic&Hisrich, 2003). However, measuring the extent to which individuals differ in their willingness to take risk is still contentious. Early scholars in small business research focused on various psychological characteristics such as tolerance of ambiguity (Gasse, 1982) and locus of control (Rotter, 1966). Senior managements subjective evaluation of their approach towards risk in most firms is also fraught with difficulty since what one person regards as a 'calculated' approach toward risk another may regard as 'aversion'. Others such as Norton and Moore (2002), have suggested that the differentiating factor is the way risks are calculated. However, according to Lumpkin and Dess (1996), Risk-takingrefers to the propensity to invest in entrepreneurial initiatives with an uncertain outcome, as well as to operate in a leveraged manner. Risk taking behavior at individual-level is a crucial factor that differentiates entrepreneurs from others because it can create losses and inconsistencies in the performance (Morris &Kuratko, 2002).It is the behavioral dimension of an EO along which opportunity is pursued (Lumpkin &Dess, 1996).This leads to:

Hypothesis 3: Risk-taking forms an important and independent dimension of EO in individual students.

III. Methodology

3.1 Sampling and procedure

The data for this study came from a quantitative survey design using convenience sampling method. The sample was collected over a period of three months using a hard copy of self-administered questionnaires with scaled statements. The questionnaire was accompanied by a covering letter assuring participants of the anonymity and confidentiality of the data, as well as a brief set of questions regarding biographical details. The instrument consisted of 14 items measuring the antecedents of entrepreneurial orientation. Each of the multi-item measures was based on a seven points Likert scale. Respondents were asked to rate the 14 statements, choosing from a scale ranging between 1 ("not confident at all") to 7 ("very confident"). The sample consisted of 64 (58.7%) male and 45 (41.3%) female with age categories as follow: below 25 (N=2), 25-34 (N=80), 35-44 (N=24) and 45-54 (N=3).

Kline (1999) states that, the univariate normality of distribution of all interval variables needs to be investigated to choose an appropriate estimation method in Structural Equation Modeling (SEM). If the absolute values of skewness and kurtosis are greater than 2 and 7 respectively, the data set is considered to have an extreme non-normality. If that is the case, a number of alternative estimationtechniques in Structural Equation Modeling should be employed such as asymptotically distribution free, general least squares and weighted least square. However, if the distribution of scores on variables do not deviate significantly from normality, the maximum likelihood estimation, which is the most widely used approach in SEM, can be applied (Hair *et al*., 2010). For this study, the data was normally distributed since the values were within the recommended range. (See Table I below).

Table 1: Descriptive Statistics

N	Min	Max	Mean		Std. Deviation	**Skewness**		**Kurtosis**	
Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
106	0	24	7.01	.500	5.152	**1.416**	.235	**2.108**	.465

The composite reliabilities for all constructs were high above the acceptable threshold of .70 (See tables 11; 111; and IV below: pro-activeness-.834;innovativeness-.898 and risk-taking-.810 respectively). Therefore, all constructs showed sufficient convergent validity (Fornell&Larcker, 1981). During reliability analysis, inappropriate items were excluded and the following items were retained as the construction of structural equation modeling analysis (see Table IV).

Table II: Factor analysis results of Pro-activeness

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Overall Cronbach's Alpha
PRO1	16.66	9.554	.683	.781	.834
PRO2	16.97	9.623	.659	.793	
PRO3	16.98	9.536	.719	.765	
PRO4	16.63	11.084	.600	.818	

Table III: Factor analysis results of Innovativeness

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Overall Cronbach's Alpha
INN1	11.72	4.045	.791	.861	.898
INN2	11.72	4.182	.780	.871	
INN3	11.62	3.934	.826	.831	

Table IV: Factor analysis results of Risk-taking

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Overall Cronbach's Alpha
R1	29.67	40.595	.514	.791	.810
R2	29.77	38.772	.629	.771	
R3	28.99	41.253	.621	.776	
R4	30.23	38.628	.587	.778	
R5	29.78	39.635	.622	.773	
R6	29.40	41.452	.512	.791	
R7	29.89	40.987	.395	.817	

Table V: Reliability analysis

	Component		
	1	2	3
INN1		.964	
INN2		.842	
INN3		.872	
PRO1	.655		
PRO2	.859		
PRO3	.835		
PRO4	.817		
R4			.474
R7			.947

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

3.2 Analyses and Results

To determine the appropriateness of the data for factor analysis, Burns and Burns (2008) suggest that two tests, Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity (BTS) to be considered. The result of the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.862, reaching the desired value of .80 or above (Hair *et. al.*, 2006). This indicated that the data was adequate to run factor analysis. Moreover, the Bartlett's test of sphericity was significant ($\chi 2$ (36) =943.429, $p < .000$) confirming that, patterns of correlations are close and factor analysis should yield consistent and reliable factors. Statistically,

this explains that, there are relationships between the variables and that they can be appropriately included in the factor analysis. The combination of the two tests supports the suitability of the factor analysis technique.

Exploratory factor analysis was conducted (Principal Component Analysis, Rotation Method: Promax with Kaiser Normalization). Based on parallel analysis relative to random data eigenvalues, the first three factors accounted for 73.405% of the total variance (51.96%; 12.380%; and 9.061% respectively). Evaluation of the eigenvalues indicated a three-factor solution and all factor loadings were above 0.5.

Table VI: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	4.677	51.964	51.964	4.677	51.964	51.964	3.877
2	1.114	12.380	64.344	1.114	12.380	64.344	3.938
3	.815	9.061	73.405	.815	9.061	73.405	1.960
4	.713	7.923	81.328				
5	.564	6.265	87.593				
6	.356	3.955	91.547				
7	.326	3.624	95.171				
8	.247	2.745	97.916				
9	.188	2.084	100.000				

Extraction Method: Principal Component Analysis.

Subsequently, a first order exploratory factor analysis of the adapted theoretical model was conducted to test the association among the variables as shown below.

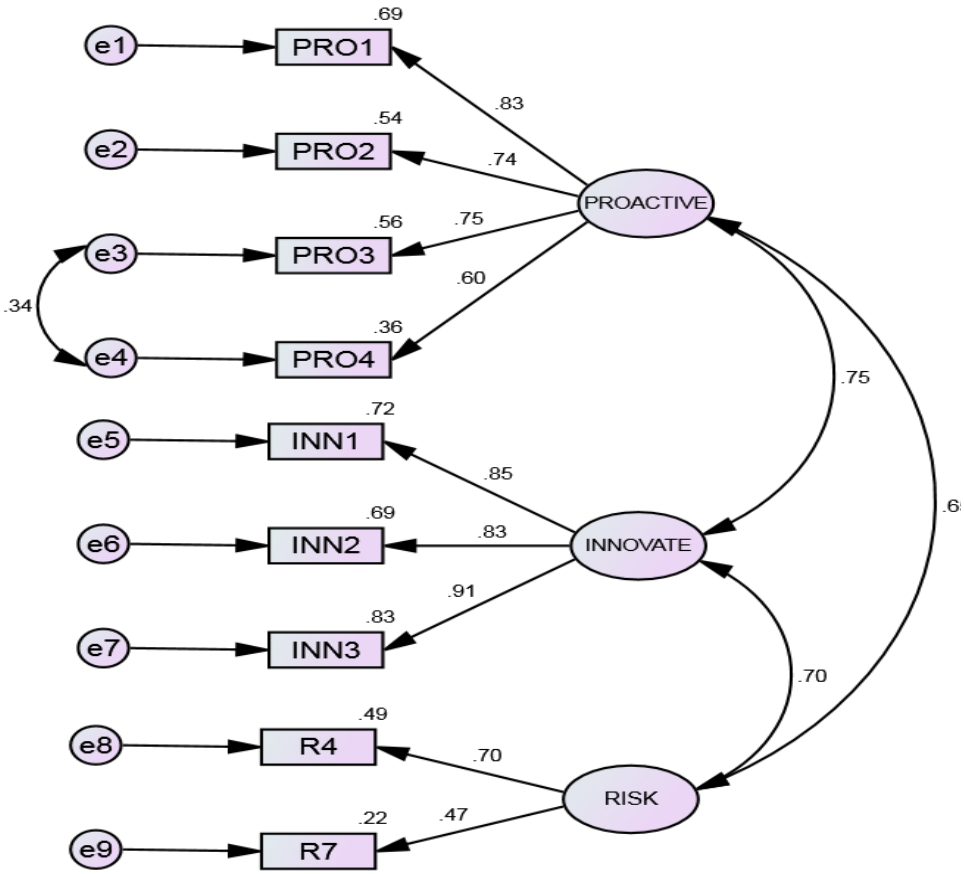

Figure 1: Result of CFA

Thereafter, Confirmatory Factor Analysis (CFA)was conducted using AMOS 21.0 for the adapted theoretical model. The items and the standardized factor loadings for this CFA are reported in figure 1. Figure one shows that the three exogenous construct influence the EO substantially. Confirmatory factor analysis provided a chi-square value and five additional indices that assessed the fit of the path model, the goodness-of-fit index (GFI), the normed fit index (NFI), the comparative fit index (CFI), and the root mean square error approximation (RMSEA). Multiple fit indices were used to evaluate fit and the fit indices showed that the model fitted the data well and measurement models ranged from adequate to excellent as shown below: CMIN/DF=2.442; CFI=0.964; NFI=0.942; TLI=0.944; IFI=0.965; RMSEA=0.084. These indices values exceeded the recommended threshold value 0.90 (Bagozzi, Yi &Nassen, 1998).

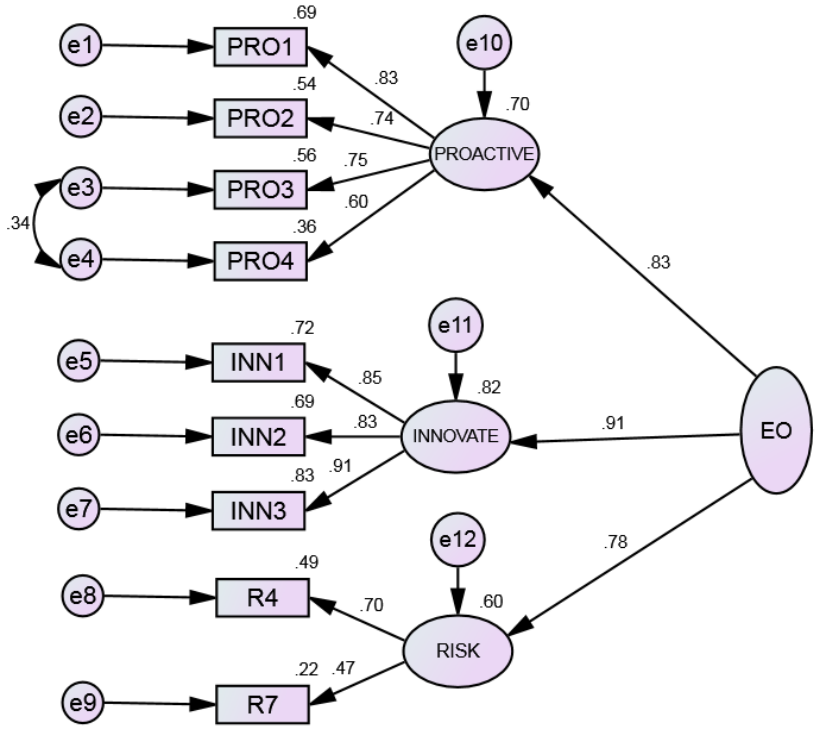

Figure 2: Structural Equation Model with EO as a unidimensional construct

By examining the standardized parameters estimates (Figure 2), the findings show that pro-activeness (β=0.83), innovativeness (β=0.91), and risk-taking (β=0.78), influences entrepreneurial Orientation as predicted in H1, H2 and H3 respectively. Comparing the magnitudes of the effects as indicate above, innovativeness is larger than pro-activeness which is larger the risk-taking. Therefore all the three hypotheses were supported.

IV. Discussion and Conclusion

The implementation of this study was to verify the factors that affecting the entrepreneurial orientation among Graduate students in Kenya. It was found that the graduate students have high entrepreneurial orientation. Entrepreneurial orientation capturing such characteristics as pro-activeness,innovativeness and risk-taking has become a very popular concept that has received substantial conceptual and empirical attention in modern entrepreneurship research. Through the exploratory factor analysis and confirmatory factor analysis, the researcher confirmed and validated the three dimensions are constructs forgraduate entrepreneurial orientation in the Kenyan context-“pro-activeness”, “risk taking” and “innovativeness”.

V. Limitations and Future Studies

First, the use of a cross-sectional design weakens the 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 pro-activeness,innovativenessand risk taking, while orientations are an important step in the process of pursuing entrepreneurial action. It is therefore, vital that future research moves beyond the antecedents to orientation, and examines the orientation–action side of the model, especially as it relates to the conditions necessary to translate orientation into action. The research method and design of this study incorporates two assumptions. The first assumption is that the two level EO

construct as defined by Kreiser'*set al.*, 2002 study is valid for the population analyzed in this study. The second additional contingent assumption is that entrepreneurial orientation is additive of its components.

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