

Interaction between Women Entrepreneurs' Age and Education on Business Dynamics in Small and Medium Enterprises in Kenya

Jane W. Gathenya (Corresponding Author)

Jomo Kenyatta University of Agriculture and Technology
P. O. Box 62000-00200, Nairobi, Kenya
School for Human Resource Development
Entrepreneurship and Procurement Department
Phone: +254-724-656798, +254-733-230704
E-mail: jwgathenya@yahoo.co.uk

Henry M. Bwisa

Associate Professor
Jomo Kenyatta University of Agriculture and Technology
P. O. Box 62000-00200, Nairobi, Kenya
School for Human Resource Development
Entrepreneurship and Procurement Department
E-mail: bwihem@yahoo.com, Phone: +254-722-858507

John M. Kihoro, PhD

Jomo Kenyatta University of Agriculture and Technology
P. O. Box 62000-00200, Nairobi, Kenya
Faculty of Science; Statistics and Actuarial Science Department
Phone: +254-715-973820
E-mail: kihoro_jm@yahoo.com, kjm@fsc.jkuat.ac.ke

Abstract

Women entrepreneurs have been considered more averse to exploiting entrepreneurial opportunities irrespective of age and education. A key question as a consequence arise – Do the two significantly influence the use of entrepreneurial strategic planning practices (entrepreneurial orientation, scanning intensity, planning flexibility, planning horizon and locus of planning) and firm performance among women-led SMEs in Kenya? An exploratory cross-sectional survey was carried out. The sample comprised of 128 small and medium scale women entrepreneurs. The results of the interaction of the UNIANOVA analysis revealed that there was significant interaction between the effects of both age and education on locus of planning. Both also had a significant impact on the profitability of the enterprises when firm performance was measured as return on asset. It is recommended that there is dire need for special courses and programs for women entrepreneurs whose highest educational achievement is primary education.

Keywords: Age, Education, Entrepreneurial Strategic Planning Practices, Performance

1. INTRODUCTION

A study by Watson & Robinson (2003) found out that women entrepreneurs are more averse to exploiting entrepreneurial opportunities irrespective of age and their levels of enlightenment. As a result, women entrepreneurs are destined to be treated as having a low level of influence on their management perspective, strategic thinking, entrepreneurial planning abilities and overall growth. Accordingly, women entrepreneurs are therefore considered more conservative, risk averse and less pro-active (Bird & Brush, 2002). On the other hand, Burke (2003) argues against this and states that women entrepreneurs are less likely to be “stuck in the past” and thus have a stimulating influence on strategic opportunism, provide strategic input on product/market issues and direction, processes and deliberations, being more strategic thinking than entrepreneurial orientation. Daily & Dalton (2003) also affirm that women entrepreneurs provide unique perspectives and experiences; their work and communication styles are more participative and process oriented and they consider a wider range of strategic options and practices dependent on their age and levels of education. This makes these women entrepreneurs more likely to use entrepreneurial planning strategies and practices of scanning the environmental trends. Their plans are flexible to changes created by environmental opportunities or threats, make considerations of the planning periods (United Nations Conference on Trade and Development (UNCTAD), 2001). Women consider the depth in locus of planning by looking at the levels of employee involvement in planning and use the process elements of strategic management for improved enterprise performance (Sonfield et al, 2001).

More so, where women entrepreneurs have enhanced education and appropriate skills, since they network more efficiently and access technical know-how (Sonfield et al, 2001). This is more evident when they are within an entrepreneurially active age given that they obtain more relevant experience (Swinney et al, 2006) and have their enterprises influenced so as to experience better performance due to enhanced planning practices of entrepreneurial orientation, scanning intensity, planning flexibility, planning horizon and locus of planning (Barringer & Bluedorn, 1999; Ellis et al, 2007).

A key question as a consequence arises – *Do the entrepreneurs' age and education level significantly influence the use of entrepreneurial strategic planning practices and firm performance among women-led SMEs in Kenya?* This question constitutes the problem for this research.

2. LITERATURE REVIEW

The questions posed by Morris et al (2006) and Swinney, (2006) in their studies as to whether women make the growth decision, or whether it is effectively made for them based on environmental conditions and the types of ventures they pursue suggest that growth is a management function which includes deliberate choice, women have a clear sense of the costs and benefits of growth, and that they make careful trade-off decisions. However, these choices may also reflect ongoing socialization processes experienced by women especially impacted by their age and education (UNCTAD, 2001). The contemporary environment remains one where, in spite of encouragement to pursue entrepreneurship, many women are taught not to be risk takers, and not to be competitive or aggressive (Singh et al, 2001). Entrepreneurial strategic planning practices when used by these women entrepreneurs in the firm imply that a firm's strategic intent is to continuously and deliberately leverage entrepreneurial opportunities for growth-seeking and advantage-seeking purposes (Ireland et al, 2009). Therefore, entrepreneurial strategic planning practices and strategic management have been considered core constructs and specific demonstration of firm-level entrepreneurship and are viewed as potential source of firms' competitive advantage, a situation women entrepreneurs should take advantage of to overcome limitations enhanced by the socialization processes (Ireland & Webb, 2007).

According to the Harding's (1987), liberal feminist theory, men and women are essentially similar. That is, a human is defined by their ability to think rationally. Thus, men and women are seen as equally able and any subordination of women must depend on discrimination or on structural barriers, for example, unequal access to education. Such barriers can be partly or totally eliminated. Women are discussed as having insufficient education or experience (Boden & Nucci, 2000). Even when structural factors are accounted for, such as access to business education, useful business networks, or managerial experience, problems in these areas are still held to be amended by the individual (Sonfield et al, 2001). Women are advised to enhance their education, to network more efficiently, and to obtain a more business relevant experience (Cromie & Birley, 1992). Related to this are difficulties in accessing technical know-how, which also reflects gender biases in training and education. That is impacting on the subjects that are thought to be appropriate for women to learn, the way these are taught, and more generally on the very understanding of what constitutes technical know-how (Bird & Brush, 2002). This therefore limits the extent to which the dimensions of strategic planning are implemented at the firm level among women owned enterprises and as integrated with strategic management, strategic thinking and eventual competitive advantage positioning and overall firm performance of these firms (Watson & Robinson, 2003).

A comparative study that considered the roles of uncertainty and risk aversion when assessing the growth of women entrepreneurs in sub-Saharan Africa by UNCTAD, (2001), revealed that these entrepreneurs suffer in many ways from information failure in a wide sense. There are not only limited business opportunities, but also general lack of exposure and education which they have to travel beyond a few kilometers to acquire. The aspect of being risk averse has been described as strictly dependent on gender discrimination and not on their ability to use aspects of strategic entrepreneurial planning or their strategic positioning or learnt skills (Della-Giusta & Phillips, 2006). The study indicated that the majority (over 60 percent) had lower than senior school, relied on friends/family and local gossip for information which has the potential to be inaccurate, incomplete or biased, they kept no accounts or records of business transactions and those who did keep were self taught or taught by parents/ siblings, views shared by DeTienne & Chandler, (2007). All these factors as well as lack or inaccurate record of activity affect the approaches to strategic thinking, strategic planning and the way in which strategic management such as this hampers women-led business performance and development (Cromie & Birley, 1992).

According to Singh et al, (2001) there are multiple ways to expand business experiences. These include programs of personal coaching and mentoring. Training and education programs to address specific tasks and skills tackle not only increased expertise, but also enhance levels of self-confidence.

A broader education helps young women understand their unique situation regarding historical, economic, ethnic, legal and religious contexts. Secondly, they further argue that as the enrollment of women in business schools continues to increase; these young women are provided with the tools and skills so important in empowering their strategic focus and thus the success in their entrepreneurial ventures.

Thirdly, education expands their horizon and stimulates aspirations of women entrepreneurs while broadening the perspectives on the essence of planning for growth. In agreement to the above, Ellis et al, (2007); Manolova et al, (2008) & Sonfield et al, (2001) add that education equips women with the knowledge and skills they need to more effectively manage, be more strategic and succeed in their businesses. These authors further argue that there is a strong correlation between a woman's belief in having the knowledge, skills, and experience to start and run a successful formal business, and her likelihood of starting and running it since education does provide basis for greater confidence, better strategic position and broader business management skills. Ellis et al, (2007) found out that for many Kenyan women inadequate education remains the norm.

A study carried out by Langowitz & Minniti, (2007) indicates that for women, the most entrepreneurially active age has been shown to be between 25 and 34 years of age and declining thereafter. This is particularly true for women who tend to be poorer; less educated, and often, for cultural reasons, have reduced access to new management styles, new ways of doing things and technology (UNCTAD, 2001). Women at this age bracket are also overwhelmed with the multiple roles of young homemakers, mothers and wives (Della-Giusta & Phillips, 2006). Beyond this age and coupled with higher education, these entrepreneurs seek for more stable enterprises, become more conservative and are not open to rapidly changing new ways of doing things (DeTienne & Chandler, 2007). As a result, they need not be inclined to changes, leave alone developing strategies of coping with change in highly dynamic environments but would wish to develop strategic plans and strategic management that would enable them cope and enhance steady growth (Cromie & Birley, 1992 & Burke, 2003).

3. RESEARCH METHODOLOGY

3.1. Research Design

In this study, an exploratory cross-sectional survey was used. The target population comprised of 1760 entrepreneurs of small and medium enterprises from Pamoja Women Development Program (PAWDEP). PAWDEP is a leading microfinance institution that offers solutions to women entrepreneurs running small and medium scale enterprises. It seeks to empower women entrepreneurs through provision of financial and business development services (BDS) to run viable, competitive and rewarding enterprises that are able to strategically compete locally and internationally. Their enterprises were distributed across the 4 sectors – Agro-based Industry, other industry, services and trade and in the economic activities. To arrive at the 128 entrepreneurs, their enterprises had to meet the following criteria: first, having between 10-99 employees that is, Small enterprises – 10 to 49 employees, Medium Enterprises – 50 to 99 Employees (World Bank Project Appraisal, 2004). Second, being independent and autonomous entities that were not branches or multi-national enterprises. Third, to provide a desirable degree of homogeneity among the respondents, their enterprises that were considered to be beyond 50Km radius from Nairobi and therefore affected by factors that are different from those within the Nairobi metropolitan area were excluded. Fourth, the study estimated that roughly 70% of the entrepreneurs trained on strategic issues adopted the principles and practices (Barringer & Bluedorn, 1999). The study used 3 basic methods to collect data – questionnaires, interview guide and content analysis. To collect data for this study, the survey instruments were administered by the researcher to the 128 entrepreneurs. This ensured 100% response rate.

3.2. Measurement of variables

Enterprise Performance: This study focused on strategies in place that bring about growth measurable by degree of satisfaction on levels of profitability (Return on Assets and Return on Equity) and sales turnover. A five point Likert scale was used for each of the two statements corresponding whereby, the higher the score, the better its perceived performance. Objective measures were also used such as sales growth measured as actual annual percentage growth in total sales and employment levels over a period of 5 years (2005, 2006, 2007, 2008 and 2009). Profitability on financial indicators of return on asset worked out as net profit as a percentage of assets employed, return on equity worked out as net profit as a percentage of ordinary share capital plus all reserves (Wood & Sangster, 2008) was used.

Dimensions of Entrepreneurial Strategic planning: In order to assess the dimensions of entrepreneurial strategic planning as independent variables included entrepreneurial orientation, planning intensity, locus of planning, planning flexibility and scanning intensity a 5-item scale was used.

This scale was developed based on arguments from Hitt et al (2001). The higher the score the more the enterprise exhibits a condition.

Entrepreneurs' Characteristics: Age and the education levels of the respondents were used to check whether they had an influence on planning dimensions for enterprise growth and competitive advantage (Venkatesh et al. 2003). Age was measured in years of the respondent while education was measured as the statement of highest level of education attained.

3.3. Hypothesis and Test of Hypothesis

A null hypothesis, H_{01} below was developed on the relationships on the following; entrepreneurs' characteristics (age and education), entrepreneurial strategic planning practices, that is EO (Entrepreneurial Orientation), SI (Scanning Intensity), PF (Planning Flexibility), PH (Planning Horizon), LP (Locus of Planning) and enterprise performance. Firm performance was measured by profitability, enterprise growth (sales and employee) over a period of 5 years and attitude towards profitability.

H_{01} : The entrepreneurs' characteristics (age and education) or their interactions have no significant influence on the entrepreneurial strategic planning practices and performance of Women-led SMEs in Kenya.

To test the hypothesis, Univariate ANOVA (UNIANOVA) analysis with factor interactions was conducted to test the null hypothesis That is, the firm performance variables plus the dimensions of entrepreneurial strategic planning associated with the entrepreneurs' characteristics (age and education) as stated in the hypothesis below. However, this was only considered when statistical significance was $p < 0.05$.

3.4. Univariate ANOVA Interaction Model

The Univariate Analysis of Variance (UNIANOVA) procedure provides both regression analysis and analysis of variance for one dependent variable by one or more predictor variables (Weinberg & Abramowitz, 2002). This univariate ANOVA (UNIANOVA) interaction model (model 1 below) with factor interaction was used. To analyze the interaction effect of each of the dependent variables, in this case entrepreneurial strategic planning practices and firm performance by the independent variables (entrepreneurs' age and education), the tests of between-subjects effects estimated marginal means (EEMM) was conducted and profile plot graphs used to represent the results. The formal model underlying UNIANOVA, with 2 treatments y and x_1 where the univariate, non-linear interaction is observed when the model needs to take into account not just an additional treatment factor x_1 to y , but also a multiplicative factor $y * x_1$ that explains how the efficacy of one factor changes in the presence of the other.

$$\mathbf{X} = \mu + y + x_1 + y * x_1 + \varepsilon \quad \text{two-factor model with interaction term} \quad (\text{Model 1})$$

Where:

\mathbf{X} is the 128th replicate of Treatment x_1 (Entrepreneurs' Characteristics) level and treatment y level
 y (performance response variable) is the effect of the 128th level of treatment y (= difference between μ and mean of all data in this treatment).

Which in this case were:

1. Return on assets expressed as net profit as a percentage of assets employed,
2. Return on equity worked out as net profit as a percentage of ordinary share capital plus all reserves
3. Sales growth was measured as actual annual percentage growth in total sales over a period of 5 years
4. Employee growth was measured as actual annual percentage growth in number of employees over a period of 5 years.
5. Attitude towards level of satisfaction towards evaluation of enterprise's Return on Assets.
6. Attitude towards level of satisfaction towards evaluation of enterprise's Return on Equity.

x_1 (Entrepreneurs' Characteristics) is the effect of the 128th level of treatment x_1 (= difference between μ and mean of all data in this treatment.)

ε is the error term.

$$\text{Note that } \Sigma x_1 = \Sigma y = \Sigma \varepsilon = 0, \Sigma y * x_1 = 0$$

4. RESEARCH FINDINGS AND DISCUSSION

4.1. Empirical Findings on Entrepreneurs' Characteristics

In this study the largest proportion of women entrepreneurs (76%) were between 22 and 48 years (Figure 1). Among the respondents the age of the entrepreneurs ranged from 22 to 69 years with the average age being 42 years and standard deviation of 9.1 years, most (72%) of the women entrepreneurs were married with the remaining 28% being single. Of these single women entrepreneurs, 12% were never married, and the remaining 16% were widowed, separated or divorced.

Insert figure (1) about here

In this study as indicated on figure 2, the respondents had attained basic education of at least primary level. The majority (44%) had a college diploma, with 19% having a university education.

Insert figure (2) about here**4.2. Interaction Analysis of Entrepreneurs' Characteristics on ESPP and Firm Performance**

The Table 1 shows the results of the interaction of the UNIANOVA analysis conducted that examined the effect of entrepreneurs' characteristics namely their age and education levels on the attitudes on the usage of entrepreneurial strategic planning practice (Entrepreneurial orientation, planning intensity, locus of planning, planning flexibility and scanning intensity). There was significant interaction between the effects of age of entrepreneur on locus of planning as shown by the results ($F = 2.709$, $p\text{-value} = 0.020$), education of entrepreneur on locus of planning ($F = 5.405$, $p\text{-value} = 0.000$), both had a goodness of fit of 68%. Entrepreneurs' education on entrepreneurial orientation had $F = 3.075$, $p\text{-value} = 0.033$ and goodness of fit of 55%. The interaction that examined the effect of entrepreneurs' characteristics namely their age and education levels on the firm performance revealed that there was a significant interaction between the effects of both age and education on return on assets ($F = 2.298$, $p\text{-value} = 0.021$ and goodness of fit of 53%), age of entrepreneur on the attitude towards return on equity ($F = 2.664$, $p\text{-value} = 0.022$ and goodness of fit of 50%) and entrepreneurs' age on attitude towards return on assets. ($F = 2.793$, $p\text{-value} = 0.017$ and goodness of fit of 46%).

Insert table (1) about here

Profile plots for effects estimated marginal means (EEMM, significant at 0.05 levels) of overall entrepreneurial strategic planning practices by entrepreneurs' age and education (Figure 3), indicate that despite the fact that the entrepreneurs with primary school education were not represented at the 33-40 years age bracket, their attitude towards entrepreneurial strategic planning practices deteriorated with age, so that the oldest age group (49-56 years) had the lowest (EEMM \approx drop from 4.0 to 3.0) towards ESPP. However, for entrepreneurs with secondary and A-Level education, the attitude towards ESPP dropped at the 33-40 years of age (EEMM \approx drop from 3.6 to 3.4) but improved as they got older (EEMM \approx rise from 3.4 at 33-40 years to 3.8 at 49-56 years).

Insert figure (3) about here

Profile plots for EEMM (significant at 0.05 levels) of firm performance by entrepreneurs' age and education (Figure 4), indicate that firm performance of the entrepreneurs with primary education worsens (EEMM \approx drop from 78 to 70) as the entrepreneurs get older while compared to those with higher education.

Insert figure (4) about here

The performance of enterprises owned by entrepreneurs with college education is significantly high (EEMM \approx 80) at the age of 25-32 years but significantly low (EEMM \approx 72) for those with secondary education at the same age. However, this trend reverses as they get older (33-40 years) since the entrepreneurs with college education perform significantly poorer (EEMM \approx 70) but only so for that age since the performance improves (EEMM \approx 77) during the 41-48 years of age. These firms' performance then converges (EEMM \approx 70) at the age of 49-56 years.

4.3. Discussion of Findings for Entrepreneurs' Characteristics, ESPP and Firm Performance

Among the respondents the age of the entrepreneurs ranged from 22 to 69 years with the average age being 42 years and standard deviation of 9.1 years, (Figure 1). Education is vital for the performance of any enterprise since it influences the ability to think critically. In this study 90% had an education above the basic primary school education (Figure 2). When the null hypothesis on the interactions between entrepreneurs' characteristics and entrepreneurial strategic planning practices were tested, the hypothesis was rejected since there was significant interaction between entrepreneurs' age and locus of planning, entrepreneurs' education and locus of planning as well as entrepreneurs' education and entrepreneurial orientation (Table 1). This implies that the respondents' age and education were important factors to consider when deciding the depth of employee involvement in the firms' strategic planning activities (locus of planning). When the interactions were tested, entrepreneurs' characteristics and firms' performance, the hypothesis was rejected since there was significant interaction between both entrepreneurs' age and education on return on assets, entrepreneurs' age on both attitude towards return on assets and equity. This means that both age and education have had a significant impact on the profitability of the enterprises when measured as return on asset. Profile plots for effects estimated marginal means (EEMM), of overall entrepreneurial strategic planning practices by entrepreneurs' age and education (Figure 3), indicate that education is significantly important for the implementation of entrepreneurial strategic planning principles.

The Profile plots for EEMM of firm performance by entrepreneurs' age and education (Figure 4) indicate that as the women entrepreneurs get older and mature the difference in performance of their enterprises narrows down and stabilizes. This is exhibited by an EEMM difference ≈ 10 at the younger age (25-32 years) as compared to the EEMM difference ≈ 1 at 49-56 years.

5. SUMMARY AND RECOMMENDATIONS

5.1. Summary

This study laid its emphasis on the definition of entrepreneurial strategic planning practices as entrepreneurial orientation (propensity to take risks, proactiveness and innovation), scanning intensity (degree of rigor in the managerial activity of learning about events and trends in the organization's environment), planning flexibility (Capacity of a firm's strategic plan to change as environmental opportunities/threats emerge especially when there are developments and changes in Research and Development, the changes in technological leadership and innovation), planning horizon (length of the future time period that decision-makers consider in planning) and locus of planning (depth of employee involvement in a firm's strategic planning activities). The majority of the women entrepreneurs were between 22-48 years. This age bracket is considered as the most entrepreneurially active age which contributes positively to the performance of enterprises. The respondents' age and education were important factors to consider when deciding the depth locus of planning and had a significant impact on return on assets. In accordance with the findings of Langowitz & Minniti (2007), the findings of the study are in agreement in that age played an important role in shaping the attitudes of the entrepreneurs towards both return on assets and return on equity. The study indicates that as the women entrepreneurs get older and mature the differences in performance of their enterprises narrows down and stabilizes irrespective of their educational background (Manolova et al, 2008).

5.2. Recommendations

The following are the recommendations suggested to improve the performance of women-led enterprises:

- Further study should be carried out that covers other aspects of entrepreneurial orientation besides risk-taking, innovation and proactiveness and strategic planning practices other than scanning intensity, planning flexibility, planning horizon and locus of planning. The findings are based on the entrepreneurs' age and education. Other parameters such as the influence of marital status, religion and cultural dynamics should be areas for future examination. The sample size could be enlarged so that all variables are well taken care of and especially if the same UNIANOVA is to be carried out.
- On practice there is need for training, implementation and follow-up by Business Development Service providers for enhanced usage of the Entrepreneurial Strategic Planning Practices for improved firm performance. There is also need for the special Entrepreneurial Strategic Planning Practices courses for women entrepreneurs with primary education so that their firms could be improved in performance.

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Table 1: UNIANOVA Results for Tests of Between-Subjects Effects for Entrepreneurs' Characteristics, ESPP and Firm Performance

Interaction Variables	Dependent Variable	R ²	F	p-value
Entrepreneurs' Characteristics and ESPP				
Age	Locus of Planning	0.681	2.709	0.020
Education	Locus of Planning	0.681	5.405	0.000
Education	Entrepreneurial Orientation	0.545	3.075	0.033
Entrepreneurs' Characteristics and Firm Performance				
Age x Education	ROA	0.532	2.298	0.021
Age	Attitude towards ROE	0.500	2.664	0.022
Age	Attitude towards ROA	0.462	2.793	0.017

Note: $p < 0.05$

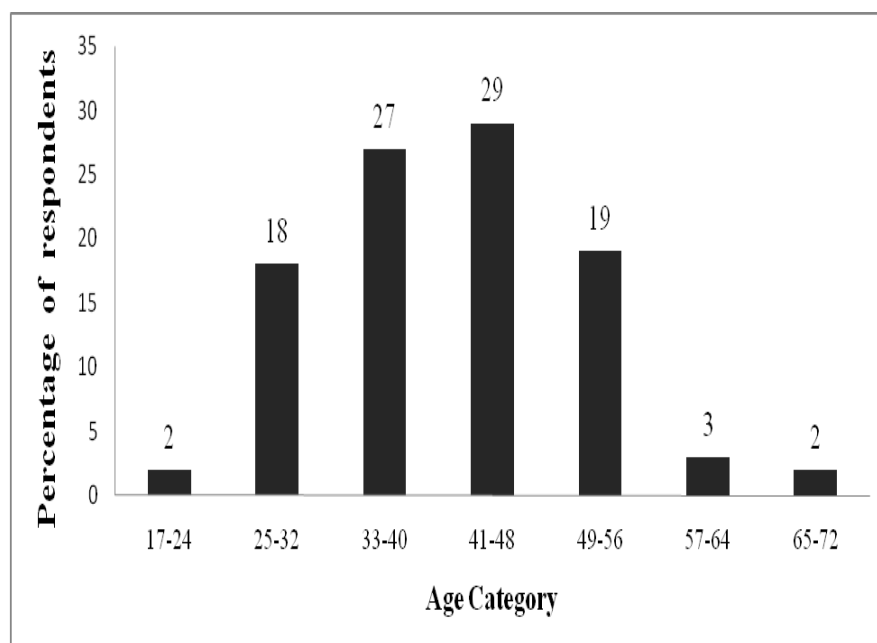


Figure 1: Entrepreneurs' Age

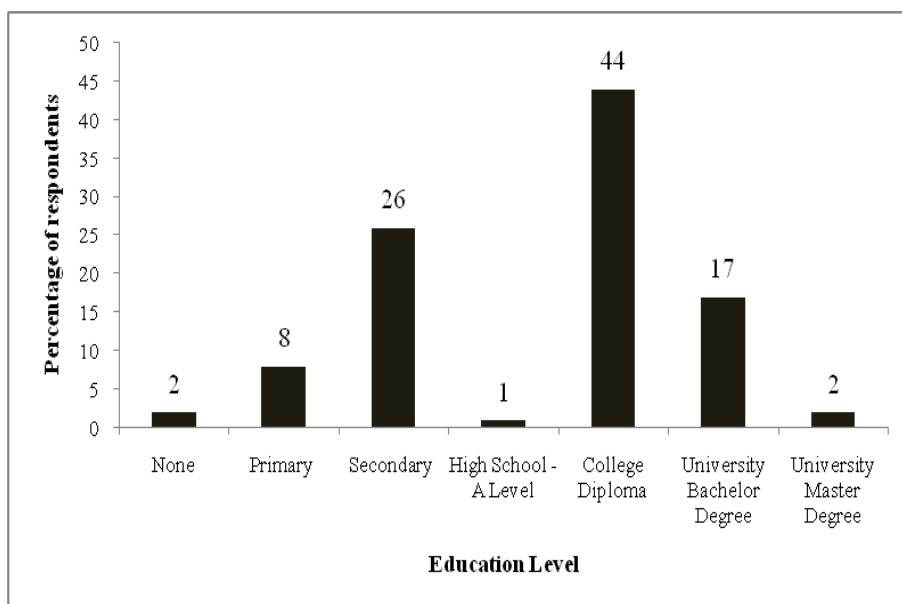


Figure 2: Entrepreneurs' Education Level

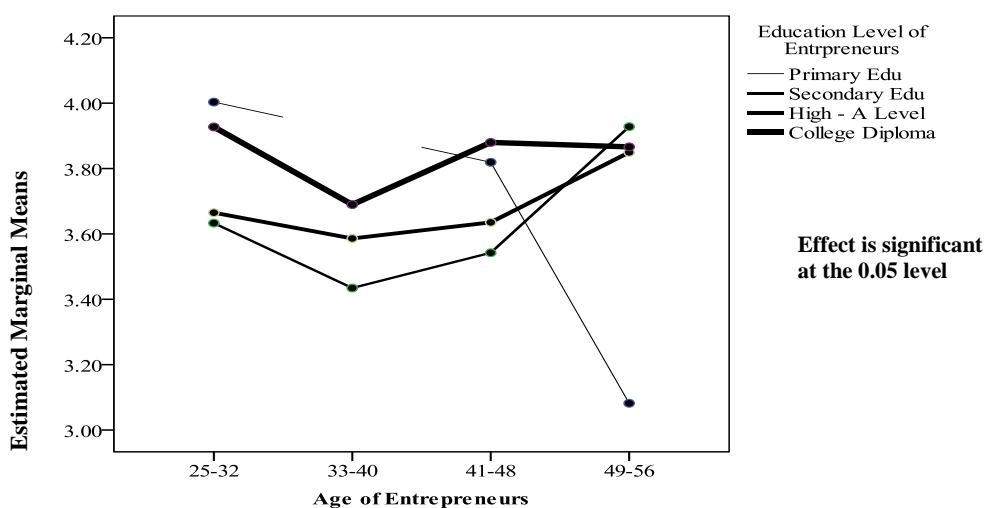


Figure 3: Profile Plots for Effects Estimated Marginal Means of ESPP by Entrepreneurs' Age and Education Level

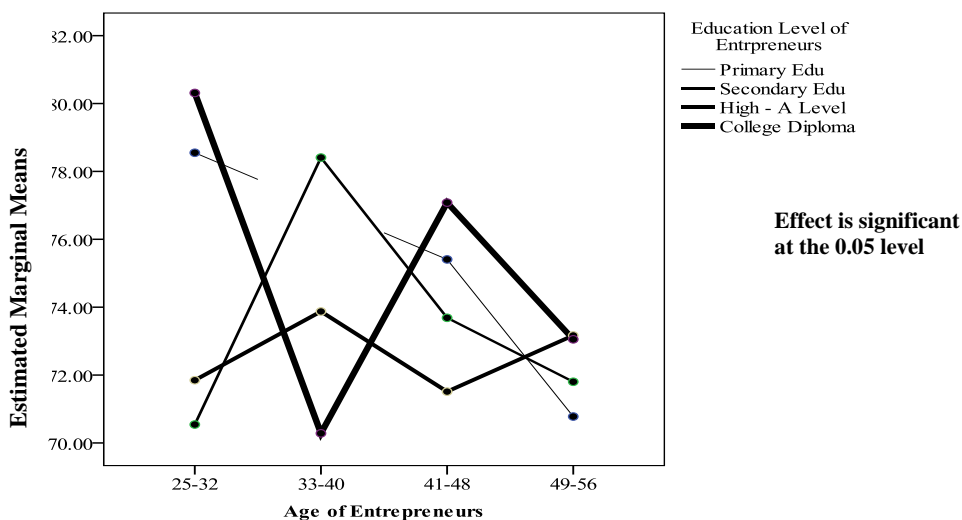


Figure 4: Profile Plots for Effects Estimated Marginal Means of Firm Performance by Entrepreneurs' Age and Education Level.