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ENHANCING INNOVATIVENESS AMONG SMALL AND MEDIUM SCALE (SMES) LEATHER ENTERPRISES TO BOOST PERFORMANCE IN ABIA STATE, NIGERIA

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ABSTRACT: *This study critically analyzes the innovation types and the effect on the performance of the leather based manufacturing enterprise in Abia state. The study has four specific objectives which were to examine the socio economic characteristics of the respondents, analyses of the various types and strategies of innovation, the effect of innovation on the performance of the enterprise as well as the determinant of innovation and performance. Random samples of 120 leather based manufacturing firms were obtained and the data were collected using a well-structured questionnaire. The tools used for data analysis were tables, frequencies and percentages, correlation analysis, probit regression and multiple regression analyses. It was observed that the innovations used to enhance performance among leather based agro-industries were product, market and technological innovations. Specifically, innovation has a positive significant effect on the performance (profit) of the enterprise. The significant determinants of innovation were enterprise size, competitors, output level, and credit availability for the venture and education status of firm operators. Also, while innovation was one of the significant determinants of enterprise performance, it is therefore recommended that the enterprise should embark on a continuous innovation to enhance their performance.*

KEYWORDS: SMEs, Leather Enterprises, Performance Abia State, Nigeria

INTRODUCTION

Actually, the key reason for innovativeness is the desire of firms to obtain increased business performance and increased competitive edge. Companies procure additional competitive advantage and market share according to the level of importance they give to innovations, which are vital factors for companies to build a reputation in the marketplace and therefore to increase their market share. Metcalfe (1998) stated that when the flow of newness and innovations desiccates, firms' economic structure settles down in an inactive state with little growth.

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Therefore, innovation plays a significant role in creating the differences of performance and competition among firms, regions and even countries.

Agro based Small and medium sized enterprises (ASMEs) including leather based firms make up a significant proportion of businesses within any nation and they play a major role in domestic development (Conway, 2005). However, despite the significant increase in international trade as a result of globalization, and competition from foreign based firms (Ibeh, 2004). Much research has thus been devoted to understanding the factors that affect innovation of SMEs (Blind, et al 2009. Innovativeness is one of the fundamental instruments of growth in innovation strategies to enter new markets, to increase the existing market share and to provide the company with a competitive edge. Motivated by the increasing competition in global markets, leather firms have started to grasp the importance of innovation, since swiftly changing technologies and severe global competition rapidly erode the value added of existing products and services. Thus, innovations constitute an indispensable component of the corporate innovation strategies for several reasons such as to apply more productive manufacturing processes, to perform better in the market, to seek positive reputation in customers' perception and as a result to gain sustainable competitive advantage. Particularly over the last two decades, innovativeness has turned into an attractive area of study for those researchers who tried to define, categorize and investigate its performance impacts, especially due to its practical relevance. Innovations provide firms a strategic orientation to overcome the problems they encounter while striving to achieve sustainable competitive advantage. Innovation as a term is not only related to products and processes, but is also related to marketing and organization. Loof, et al (2001) described different types of innovation: new products, new methods of production, new sources of supply, the exploitation of new markets, and new ways to organize business. (Love, 2001) defined innovation as the process of equipping in new, improved capabilities or increased utility, which is the primary international basis of guidelines for defining and assessing innovation activities as well as for compilation and use of related data It has been taken as the fundamental reference source to describe, identify and classify innovations at firm level.

In the Conway, (2005) four different innovation types are introduced. These are product innovation, process innovation, marketing innovation and organizational innovation. Product and process innovations are closely related to the concept of technological developments. Product innovations can utilize new knowledge or technologies, or can be based on new use or combinations of existing knowledge or technologies. The term product covers both goods and services. Product innovation is a difficult process driven by advancing technologies, changing customer needs, shortening product life cycles, and increasing global competition. For success, it must involve strong interaction within the firm and further between the firm and its customers and suppliers (Blind, et al 2009)

. A process innovation is the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software.

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Process innovations can be intended to decrease unit costs of production or delivery, to increase quality, or to produce or deliver new or significantly improved products (OECD Oslo Manual, 2005). Fagerberg et al. (2004) stressed that while the introduction of new products is commonly assumed to have a clear, positive effect on the growth of income and employment, process innovation, due to its cost-cutting nature, can have a more hazy effect.

A marketing innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing. Marketing innovations target at addressing customer needs better, opening up new markets, or newly positioning a firm's product on the market with the intention of increasing firm's sales. Marketing innovations are strongly related to pricing innovation strategies, product package design properties, product placement and promotion activities along the lines of four P's of marketing (Crone, 2000)

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Finally, an organizational innovation is the implementation of a new organizational method in the firm's business practices, workplace organization or external relations. Organizational innovations have a tendency to increase firm performance by reducing administrative and transaction costs, improving workplace satisfaction (and thus labor productivity), gaining access to non-tradable assets (such as non-codified external knowledge) or reducing costs of supplies (Cooke, 2007). Thus, organizational innovations are strongly related with all the administrative efforts of renewing the organizational routines, procedures, mechanisms, systems etc. to promote teamwork, information sharing, coordination, collaboration, learning, and innovativeness.

One of the primary research areas in the recent innovation literature aims to find out the acknowledged relations between innovation types and firm performance. Although there are quite numerous conceptual studies, analytical and empirical studies are limited both in terms of numbers and the extent and depth of the analysis. At the present time, due to the tough global competition, both individuals and companies has began to evaluate and to apply their innovation strategies and entrepreneurial abilities with the purpose of gaining competitive advantage (Braczyk, *et.al*, 2008). Formally, innovation is considered as developments and new applications, with the purpose of launching newness into the economic area. It can be conceived as the transformation of knowledge to commercial value. Innovation has great commercial importance due to its potential for increasing the efficiency and the profitability of firms (Crone, 2000) . In examining manufacturing innovation, findings of earlier studies indicated a number of differences and similarities between indigenous and foreign firms using data gathered from both developed and developing countries. Although there is growing empirical evidence showing that international firms perform better in almost all areas than their domestic counterparts, the intervening effects of innovative has not been reported (Love, 2001) . Although is very important to the productivity of indigenous and multinational firms, in actual operation, many indigenous and multinational firms do not realize this point completely, as there are always several of problems in the innovation strategies.

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From a contemporary perspective, it is observed that innovation in industrialization process has occupied an important dimension to performance optimization ((Braczyk, et al2008)). In another contribution by Erik and Kelvin (2006), the issue of innovation was associated with metro-logistics particularly with emphasis on some predictors of successful studies. However, most of the indicators of performance in these studies were qualitative. The general belief that sales turnover depends on innovative innovation strategies is evident in existing literature (Blind, et al 2009)

. The findings showed that companies with innovative teams are expected to have more sales, although such conclusion is still a subject of empirical verification because the samples of such studies were mainly drawn from developed countries (Timmons, 2002, Trolt, 2004). The problems of innovativeness and performance of leather firms in Nigeria include

1. Inability to compete in terms of comparative advantages of labour and resources as in the past
2. Lack of know-how both in the utilisation and adaptation of technology, insufficient research on product development and production techniques.
3. Lack of innovative efforts and the problem of declining efficiency in the production process, which hinders the upgrading in overall business.
4. Limited access to financial capital i.e. these enterprises are not in a position to mobilise funds from the capital market or from any other sources such as partnerships because the management system is not sufficiently sophisticated.
5. Loan from financial institutions are costly and are also limited because of high ratio of non-performing loans.
6. Lack of corporate good governance i.e. accountability, transparency and equity
7. Most enterprises are family owned and not professionally managed
8. Marketing of SME products-high cost of advertising
9. Choice of production equipment
10. Lack of exposure to new business opportunities
11. Multiple taxation and levies and Not enough support from government

Based from the above its is very important to examine the effect of innovation types on the performance of the leather-based product manufacturers in Abia state, Nigeria.The main objective of this is to examine the effect of innovation types on the performance of leather – based product manufacturers in Abia state.

METHODOLOGY

The research was carried out in Abia State of Nigeria. The climate of the state is tropical and with a relative humidity all the year round. It has an annual rainfall averaging between 2000mm up to 2500 mm. Abia State is bounded by Akwa Ibom and Cross River States in East, River State in the South, Imo State in the north and Enugu and Ebonyi States in the west.

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The inhabitants engage in various trades and occupation, like leather works such as belts, boxes, shoes, sandals, dye and hand bags. The industrial city of Aba was chosen for the study due to the high presence of leather firms in the area. **Aba** is a city and a big trading nerve centerAlso, upon the creation of Abia state in 1991, Aba was divided into two local governments areas namely; Aba south and Aba North. Aba south being the main main city center and the heart beat of Abia State, south-east Nigeria. located on the Aba River.Aba is made up many villages such as; Umuokpoji Aba, Eziukwu-Aba, Obuda-Aba, Aba Ukwu and other villages from Ohazu merged due to administrative convenience. The indigenous people of Aba are the Ngwa. Aba is well known for its craftsmen. As of 2004 Aba had an estimated population of 1,020,900. The sampling procedure used was a random sampling selection of firms in the two local governments of Aba North and Aba south, and a purposive selection of the firms based on functionality (leather based). A total of 120 agribusiness firms were selected.Data for the study was obtained from primary sources only. This involved administering a well-structured questionnaire to the respondents.

The tools employed in analysis include, descriptive statistical tools, such as means, average, percentages, and frequency distribution tables. Other tools are, simple correlation and ordinary least square (OLS) multiple regression analysis.

Model Specification

In order to estimate the determinants of innovation the following probit regression model will be employed

The model is implicitly stated as

$Y^*i= (x_1,x_2,x_3,x_4,x_5,x_6,x_7,x_8,x_9)+ei$

$Y^*i=$ 1 if $y^*i>0$, 0 if $Y^*I \leq 0$

The explicit form of the model is stated as

$Y^*i= b_0+b_1x_1+b_2x_2+b_3x_3+b_4x_4+b_5x_5+b_6x_6+b_7x_7+b_8X_8+b_9x_9+b_{10}x_{10}+ei$

Where

Y^*i = probability to access capital (innovativeness or number of product lines =1, no innovativeness or no improvement=0)

X_1 = the firm size

X_2 = the number of competitors

X_3 = the firm labour

X_4 = the output of the firm in naira

X_5 = the amount of credit

X_6 = the marital status (married=1, others=0)

X_7 = the owners age

X_8 = the owners gender

X_9 = the owner level of education

X_{10} = the firm profit

Bi is the parameter

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Ei is the error term

Objective (5) was analyzed with multiple regression analysis . It was implicitly stated as follows
$Y = F (x_1, x_2, x_3, x_4, x_5, x_6, x_7, x_8, x_9)$.
The explicit form as follows
$Y = b_o + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4 + b_5 x_5 + b_6 x_6 + b_7 x_7 + b_8 x_8 + b_9 x_9 + e$
Where:
Y= profit
X_1 = the firm size
X_2 = the number of competitors
X_3 = the firm labour
X_4 = the output of the firm in naira
X_5 = the amount of credit
X_6 = the marital status (married=1, others=0)
X_7 = the owners age
X_8 = the owners gender
X_9 = the owner level of education
X_{10} = the firm profit
X_{11} = the type of innovation (product=1, technology=2, other=3)
Bi is the parameter
Ei is the error term
X_{10} is the firm profit
X_{11} is the type of innovation (product=1, technology=2, other=3)
Bi is the parameter
Ei is the error term

Data presentation and analysis
This section consist of the socio economic characteristics of the respondents, the types, strategies and level of innovation, the effect of innovation on the performance of leather based agribusiness firms.

Socio economic characteristics of the leather agro-SMEs
The table below consist of the socio economic characteristics of the respondent considering their age, income, firm size, government assistance, gender, marital status and membership to firm organizations.

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Table 1 socio economic descriptive statistics of the leather agro-SMEs

Statistic	Expenditure	firm income	Age	Size	Government assistant
No. of observations	120.00	120	120	120	120
Minimum	100000.00	50000.000	18.000	1.240	1.000
Maximum	800000.00	960200.000	73.000	5.340	6.000
1st Quartile	200000.00	200000.000	33.000	2.500	2.000
Median	350000.00	400000.000	40.000	3.140	3.000
3rd Quartile	500000.00	600000.000	52.250	3.830	5.000
Mean	382500.00	423529.050	42.217	3.201	3.400
Variance (n-1)	39999.00	62427541.493	191.633	1.010	2.545
Standard deviation (n-1)	199331.87	249855.044	13.843	1.005	1.595

Source: survey data, 2013.

Table 1 presents the descriptive distribution of the respondents. . the minimum off firm income of the respondents were 100, 000 naira and a maximum 800, 000 naira, the minimum off firm income of the respondents was 50,000 and the maximum firm income was 960200 naira. The minimum age of the responding firm firms was 18 years and the maximum age of the responding firm was 75 years. The minimum firm size was 1.2 kilometer square and the maximum firm size was 5.3 kilometer square. The minimum government assistants by the firm is one government officer and the maximum government officer assistants was six government officers.

The types and strategies of innovation among the leather based manufacturing enterprises

This section presents the response of the respondents to the types, strategies and levels of innovation obtainable among the leather based manufacturing firms in Abia state.

Types of innovation adopted by the leather firms

The response of the leather enterprises on the types of innovation adopted is been presented in table 2.

Table 2: Types of innovation by leather firms

types of innovation	**Frequency**	**Percentage**
product innovation	73	60.83
market innovation	37	30.83
technological innovation	10	8.33
Total	**120**	**100**

Source: survey data, 2013.

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From table 2 which present the response of the leather based enterprises on the innovation types adopted by them. Product innovation was adopted by 60.83 percent of the respondents. Product innovation implies the modification of the product to suit customers' desire and the current trend of fashion and demand. Market innovation was adopted by30.83 percent of the leather based enterprises. Market innovation involves the introduction or discovery of markets not served and taking advantage of such opportunities to market the leather products. Technologic innovations was adopted by 8.33 percent of the leather based manufacturing firms indicating that a small percentage of the enterprise look for better, improved and cheaper means of production.

Innovation strategies by the firms

The innovation strategies adopted by the enterprises is been examined here, and the percentage of each strategy examined.

Table 3: innovation strategies of the leather firms

strategies of innovation	Frequency	Percentage
research & development	9	7.50
Education	20	16.67
Training	34	28.33
Capital	33	27.50
government/institutional support	24	20.0
Total	**120**	**100**

Source: survey data, 2013.

From table 3 which presents the innovations strategies adopted by the firms, the identified innovation strategies include research and development, education, training, capital and government/institutional support.

The training innovation strategy was used by 28.3 percent of the respondents. This strategy involves the training of the workers in the leather based enterprise in order to enhance their efficiency. This is mostly obtainable due to the high presence of product innovation which involves the training of the workers to develop new/modified products to suit the current and future trend of preferences. Education which is the acquisition of formal education was identified by 16.67 percent as the strategy of enhancing their innovativeness. Capital which is essential for investment in the enterprise was responded to by 27.5 percent of the respondent as the strategy for their innovation to beat competitors. Government and institutional support was identified by 20 percent of the respondents as identified that the government/institutional support was the obtainable strategy to increase their innovation. This support can come in form grant and aid as well as training and policy measures.

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Effect of innovation on the performance of leather based firms

This section presents the correlation result of the effect of innovation on the performance of the firms. The performance was measured through the profit margins given by the enterprises and the innovation measured by the cost of innovation provided by the enterprises.

Table 4 effect of innovation on the enterprise performance

			Profit	innovation
Pearson	profit	Correlation Coefficient	1.000	.869
		Sig. (2-tailed)	.	.0003
		N	120	120
	innovation	Correlation Coefficient	.869	1.000
		Sig. (2-tailed)	.0003	.
		N	120	120

Source: Survey data, 2013

*Statistically coefficient significant at 10%

** Statistically coefficient significant at 5%

*** Statistically coefficient significant at 1%

From the table 3 which present the result of the correlation coefficient of the innovation and performance of the leather enterprises. It was found that there is a significant relationship existing between innovation and profit of the enterprise. The correlation coefficient was found to be statistically significant at 1 percent and positively related. This implies that an increased innovativeness of the firms resulted to an increase in the performance of the firm.

Determinants of innovation and firm performance

This section considers the determinants of the firm innovation and firm performance. The determinants are the factors that influence the firm innovation and level of performance.

The determinants of innovation

Table 4 presents an analysis of the determinants of innovation.

Table 4 The determinants of innovation

Parameter	**Estimate**	**Standard error**	**z-value**
Constant	-0.5568	0.102	-5.451***
Size	1.0237	0.075	2.982**
Competitors	0.0722	0.010	7.220***
Labour	-1.2730	0.110	-11.573***
output	1.186	0.120	9.883***

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Credit	0.005	0.001	5.000***
marital status	0.0033	0.003	1.007
Age	0.0083	0.012	0.6721
Gender	0.0015	0.045	0.0333
education	0.445	0.078	5.7051***
Profit	0.0012	0.008	0.1501
Wald Chi square value	10.998***		

Source: Survey data, 2013
*Statistically coefficient significant at 10%
** Statistically coefficient significant at 5%
*** Statistically coefficient significant at 1%

From table 4 which present the result of the determinants of innovation by the leather based manufacturing enterprises. The probit regression model is statistically significant at 1percent based on the value of the Wald.The size of the enterprise was fund to be statistically significant at 5 percent and positively related to the innovation of the enterprise, this implies that as the firm size increases the innovation rate of the enterprise grows as well to meet up the demand.

Competition was significant at 1% and positively related to innovation. This implies that an increase in the number of competitors is followed by an increase in the need to innovate to remain competitive. Labour was statistically significant ant at 1 percent and negatively related to the innovation of the enterprise this implies that as the number of workers increased, the innovation of the enterprise decreases as the firm will tend to move toward labour intensive production and many discard innovations (Blind, et al 2009) .

Output was significant at 1percent and positively related to innovation. This implies that as they enterprise produce more of their products, they will use innovation to ensure that the products form the increased output appeal to their customers. Credit was significant at 1 percent and positively related to the innovation of the enterprise, this implies that as the enterprise have access to credit facilities, they use such credit facilities to enhance their output through innovation.
Education was significant at 1 percent and positively related to innovation. This implies that as the enterprise manager have more education he apples such education to enhance the innovation of the enterprise.

The determinants of firm performance
Determinants of the performance of the leather based manufacturing enterprises is presented in table 5.

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Table 5 the determinants of performance

Variable	Linear	Exponential	Semi log+	Double log
Intercept	1.794	1.244E-6	670940.610	0.381
	(2.806)**	(4.385)***	(1.945)**	(3.649)***
Size	0.160	1.364E-7	216072.596	0.165
	(1.608)*	(3.089)***	(1.316)	(3.314)***
Competitors	0.378	5.345E-7	839053.516	1.408
	(2.304)**	(7.336)***	(1.463)	(8.107)***
Labour	0.996	6.998	0.262	0.010
	(0.002)	(0.998)	(3.071)***	(2.797)**
output	0.001	2.889E-5	0.482	0.019
	(4.293)***	(4.004)***	(1.527)	(1.358)
Credit	0.000	-1.721E-5	-13.128	-0.542
	(-14.080)***	(13.498)***	(-16.681)***	(-15.782)***
marital status	0.000	9.807E-6	2.435	0.103
	(14.193)***	(13.989)***	(1.510)	(15.075)***
Age	-0.880	-0.041	5.124	0.205
	(-0.669)	(-0.733)	(7.020)***	(6.423)***
Gender	0.000	-1.721E-5	-0.0128	-0.542
	(-14.080)***	(13.498)***	(-1.681)***	(15.782)***
education	7562.540	0.022	13405.346	0.025
	(0.364)	(0.722)	(0.217)	(0.780)
Innovation	3.559	96.131	6.162	32.910
	(1.077)	(2.266)*	(3.705)***	(4.005)***
R^2	0.886	0.879	0.906	0.897
R^{-2}	0.877	0.870	0.898	0.889
F statistics	106.395***	100.053***	116.227***	105.796***

Source: Survey data, 2012

Note: values in parenthesis are t-values

*Statistically coefficient significant at 10%

** Statistically coefficient significant at 5%

*** Statistically coefficient significant at 1%

From table5 which presents the result of the determinants of the enterprise performance

The semi log regression model was chosen as the lead equation based on the value of the F-statistics which indicates that the model was statistically significant at 1 percent. The R^2 value of 0.906 indicates that 90.6 percent of the total variation in the dependent variable was accounted for by the independent variables included in the model (Braczyk, et al2008) .

The labour size of the enterprise was significant at 1 percent and positively related to the performance of the enterprise. This implies that labour size of the enterprise grows, output will

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be enhanced and the profit level of the enterprise increased.Credit was significant at 1 percent and negatively related to the performance of the enterprise. This indicates that the increase access to credit facilities many result to poor management of such credit facilitated resulting to decrease in performance/profit due to increase cost of credit repayment.

Age was significant at 1 percent and positively related to the profit of the enterprise. This indicates that an increase in age/experience result to an increase in profit due to the fact that the business must have been studied and mastered.Innovation was significant at 1% and positively related to the enterprise profit performance. This implies that at the enterprise adopts more innovation measures, the more the enterprise enhances its profits. The innovations could be product technology and market innovation

CONCLUSION

This study examined the effect of innovation types on the performance of leather based product manufacturers in Abia state. The study observed that the leather firms in the Abia State adopted various innovative techniques in their operations. The types of innovations identified included product based innovation, technology innovation and market innovation. The innovation strategies identified among enterprises included research and development, education, training, credit, and government/institutional support. The significant determinants of innovation include enterprise size, competitors, labour output and education. While the significant determinants of performance include labour, credit, age and innovation types. Based on the findings of this study the following recommendations are been proffered: the enterprises should adopt the innovation type that will enhance the profitability as innovation types were found to be significant factor affecting profit; the enterprises should adopt an innovations strategy that best suit them to enhance their performance; the enterprise should analyze the competitors strengths and weakness and adopt an innovation type and strategy that will enhance their performance; the government should formulate an institution policy that protects the enterprise and enhance their profitability and innovation through credit facilities; the enterprises should imbibe the training of the workers to enhance innovation and profitability; Research and development should be adopted to enhance the profit of the enterprises.

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