Influence of Education on the Participation of Women Entrepreneurs
(Studied in North – Western Nigeria)

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Abstract: This study examined the influence of education factors on women entrepreneurial participation in North – Western Nigeria in five activity sectors (wholesale retail, education, manufacturing and processing, agriculture and hospitality sectors). Samples of 500 women entrepreneurs were purposively selected and a multinomial logistic regression was conducted to assess how the independent variables predict the dependent variable. Education factors, EPEIC (Education promote entrepreneurial culture) has a positive significant influence in all the sectors examined except in the manufacturing and processing sector. Level of education has positive significant influence in the hospitality and manufacturing and processing sectors. EDPI (Education improve ability to make decision and process information) and LOE (Level of education) do not predict women entrepreneurial participation in the wholesale retail and agriculture sectors in Kebbi and Sokoto states. Therefore to promote entrepreneurial engagement women should be given the opportunity to acquire the basic skills required to start and run a successful business.

Keywords: Education, women entrepreneurs, agriculture, manufacturing, logistic regression, Nigeria.

JEL Classification: L26, N5, O14, P36.

1. INTRODUCTION

Many stakeholders have described women entrepreneurs as the ‘rising stars of the economies’, the ‘unstable source of economic growth and development’, ‘the way forward’, and the ‘new women’s movement’ (Vossenberg, 2013). Although women represent 48% of all entrepreneurial activity on the global scale (GEM, 2012; World Bank, 2011), there are significant gender gaps among different countries and states. The facts in Kebbi and Sokoto States in Nigeria must be captured to reflect its own socio-cultural peculiarities and the implications for women entrepreneurship in the States.
Due to the socio-cultural peculiarities in some places, women’s entrepreneurial activity is concentrated in low-growth and low-skilled business sectors. Many studies have been conducted to explore the relationship between women entrepreneurship and socio-cultural factors in different geographical areas. Most of these studies, also observed by Petro, Annastazia & Robert (2014), have been devoted to determine how socio-cultural factors affect women entrepreneurial behaviour, without specifically examining the impact of factors such as education on women entrepreneurship in different sectors in Nigeria and more particularly in the states of Kebbi and Sokoto. The extent to which women’s business performance can be explained by level of education is not used quantitatively in-depth. Thus, this study is in place to empirically assess the impact of level of education factors on women entrepreneurial participation in Kebbi and Sokoto State, Nigeria.

Studies on female entrepreneurs in the developing counties are still relatively few compared to those of developed countries (Brush & Cooper, 2012; Link & Strong, 2016). However, empirical research on the association between level of education and female entrepreneurship participation in different sectors is rare. It is in this context that this study undertakes a sectoral analysis of the influence of education on women’s participation in business creation in five different sectors- hospitality, manufacturing and processing, agriculture, wholesale and retail and education sectors- in Kebbi and Sokoto States.

To do this, this article is structured into five sections. Section one is the brief introduction, followed by the literature review and hypothesis development of the second section. The third part presents the methodology used. Section four discusses the results and section five, the recommendations and conclusions are drawn.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Education is very important for women entrepreneurship activities. As stated in the work of Kain and Sharma (2013) that there is a great need to educate women entrepreneur for the nation’s development and overall growth of the economy as women do not only generate employment for themselves in the organized and unorganized sectors, but also provide for others. Education has a positive impact on the probability of being an entrepreneur. This result is supported by literature as the GEM (2010) also reported that a healthy and educated workforce is important to a business’s competitiveness and productivity.

Education reduces the level of an individual’s ignorance and this in turn improves her ability to decode, make decision, understand and process information. According to Simon & Shepherd (2014), the education of entrepreneurs can impact the path to business success because it is the process of building absorptive capacity of managers such as confidence, psychology, knowledge and skills. Centindamar et al. (2012) suggest that the likelihood of women becoming entrepreneurs will be especially improved if they have increased access to education. Takahashi (2009) indicates that one of the success factors in small business is the education level of the owner, which can assist the business to survive and manage a complex environment and keep business profitability.

Dolinsky et al. (1993) establish the relationship between the level of education and the probability of starting up a business, and they find a positive relationship between the two factors: as the educational level rises, so does the probability of creating a business.

Employing an ex post facto and cross sectional design in their empirical study of the role of gender and education on small business performance in the South African small enterprise sector, Simon and Shepherd (2014) show that out of 500 respondents, 64% of the respondents were male and 35% were females. The levels of education were presented as follows: < grade 7 (3.6 %); grade 8-12 (36%); diploma (30%); degree (23%) and postgraduate (6%). The study’s hypotheses were measured using the Wilcoxon test (Kruskall-Wallis) method as well as the Mann-Whitney’s test. The ANOVA was also used to test the main and the interaction effects of categorical variables on a continuous dependent variable, controlling for the effects of selected continuous variables which co-vary with the dependent. The results of their analyses indicate that education plays a role (has an effect) on business performance. This result is supported by literature as the GEM (2010) also reported that a healthy and educated workforce is important to a business’s competitiveness and productivity. The study also indicates that gender affects business performance. The result of Mann-Whitney’s test of the education
and business performance shows that there is a significant difference between category grade 1-7 and a degree but there is no difference between the first (grade 1-7) and second category (grade 8-12). There is also a difference between category grade 8-12 and the degree. Therefore, the more education one has, the better his/her business is likely to perform. Education makes a difference in business performance.

Arthur et al. (1993) in their empirical study on the effects of education on women business ownership using national longitudinal sample of women to examine variations in the likelihood of entering, staying, and re-entering self-employment by level of educational attainment. In doing so, they identified new entries, continuous stayers, and re-entries for the overall sample and for the sample when stratified by level of educational attainment. The results indicate that the incidence of initial entry, continuous stayer, and re-entry status in entrepreneurial activity increased with increasing levels of educational attainment. The incidence of self-employment, as measured by the percent of total person-years of observation spent in self-employment, increases dramatically with increasing levels of educational attainment. From the results, it increases from a total of 2.3 percent for the least educated, to 3.7 percent for high-school-only graduates, and to 5.7 for those with some college or more.

It might be noted that these differences reflect the notion that 13 percent of the least-educated sample (initially) entered into self-employment during the study period, while the figure was 19 percent and 27 percent for the high-school-only graduate and the some-college-or-more samples, respectively. Thus, the likelihood of entering into self-employment clearly increases with increased levels of educational attainment. Also, the likelihood of being self-employed for both the continual stayer and the re-entry increases with increased levels of educational attainment. Their study however admits that female business ownership studies are mostly based on cross-sectional data and do not address the question of the effect of education on women’s entrepreneurship. Therefore, what is known about the relationship between education and female entrepreneurship is limited to the identification of the level of educational attainment of different entrepreneurship study samples when compared to the general population and at times to that of male entrepreneurs (Arthur et al., 1993).

Kasang and Mulyung (2017) study on determinant of women empowerment through entrepreneurial activities in Kigali city, using Pearson correlation and found that entrepreneurial education and training, socio-cultural factors, and capital availability significantly influences entrepreneurial development amongst women entrepreneurs.

Dina (2012) study on Tanzanian education and entrepreneurial influence among females, found that policy strategies and support for female entrepreneurs had little or no impact on their entrepreneurial motivation, and level of formal education that women attained have little impact, but the kind of training a female entrepreneur underwent was the most important factor in the business start-up.

Therefore, we state both the null and alternative hypotheses as follows:

H₀: level of education does not significantly influence women entrepreneurial participation.
H₁: level of education significantly influences women entrepreneurial participation.

3. METHODOLOGY
3.1 Research Design
This study is a descriptive survey designed to evaluate the influence of education on women entrepreneurial participation in five sectors (wholesale and retail, agriculture, manufacturing and processing, education and hospitality sectors in North-western Nigeria.

A total of four thousand, four hundred and three (4,403) registered women-owned enterprises in five activity sectors, namely, wholesale & retail, agriculture, education, manufacturing & processing, and hospitality, spread across Kebbi and Sokoto States in North-western Nigeria constitute the population of the study (SMEDAN). This is composed of 3220 registered women-owned enterprises in Sokoto and 1183 registered women-owned enterprises in Kebbi states respectively.

A total sample size of 500 was drawn from the population size of 4403. The sample size of 500 was determined using the Krejcie and Morgan (1970) sampling approach for calculating sample size for a finite (known) population. A 99% confidence level (with a Z-value of 2.576) and a 5% margin of error was assumed for the computation of the sample size. The choice of confidence level, population proportion and degree of accuracy was informed by the researcher’s observed realities on the field
while collecting the data and in line with previous researches. The Krejcie and Morgan’s (1970) method of calculating sample size for a finite (known) population was used to determine the total sample size for the study.

To determine the number of elements to be approached with the questionnaire, the purposive sampling technique was utilized. The justification for the use of purposive non-probability sampling is because the owners who are the heads of their enterprise are in the best position to respond to the questionnaire.

In order to determine the sample size for each of the 5 sectors, the stratified sampling technique was used, with each sector representing a stratum. The approach which was used to assign sample to each stratum is called proportionate stratification. This approach was adopted because of the varying sizes of the different sectors from which representative samples was drawn. The approach will ensure that each sector is represented in the sample in proportion to the population size of that sector. In other words, with proportionate stratification, the sample size of each stratum is proportionate to the population size of the stratum and this way, results obtained can be generalized for the population of women entrepreneurs in Kebbi and Sokoto States.

3.2 Method of Data Analysis and Model Specification

A multinomial logistic regression was conducted to investigate whether socio-cultural factors (independent variables) predict women entrepreneurship participation (dependent variable), which has five categorical levels. The overall model significance for the multinomial logistic regression was examined by the collective effect of the independent variable(s), presented with a chi square ($\chi^2$) coefficient. The Nagelkerke $R^2$ and Cox and Snell statistics were used to assess the variability accounted for on the dependent variable by the independent predictor variables. Individual predictors were assessed by the Wald coefficient. Predicted probabilities of an event occurring were determined by the Exp ($\beta$). For significant predictors; an Exp ($\beta$) greater than one indicates that given a one-unit increase in the independent variable, the dependent variable will be X times more likely to be coded 1 or fall into the comparison category. Significant predictors with Exp ($\beta$) less than 1 will be evaluated by $1/\text{Exp} (\beta)$, meaning that a one-unit increase in the independent variable will be X times more likely to be coded 0 or fall into the reference category. A total of four multinomial logistic regression models were designed however, only 3 models (i.e. k-1) were estimated, using the education sector as the reference category, to determine the extent to which level of education influence women entrepreneurial participation in the five different sectors, the following models are drawn:

$$\ln \text{Pr (WR/Ref. Education.)} = a_0 + \beta_1 \text{LOE}_{i} + \beta_2 \text{EPEIC} + \beta_3 \text{EDPI} + e$$ \quad (1)

$$\ln \text{Pr (HP/Ref. Education.)} = a_0 + \beta_1 \text{LOE}_{i} + \beta_2 \text{EPEIC} + \beta_3 \text{EDPI} + e$$ \quad (2)

$$\ln \text{Pr (MP/Ref. Education.)} = a_0 + \beta_1 \text{LOE}_{i} + \beta_2 \text{EPEIC} + \beta_3 \text{EDPI} + e$$ \quad (3)

$$\ln \text{Pr (Agric/Ref. Education.)} = a_0 + \beta_1 \text{LOE}_{i} + \beta_2 \text{EPEIC} + \beta_3 \text{EDPI} + e$$ \quad (4)

Where:

WR = wholesale & retail
AGRIC = agriculture
EDU = education
MP = manufacturing & processing
HP = hospitality
LOE = Level of education
EPEIC = Education promote entrepreneurial culture
EDPI = Education improve ability to make decision and process information
$\beta_i$ (i=1,2,3) = Coefficients of Independent variables
e = Error term
Ln Pr = Probability of dependent variable

The above equations explain the extent to which level of education motivate women to participate in entrepreneurial activities in the five different sectors.
3.3 Variables Measurement

3.3.1 Dependent Variable

The dependent variable is women entrepreneurship participation in five different sectors, namely wholesale and retail, agriculture, education, manufacturing & processing, and hospitality sectors. Following the Global Entrepreneurship Monitor (GEM) (2010) project, women entrepreneurship in the different sectors was measured by the number of women-owned businesses in the various sectors in Kebbi and Sokoto State. The registered number of women entrepreneurs for each sector was obtained from records available at the Small Medium Enterprises Development Agency of Nigeria (SMEDAN) reports in Sokoto State. With 500 women entrepreneurs selected for the survey, women entrepreneurship is dummy-coded into the five categorical sectors examined in this work. This allows for women entrepreneurship and demographic characteristics to be measured across all the sectors. This is in consonance with Urbano, Ferri and Noguera (2014).

3.3.2 Independent variables

Level of education which will be measured using a 5-point Likert scale of 1-5, level of education will be measured based on the following variables, viz. Education promote entrepreneurial culture, if education improve ability to make decision and process information, my business would have collapsed if not for my educational background.

4. DATA ANALYSIS AND DISCUSSION OF RESULTS

In this section, results of statistical analyses and discussion are presented.

Table 1: Model Fitting Information

<table>
<thead>
<tr>
<th>Model</th>
<th>Model Fitting Criteria</th>
<th>Likelihood Ratio Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept Only</td>
<td>-2 Log Likelihood</td>
<td>Chi-Square</td>
</tr>
<tr>
<td>Final</td>
<td>604.341</td>
<td>52.465</td>
</tr>
<tr>
<td></td>
<td>551.876</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>

Table 1 returns a chi square value, \( \chi^2 \) (12) = 52.465, p-value=0.000< 0.05 revealed that the goodness of fit of the overall model was tested and is high. Impliedly, LOE = Level of education, EPEIC = Education promote entrepreneurial culture, EDPI = Education improve ability to make decision and process information, have combined significant effect on women entrepreneurship participation in the five sectoral categories of wholesale & retail, agriculture, education, manufacturing/processing, as well as hospitality.

Table 2: Pseudo R-Square

<table>
<thead>
<tr>
<th></th>
<th>Cox and Snell</th>
<th>Nagelkerke</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.178</td>
<td>.512</td>
</tr>
</tbody>
</table>

Table 2 also reports that the independent variables (LOE = Level of education, EPEIC = Education promote entrepreneurial culture, EDPI = Education improve ability to make decision and process information) are able to explain the dependent variable WEP (women entrepreneurial participation) at 51.2%.

Table 3: Likelihood Ratio Tests

<table>
<thead>
<tr>
<th>Variables</th>
<th>-2 Log Likelihood of Reduced Model</th>
<th>Chi-Square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>569.510</td>
<td>17.634</td>
<td>4</td>
<td>.001</td>
</tr>
<tr>
<td>EPEIC</td>
<td>559.516</td>
<td>7.640</td>
<td>4</td>
<td>.106</td>
</tr>
<tr>
<td>EDPI</td>
<td>566.895</td>
<td>15.018</td>
<td>4</td>
<td>.005</td>
</tr>
<tr>
<td>LOE</td>
<td>580.655</td>
<td>28.779</td>
<td>4</td>
<td>.000</td>
</tr>
</tbody>
</table>
Table 3 shows the result statistical significance of each predictor’s contribution in the multinomial logistic regression model. The results revealed that all the independent variables are statistically significant except EPEIC (Education promote entrepreneurial culture).

<table>
<thead>
<tr>
<th>WEP a</th>
<th>B</th>
<th>Std. Error</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(β)</th>
<th>95% Confidence Interval for Exp(β)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>WR</td>
<td>Intercept</td>
<td>.202</td>
<td>.632</td>
<td>.102</td>
<td>1</td>
<td>.750</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EPEIC</td>
<td>.531</td>
<td>.240</td>
<td>4.889</td>
<td>1</td>
<td>.027</td>
<td>1.701</td>
</tr>
<tr>
<td></td>
<td>EDPI</td>
<td>-.083</td>
<td>.198</td>
<td>.176</td>
<td>1</td>
<td>.675</td>
<td>.920</td>
</tr>
<tr>
<td></td>
<td>LOE</td>
<td>.145</td>
<td>.127</td>
<td>1.294</td>
<td>1</td>
<td>.255</td>
<td>1.156</td>
</tr>
<tr>
<td>AGR</td>
<td>Intercept</td>
<td>-.185</td>
<td>.634</td>
<td>.085</td>
<td>1</td>
<td>.770</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EPEIC</td>
<td>.430</td>
<td>.242</td>
<td>3.143</td>
<td>1</td>
<td>.076</td>
<td>1.537</td>
</tr>
<tr>
<td></td>
<td>EDPI</td>
<td>.257</td>
<td>.194</td>
<td>1.756</td>
<td>1</td>
<td>.185</td>
<td>1.293</td>
</tr>
<tr>
<td></td>
<td>LOE</td>
<td>-.064</td>
<td>.130</td>
<td>.242</td>
<td>1</td>
<td>.623</td>
<td>.938</td>
</tr>
<tr>
<td>HOP</td>
<td>Intercept</td>
<td>-1.940</td>
<td>.745</td>
<td>6.771</td>
<td>1</td>
<td>.009</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EPEIC</td>
<td>.440</td>
<td>.267</td>
<td>2.722</td>
<td>1</td>
<td>.099</td>
<td>1.553</td>
</tr>
<tr>
<td></td>
<td>EDPI</td>
<td>.254</td>
<td>.216</td>
<td>1.390</td>
<td>1</td>
<td>.238</td>
<td>1.290</td>
</tr>
<tr>
<td></td>
<td>LOE</td>
<td>.444</td>
<td>.145</td>
<td>9.400</td>
<td>1</td>
<td>.002</td>
<td>1.559</td>
</tr>
<tr>
<td>MP</td>
<td>Intercept</td>
<td>-.271</td>
<td>.730</td>
<td>.138</td>
<td>1</td>
<td>.711</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EDPI</td>
<td>-.288</td>
<td>.236</td>
<td>1.490</td>
<td>1</td>
<td>.222</td>
<td>.750</td>
</tr>
<tr>
<td></td>
<td>LOE</td>
<td>.340</td>
<td>.143</td>
<td>5.678</td>
<td>1</td>
<td>.017</td>
<td>1.404</td>
</tr>
</tbody>
</table>

a. The reference category is: EDU.

Table 4 presents the results of parameter estimates, Wald significance test and odd ratio of each independent variable with respect to women’s entrepreneurial participation in the wholesale and retail, agriculture, hospitality, and manufacturing and processing sectors compare to women entrepreneurship participation in education sector in Sokoto and Kebbi States.

The result of Wald test statistic is 4.889 with an associated p-value of 0.027<0.05 at a significance level of 5%, the study rejects the null hypothesis and concludes that in the case of women entrepreneurial participation in the wholesale and retail sector relative to women entrepreneurship participation in education sector, the regression coefficient was found to be statistically different from zero with all other variables included in the model. Implicitly, the EPEIC predictor (β-value of 0.531) has a significant positive influence on women entrepreneurial participation in the wholesale and retail sector compared to women entrepreneurial participation in education sector. The odd ratio of 1.701>1 shows that education promotes women entrepreneurial participation in the wholesale and retail sector in Kebbi and Sokoto States. The result is corroborated by the work of Kain and Sharma (2013) who stated that it was absolutely necessary to educate women entrepreneurs for the nation’s development and overall growth of the economy, because women did not create only jobs in the organized and unorganized sectors, but also provide for others.

Wald test statistic 3.143 with an associated p-value of 0.076<0.10 at 10% level of significance, the study rejects the null hypothesis and concludes that for women entrepreneurial participation in the agriculture sector relative to that of women entrepreneurial participation in education sector, the regression coefficient was statistically different from zero since all other variables are in the model. Implicitly, the EPEIC predictor (β-value of 0.43) has a significant positive influence on women entrepreneurial participation in the agriculture sector compared to their participation in education sector. The odd ratio of 1.537>1 shows that education promotes women entrepreneurial participation in the
agriculture sector in Kebbi and Sokoto States. The result is supported by Centindamar et al. (2012) who suggested that the women’s chances of becoming entrepreneurs would be particularly enhanced if they had greater access to education.

The extent of the relationship between education variable (EPEIC) and women entrepreneurial participation in the hospitality sector in Kebbi and Sokoto States with Wald test statistic 2.722 with an associated p-value of 0.099<0.10 at 10% level of significance, the study rejects the null hypothesis and concludes that for women entrepreneurial participation in the hospitality sector relative to women entrepreneurial participation in education sector, the regression coefficient was found to be statistically different from zero given that all other variables are in the model. Therefore, the predictor EPEIC (β-value of 0.440) has positive significant influence on women entrepreneurial participation in the hospitality sector relative to women entrepreneurial participation in education sector. The odd ratio of 1.553>1 for EPEIC shows that education promotes women entrepreneurial participation in the hospitality sector in Kebbi and Sokoto States. The result is in consonant with the work of Takahashi (2009) who indicated that one of the success factors in small business is the education level of the owner, which can assist the business to survive, manage a complex environment and keep business profitability.

The results in table 4 further show the extent to which education variable (LOE) affect women entrepreneurial participation in the hospitality subsector. The Wald test statistic for the predictor entrepreneurial participation (LOE) is 9.40 with an associated P-value of 0.002 < 0.05. The regression coefficient has been found to be statistically different from zero. This provides sufficient evidence to say that LOE has significant influence on women entrepreneurial participation in hospitality sector. This is in line with the findings of Kasang and Mulyung (2017) who conducted an extensive empirical investigation on determinant of women empowerment through entrepreneurial activities in Kigali city, using Pearson correlation and found that entrepreneurial education and training, socio cultural factors, capital availability significantly influences entrepreneurial development amongst women entrepreneurs. Additionally, with a β value of 0.444 if a woman entrepreneur increases her LOE influence score by one point she would prefer entrepreneurship in hospitality rather than education sector. Based on the EXP(β) value of 1.559 > 1, the relative risk of being in hospitality sector would be 1.559 more likely when other variables in the model are held constant. In other words, an increase in LOE score; women entrepreneurship will prefer to participate in hospitality business rather than in education sector.

The extent of the relationship between LOE and women entrepreneurial participation in the manufacturing and processing sector relative to women entrepreneurial participation in education sector was determined. The Wald test statistic for the predictor LOE is 5.678 with an associated p-value of 0.017<0.05 at 5% level of significance. The study rejects the null hypothesis and concludes that the regression coefficient was found to be statistically different from zero given that all other variables are in the model. The B-value of 0.34 represents the multinomial logistic estimate for a one-unit increase in LOE score for women entrepreneurial participation in the manufacturing and processing sector relative to women entrepreneurship participation in education sector given that other variables in the model are held constant, women entrepreneurs will prefer enterprise in the manufacturing and processing sector relative to education sector. The odd ratio of 1.404>1 shows that LOE promotes women entrepreneurial participation in the manufacturing and processing sector in Kebbi and Sokoto States. The result is in conformity with the work of Dolinsky et al. (1993) who established the relationship between the level of education and the probability of starting up a business and found a positive relationship between the two factors exist: as the educational level rises, so does the probability of creating a business.

The results in table 4 reveal the extent to which education (EDPI, LOE) variables affects women entrepreneurial participation in the Wholesale/Retail and agriculture sectors in Kebbi and Sokoto State. The Wald test statistic for the predictors (EDPI and LOE) are 0.176 and 1.294 in wholesale retail sector with an associated P-values of 0.675 > 0.05 and 0.255 > 0.05 and the Wald test statistic for the predictors (EDPI and LOE) in the agriculture sector are 1.756 and 0.242 with an associated P-values of 0.185 > 0.05, for EDPI and 0.623 > 0.05. At 5% level of significance. The regression coefficient has not been found to be statistically different from zero. This provide sufficient evidence to infer that EDPI and LOE have no significance influence on women entrepreneurial participation in the wholesale retail and agriculture sectors examined in Kebbi and Sokoto State. This contradict the findings of
Takahashi (2009) who indicates that one of the success factors in small business is the education level of the owner, which can assist the business to survive and manage a complex environment and keep business profitability.

The result of analysis shown in Table 4 shows the extent to which education variable affect women entrepreneurial participation in the hospitality and manufacturing and processing sectors relative to women entrepreneurship participation in education sector in Sokoto and Kebbi State. The Wald test statistic for the predictor, (EDPI) is 1.390 with an associated P value of 0.238 > 0.05, for the hospitality sector and 1.490 with an associated P-value of 0.222 > 0.05, for the manufacturing and processing sector. At 5% level of significance. Additionally, the regression coefficient has not been found to be statistically different from zero. This provides sufficient evidence to infer that EDPI has no significant influence on women entrepreneurial participation in all the sectors examined in Kebbi and Sokoto states.

Table 4 shows that for women entrepreneurial participation in manufacturing and processing relative to women entrepreneurial participation in education in North-western Nigeria, the Wald test statistic for the EPEIC is 0.442 with an associated p-value of 0.506 > 0.05. At the 0.05 level of significance, the study accepts the null hypothesis and concludes that for women entrepreneurship participation in manufacturing and processing sector relative to women entrepreneurship in education, the regression coefficient for (EPEIC) is not statistically different from zero given that all other variables are in the model. This means that there is no sufficient evidence to say that EPEIC has a significant influence on women entrepreneurial participation in the manufacturing and processing sub sector in North-western Nigeria. This finding is at variance with that of Simon & Shepherd (2014), who submitted that the education of entrepreneurs can impact the path to business success because it is the process of building absorptive capacity of managers such as confidence, psychology, knowledge and skills.

5. CONCLUSIONS AND RECOMMENDATIONS
5.1 Conclusions
Based on the findings of the study, the study concludes that EPEIC, EDPI and LOE jointly predict women entrepreneurial participation in all the sectors examined in Kebbi and Sokoto states. The study also concludes that EPEIC (education promote entrepreneurial culture) has a positive significant influence in all the sectors examined except in the manufacturing and processing sector. LOE (my business would have collapse if not for my educational background) have positive significant influence in the manufacturing and processing and hospitality sectors relative to education sector. EDPI and LOE do not predict women entrepreneurial participation in the wholesale/retail and agriculture sectors in Kebbi and Sokoto states. The lack of basic education required to manage a business should be made available to women entrepreneurs in North-western state of Nigeria. The study concludes that women entrepreneurial participation is greater among those women who possess the basic skills required to start and run a successful business. The present study reveals that EPEIC and LOE have been accepted as a distinguishing factor among women entrepreneurs.

5.2 Recommendations
Based on the findings of this research, the following recommendations are drawn.

Entrepreneurial women should be given the opportunity to engage in entrepreneurial education to help them get the basic skills required to start and run a successful business activities.

Generally, capacity building workshops and training should be provided for women entrepreneurs in North-western Nigeria. Government can offer different forms of support such as entrepreneurship awards, counseling, training, advisory support, information products and web portals to women entrepreneurs.

5.3 Limitation of the Study
The study only covered women participation in wholesale and retail, agriculture, education, manufacturing and processing as well as hospitality sectors. For the purposes of depth of analysis, the study cannot cover all sectors that women are likely to participate in as entrepreneurs.
5.4 Suggestions for Further Research

The study used cross-sectional data which does not give room for measurement of changes in the significance of determinants of women entrepreneurship. It is therefore suggested that a longitudinal study on women entrepreneurship in northern Nigeria be carried out so that information on women entrepreneurship over a longer period of time will be collected in order to examine the significance and effect of changes in determinants.

6. REFERENCES


