

DETERMINANTS OF RETURN ON INVESTMENT AND ENTREPRENEURSHIP DEVELOPMENT AMONG FOOD-BASED ENTREPRENEURS IN ABA METROPOLIS OF ABIA STATE, NIGERIA

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Abstract

The study analysed the determinants of return on investment and entrepreneurship development of 110 food-based entrepreneurs in Aba metropolis of Abia state, Nigeria. The specific objectives included: to analyse the features of the food-based firms and the socio-economic characteristics of the agro-based entrepreneurs; ascertain the relationship between return on investment, asset size and entrepreneurship development; determine the factors that affect return on investment, asset size and entrepreneurship development. Simple descriptive statistics, Pearson correlation and multiple and probit regression analytical tools were employed to analyse the data obtained. Findings showed that many of the food-based firms in Aba metropolis were small and medium enterprises following the assertion of the National Policy on Micro, Small, and Medium Scale Enterprises (MSMEs) by Central Bank of Nigeria. The results also revealed that there is a significant and positive relationship between return on investment, asset size and entrepreneurship development. The study further revealed that sex, experience, educational attainment, finance, technology, taxation, infrastructure, location, return on investment and asset size are significant factors that affect entrepreneurship development. The study therefore recommends that a strategic action plan be adopted to address these key constraints confronting agro-based entrepreneurs and also to enhance returns on investment and efficient entrepreneurship development.

Keywords: Return on Investment, Asset Size and Entrepreneurship development

Introduction

According to Carr (1997), the purpose of return on investment metric is to measure per period, rates of return on money invested in an economic entity in order to decide whether or not to undertake an investment. It is also used as an indicator to compare different project investments within a project portfolio. The project with the best return on investment is prioritized. Return on investment and related metrics provide a snapshot of profitability, adjusted for the size of the investment assets tied up in the enterprise. Return on investment is often compared to expected (or required) rates of return on money invested (Carr, 1997). Return on investment may be calculated in terms other than financial gain. It can be used by any entity to evaluate impact on stakeholders, identify ways to improve performance, and enhance the performance of investments. Asset size is essential when it comes to identifying the right size of any mutual fund. For funds that function in larger market segments, such as money market or index funds, De Angelo *et al.* (1994), suggest that a bigger base of assets is usually an excellent approach, since it can help protect the fund from situations where block trading takes place. However, a smaller mutual fund may find that taking on too many different assets may make the fund hard to manage efficiently, leading to less return on the investment. When the asset size and the investment style of a mutual fund are found to be incompatible, the phenomenon of asset bloat, or too many assets to handle, may in fact drive away investors that would otherwise have been interested in participating in the fund. Asset size can

impede performance for any fund, but some types of funds are hurt than others. It depends on the fund's style. Entrepreneurship according to Wennekers and Thurik (1999) is the manifest ability and willingness of individuals to perceive new economic opportunities and seize these opportunities into the market. Hence, it can be conceived as the process which involves the efforts of an individual in identifying viable opportunities in a business environment and obtaining and managing the resources needed to exploit those opportunities. Entrepreneurship makes entrepreneurs to derive great satisfaction from their entrepreneurial work. Being an entrepreneur offers far greater security than being an employee elsewhere. Entrepreneurship enables entrepreneurs to acquire wealth quickly and cushion themselves against financial insecurity (Blanchflower, 2000). Hisrich (2005), opined that entrepreneurship is increasingly recognized as an important driver of economic growth, productivity, innovation and employment and it is widely acceptable as a key aspect of economic dynamism. Transforming ideas into economic opportunities is the decisive issue of entrepreneurship. Entrepreneurship is an important and unlimited ability of human beings. Entrepreneurs are enterprising individuals who build capital through risk and/or initiatives. Management skill and strong team building abilities are needful for successful entrepreneurs (Ikanni, 2005).

The decision of individuals to become entrepreneurs is generally modeled in terms of utility maximization, where the economic returns from entrepreneurship are compared to returns of wage employment (Jovanovic and Glenn, 1994). Individual-specific characteristics such as risk aversion (Kihlstrom and Laffont, 1979), prior self-employment experience (Evans and Leighton, 1989), education, human capital, age and personality traits such as drive for achievement (Blanchflower and Meyer, 1994) are found to have an impact on an individual's entrepreneurship choice. Entrepreneurship development focuses on the individual who wishes to start or expand a business. Small and Medium Enterprises (SMEs) development focuses on developing the enterprise, whether or not it employs or is led by individuals who can be considered entrepreneurial. Agribusiness firms like industrial firms can be classified as micro or macro, small, medium and large scale agribusiness and entrepreneurship (Onwumere, 2010). Furthermore, entrepreneurship development concentrates more on growth potential and innovation. There is a pervasive tendency to equate entrepreneurship development with self employment. Many self-employed individuals are indeed entrepreneurs, but majority are not. Their businesses are simply micro-enterprises in the informal sector, with little growth potential. The promotion of self-employment is a worthwhile objective, but it should not be confused with entrepreneurship development. Boam and Sparrow (1992), opined that the factors that affects the level of entrepreneurship in a country include the perception of opportunity, degree of respect according to entrepreneurs, and acceptance of wide disparities in income. To this end, this study endeavours to ascertain the inter-relationship between return on investment and entrepreneurship development in Aba metropolis, Abia state, Nigeria.

Methodology

The area of study was Abia state, Nigeria. For this study, a sample size of 110 (one hundred and ten) food-based entrepreneurs within Aba metropolis was randomly selected. Data were obtained through the use of questionnaires which was designed and pre-tested. Simple descriptive statistics, pearson correlation and multiple and probit regression were employed to analyse the data obtained. The correlation co-efficient used in the analysis is implicitly stated as follows:

$$r = \frac{N\sum xy - (\sum x)(\sum y)}{\sqrt{[N\sum x^2 - (\sum x)^2][N\sum y^2 - (\sum y)^2]}}$$

Where:

r = correlation coefficient

x_1 = asset size (value of asset of the enterprise)

x_2 = return on investment (₦)

y = entrepreneurship development (0= micro/small-scale entrepreneurs; 1= medium/large-scale entrepreneurs)

The multiple regression model used in the analysis is stated as follows:

$$ROI = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + e_i$$

Where:

Y = return on investment (₦)

X_1 = sex (1= male; 0= female)

X_2 = age (years)

X_3 = educational background (0 = informal, 1 = formal)

X_4 = experience (years)

X_5 = household size (number of dependents)

X_6 = income (₦)

X_7 = size of labour force (number)

X_8 = asset size (value of asset of the enterprise)

X_9 = customer share (number)

e_i = error term

$$\text{Asset size} = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + b_{10}x_{10} + e_i$$

Where:

Y = asset size (value of asset of the enterprise)

X_1 = return on investment (₦)

X_2 = sex (1= male; 0= female)

X_3 = age (years)

X_4 = educational background (0 = informal; 1 = formal)

X_5 = experience (years)

X_6 = household size (number of dependents)

X_7 = income (₦)

X_8 = size of labour force (number)

X_9 = customer share (number)

e_i = error term

The probit model used in the analysis is stated as follows:

$$\Pr (y= 1/x) = \Phi (x^1\beta)$$

\Pr = probability

Φ = cumulative distribution function of the standard normal distribution

B = parameters

To motivate the probit model as a latent variable model, it is further stated as:

$$y^* = x^1\beta + \varepsilon$$

y = entrepreneurship development (0= micro/small-scale entrepreneurs; 1= medium/large-scale entrepreneurs)

X_1 = age (years)

X_2 = sex (1 = male; 0 = female)

X_3 = marital status (0= single; 1= married)

X_4 = experience (years)

X₅= educational background (0 = informal, 1 = formal)
X₆= finance (1= access; 0= inaccessibility)
X₇= technology (0= obsolete; 1= current)
X₈= taxation (0= low; 1= high)
X₉= number of competing industries (0= no competition; 1= presence of competition)
X₁₀= infrastructure (0= poor; 1= good)
X₁₁= location (0 = poor patronage; 1= high patronage)
X₁₂= return on investment (₦)
X₁₃= asset size (value of asset of the enterprise)
ε= error term

Results and Discussion

Features of the Food-Based Firms

Table (1) showed that the food-based firms studied are categorized as small and medium enterprises.

Socio-Economic Characteristics of the Food-Based Entrepreneurs

About 98% of the respondents are males, while only 2% are females. The result revealed that more males are involved in entrepreneurship than their female counterparts. The result is a serious indication of dearth of female entrepreneurs in the study area. Majority (42%) of the respondents were within the age range of 30 to 39 years, thus indicating availability of able bodied labour category. This will also presuppose greater productivity. About 15% of the respondents are single while 76% are married implying more hands to cushion shortage of labour. The result showed that 44% of the respondents had B.Sc and 18% had M.Sc. certificates. This shows that a greater number of the food-based entrepreneurs are educated and greater enlightenment will increase skill and productivity respectively. This is in agreement with Evans and Leighton, (1989) and Blanchflower and Meyer, (1994) that education enhances performance of investments. Many (50%) of the food-based entrepreneurs had 3 to 5 years experience while 33% had 6 to 10 years experience but very few (5%) of the food-based entrepreneurs had over 10 years entrepreneurship experience. Thus, poor experience among food-based entrepreneurs can be implied.

Relationship between Return on Investment, Asset Size and Entrepreneurship Development

The correlation coefficient (r) between return on investment and asset size is 0.741, and also significant at 1% probability level with p-value= 0.000. This implies that there is a strong positive and direct relationship between return on investment and asset size. Also, the correlation coefficient (r) between return on investment and entrepreneurship development is 0.897 but significant at 5% probability level with p-value= 0.003. This indicates a strong positive and direct relationship between the two variables. Furthermore, the correlation between asset size and entrepreneurship development is 0.904 but significant at 1% level with p-value= 0.000. This connotes the existence of a strong positive and direct relationship between asset size and entrepreneurship development. The analysis buttressed that asset size is strong determinant of return on investment and entrepreneurship development. This finding is in agreement with Blanchflower (2000).

Factors Affecting Return on Investment of Food-Based Entrepreneurs

Sex of an entrepreneur was significant at 5% probability level and positively related to return on investment of food-based entrepreneurs. This result implies that more male entrepreneurs achieve higher returns on their investment than their female counterparts. Marital status was found to be statistically significant at 5% probability level but negatively related to return on investment. This may mean that food-based entrepreneurs who are single tend to re-invest more than married food-

based entrepreneurs, perhaps family commitments affect some married food-based entrepreneurs. Years of experience was found to be statistically significant at 10% probability level and positively related to returns on investment. This means that as food-based entrepreneurs gain more experience in their business, their returns on investment level increases. Educational level was found to be statistically significant at 10% probability level and positively related to returns on investment. It shows that return on investment of food-based entrepreneur is a function of educational attainment. The more educated food-based entrepreneurs become, the more their skill is sharpened which thus enhances their knowledge to improve their return on investment. Income was found to be statistically significant at 1% probability level and positively related to return on investment of food-based entrepreneurs. This indicates that as income increases, returns on investment also increases. Customer share was statistically significant at 5% probability level and positively related to return on investment. This implies that an increase in the customer share of a food-based entrepreneur will result in an increase in his return on investment. Thus, more customer patronage will bring increased sales and subsequent increased returns on investment.

Factors Affecting Asset Size of Food-Based Entrepreneurs

Age was significant at 10% probability level and positively related to asset size of food-based entrepreneurs. This implies that the acquisition of assets and the subsequent size of such assets are dependent on age. As a food-based entrepreneur increases in age which translates to years of experience, his asset size increases. Sex was significant at 5% probability level and positively related to asset size of food-based entrepreneurs. This result implies that more male food-based entrepreneurs tend to acquire more assets than their female counterparts. Years of experience was found to be statistically significant at 10% probability level and positively related to asset size. This means that the more a food-based entrepreneur gains experience in his business, the more he is likely to increase the size of his assets. Educational level was found to be statistically significant at 5% probability level but negatively related to food-based entrepreneur's asset size. This implies that education does not positively influence asset size. This is against apriori expectation of positive outcome. However, though wealth allocation may be from parents, an uneducated food-based entrepreneur may acquire larger assets than an educated food-based entrepreneur. So, the result outcome may be affected. Customer share was found to be statistically significant at 5% probability level and positively related to asset size. This implies that an increase in the customer share of a food-based entrepreneur will result in an increase in his asset size. More loyal customers will translate to more profit and such additional profits can subsequently lead to increase in the acquisition of assets.

Factors Affecting Entrepreneurship Development of Food-Based Entrepreneurs

Age was found to be statistically significant at 10% probability level and positively related to entrepreneurship development. This indicates that age is an important factor for achieving entrepreneurship development. The more a food-based entrepreneur advances in age, the more he develops as a food-based entrepreneur. Sex was significant at 5% probability level and positively related to entrepreneurship development. This affirms the findings of previous studies were it was observed that males are involved more in food-based entrepreneurship than females. Years of experience in food-based entrepreneurship was found to be statistically significant at 1% probability level and positively related to entrepreneurship development. This means that the more a food-based entrepreneur stays in the business and gains more experience, the more his enterprise develops. Educational background was statistically significant at 1% probability level and positively related to entrepreneurship development. Based on a food-based entrepreneur's level of education, he can have the requisite skills that are invaluable and that will subsequently develop his enterprise. This

result agrees with Blanchflower and Meyer (1994) on education being identified as a strong tool for entrepreneurship development. Technology was significant at 5% probability level but negatively related to entrepreneurship development. Technological advancements have been a major challenge to entrepreneurship development. As new technologies are developed, the existing ones become obsolete thereby disorienting the food-based entrepreneur. Thus, as technological advancement increases, entrepreneurship development increases.

Conclusion

It is observed from the result that there is a significant relationship between return on investment, asset size and entrepreneurship development. This further revealed that sex, experience, educational attainment, finance, technology, taxation, infrastructure, location, return on investment and asset size are significant factors that affect entrepreneurship development either positively or negatively. When these factors are present, entrepreneurship can be developed or impeded. It is recommended that a strategic action plan should be adopted to address the key constraints confronting food-based entrepreneurs and also to enhance returns on investment and efficient entrepreneurship development. Government should support entrepreneurship through the provision of grants, technical training to enhance entrepreneurship, venture capital and business infrastructural development to returns entrepreneurship capacity.

Table 1: Distribution of respondents according to features of the food-based firms

Firm	Category	Employment	Assets (M[₦])
Planet Oil	Medium enterprise	50 – 199	50 to less than 500
Female	Medium enterprise	50 – 199	50 to less than 500
Jevinik Foods	Small enterprise	10 – 49	5 to less than 50

Source: Field survey, 2015.

Table 2: Distribution of respondents according to socio-economic characteristics of the food-based entrepreneurs: n= 110

Item	Frequency	Percentage (%)
Sex		
Female	21	2
Male	89	98
Total	110	100
Age		
20 – 29	15	17
30 – 39	37	42
40 – 49	29	32
50 – 59	21	24
60 – 69	8	9
Total	110	100
Marital Status		
Single	17	15
Married	84	76
Widow (er)	7	7
Divorced	2	2
Total	110	100
Educational background		
Primary	3	2
S.S.C.E	15	14
OND/NCE	24	22
B.Sc./HND	48	44
M.Sc./Ph.D.	20	18
Total	110	100
Experience		
1 – 2	12	11
3 – 5	55	50
6 – 10	36	33
Above 10	7	5
Total	110	100
Income		
Below 20,000	6	5
21,000 - 50,000	49	45
51,000 - 100,000	39	35
Above 100,000	16	15
Total	110	100

Source: Field survey, 2015.

Table 3: Correlation co-efficient analysis showing the relationship between return on investment, asset size and entrepreneurship development

	ROI	Asset size	Entrepreneurship Development
Return on Investment			
Pearson Correlation		0.741***	0.897**
Asset Size			
Pearson Correlation		0.741***	0.904***
Entrepreneurship Development			
Pearson Correlation	0.897**	0.904***	1

Source: Field survey, 2015.

***= Significant at 0.01 level (2-tailed); **= Significant at 0.05 level (2-tailed)

Table 4: Multiple regression analysis showing factors affecting return on investment of food-based entrepreneurs

Variables	Coefficient	Std. Error	Z-value
Constant	7.345	1.101	6.671
Age	-58418.10	18843.584	-3.10**
Sex	3.494	1.055	3.311**
Marital Status	-6.253	1.723	-3.629***
Experience	214049.356	115965.725	1.846*
Education	950944.427	406550.238	2.339*
Income	8.044	1.455	5.528***
Household Size	-651639.239	482745.262	-1.350
Customer Share	7.548	2.402	3.142**
Competing Firms	-44770.474	10089.767	-4.437***
Labour Force	16235.211	24888.222	6.524***
Asset Size	5.518	1.058	5.216***
R ²	0.881		
Adjusted R ²	0.779		
F-statistic	16.595***		
N	110		

Source: Field survey, 2015.

***= Significant at 1% level; **= Significant at 5% level; *= Significant at 10% level

Table 5: Multiple regression analysis showing factors affecting asset size of food-based entrepreneurs

Variables	Coefficient	Std. Error	Z-value
Constant	4.870	1.612	3.021
Age	498217.180	243313.097	2.047*
Sex	6.209	1.807	3.436**
Marital Status	3.599	2.742	1.313
Years of Experience	449894.068	224696.721	2.002*
Educational Level	-5416.231	1990.411	-2.721**
Income	26.213	8.743	3.093**
Household Size	532141.216	498716.522	1.067
Customer Share	16.742	5.773	2.900**
Competing Firms	-41354.701	10441.148	-3.960***
Labour Force	53459.225	22592.893	62.366*
Return on Investment	0.454	0.078	5.820***
R ²	0.809		
Adjusted R ²	0.771		
F-statistic	14.974***		
N	110		

Source: Field survey, 2015.

***= Significant at 1% level; **= Significant at 5% level; *= Significant at 10% level

Table 6: Probit analysis showing factors affecting entrepreneurship development of food-based entrepreneurs

Variables	Coefficient	Std. Error	Z-value
Constant	4.08	0.056	7.29
Age	0.084	0.032	2.63*
Sex	0.019	0.007	32.71**
Marital Status	0.050	0.040	1.25
Years of Experience	0.028	0.005	5.60***
Educational Level	0.031	0.005	6.20***
Finance	0.006	0.001	6.00***
Technology	-0.142	0.039	-3.64**
Taxation	-0.015	0.007	-2.14**
Competing Firms	-0.085	0.071	-1.19
Infrastructure	0.004	0.001	4.93***
Location	0.049	0.019	2.58*
Return on Investment	0.375	0.072	5.21***
Asset Size	0.133	0.025	5.32***
Chi-square Value	1083.151		
DF	98		
P<0.005	0.000		
N	110		

Source: Field survey, 2015.

***= Significant at 1% level; **= Significant at 5% level; *= Significant at 10% level

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