Performance and Constraints of Small Scale Enterprises in the Accra Metropolitan Area of Ghana

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Abstract

Small Scale Enterprises play a crucial role in the development of entrepreneurial capabilities and indigenous technology which generate employment. Promotion of such enterprises in developing economies like Ghana is of paramount importance as it brings about a great distribution of benefits. The study seeks to quantify the determinants of the factors influencing performance of small scale enterprises in Accra Metropolitan Area of Ghana. Kendall's coefficient of concordance was used to test the agreement between the ranked constraints of the small scale enterprises in relation to performance. The study uses structured questionnaire to interview 150 small scale entrepreneurs in Accra Metropolitan Area (AMA). Data collected was analyzed using Statistical Package for Social Science (SPSS) and Econometric views (E-views). Results of the analysis indicate that age of entrepreneur is the most influential determinant of performance of small scale enterprises. The Kendall's coefficient of concordance indicates that there is 91 percent agreement between the respondents in the ranking of the constraints in relation to performance. High cost of borrowing is the most important constraint faced by the small scale entrepreneurs. Based on the results, we recommend a flexible policy geared towards helping young entrepreneurs, as well as reducing the high interest charges on loans.

Key words: Performance, Constraint, Small Scale Enterprise, Accra Metropolitan Area, Ghana

1.0 Introduction

1.1 Background and Problem Statement

Small Scale enterprises are the main instrument of growth and employment in most developing economies. Many economist until the early 1960's view the continued existence of small-scale industries in less developed countries as justified by scarcity of capital and administrative experience. It was often argued that small and traditional type of enterprise would, in one sector after the other be superseded by modern forms of large-scale production with economic growth. In order to ensure an orderly transition, small industries were seen to deserve support, but mainly in sectors where modern methods could not be immediately applied. New Approach to small to medium-scale enterprise (SME) development began to emerge due to a number of factors in the mid-1960s. Firstly, there was growing concern over low employment elasticity of modern, large-scale production. It was claimed that even with more optimal policies, this form of industrial organization was unable to absorb a significant proportion of the rapidly expanding labour force (Chenery, Ahluwalia, Bell, Duloy & Jolly, 1974; ILO, 1973). Secondly, there was widespread recognition that the benefits of economic growth were not being fairly distributed, and that the use of large-scale, capital-intensive techniques was partly to blame (Chenery et al., 1974). Lastly, empirical diagnosis showed that the causes of poverty were not confined to unemployment and that most of the poor were employed in a large variety of small-scale, low-productivity activities. Thus, it was thought that one way to alleviate poverty could be to increase the productivity of those engaged in small-scale production (Aftab and Rahim, 1989).

SMEs have been defined in several ways by different authors. The definitions are normally concept based many components which vary among researchers. According Abor & Quartey (2010), some researchers attempt to use the capital assets while others use skill of labour and turnover level whilst others define SMEs in terms of their legal

status and method of production. However, Storey (1994) caution the use of size to define the status of a firm by stating that in some sectors, all firms may be regarded as small, whilst in other sectors there are possibly no firms which are small.

A small scale enterprise is any business that is privately owned and operated, with a small number of employees and relatively low volume of sales (Payton, 2011). Small businesses are normally privately owned corporations, partnerships, or sole proprietorships. Small scale enterprises in Ghana have been defined in several ways using the number of employees of the enterprise as the most common criterion (Kayanula and Quartey, 2000). The application of this definition creates confusion in terms of its arbitrariness and cut off points used by the various official sources. The Ghana Statistical Service (GSS) considers firms with fewer than 10 employees as small-scale enterprises and their counterparts with more than 10 employees as medium and large-sized enterprises. Kayanula and Quartey, (2000) noted that the GSS in its national accounts considered companies with up to 9 employees as SMEs which is contradictory to the earlier definition. The value of fixed assets in the firm has also been used as an alternative criterion for defining SMEs. However, the National Board for Small Scale Industries (NBSSI) in Ghana applies both the "fixed asset and number of employees" criteria. It defines a small-scale enterprise as a firm with not more than 9 workers, and has plant and machinery (excluding land, buildings and vehicles) not exceeding 10 million Ghanaian cedis. The Ghana Enterprise Development Commission (GEDC), on the other hand, uses a 10 million Ghanaian cedis upper limit definition for plant and machinery. In defining small-scale enterprises in Ghana, Steel and Webster (1991) and Osei, Baah-Nuako, Tutu & Sowa (1993) used an employment cut-off point of 30 employees. Osei *et al.* (1993), however, classified small-scale enterprises into three categories namely (i) micro - employing less than 6 people; (ii) very small - employing 6-9 people; (iii) small – employing between 10 and 29 employees. A more recent definition as proposed by the Regional Project on Enterprise Development Ghana manufacturing survey paper. The survey report classified firms into: (i) micro enterprise, less than 5 employees; (ii) small enterprise, 5 - 29 employees; (iii) medium enterprise, 30 – 99 employees; (iv) large enterprise, 100 and more employees (Teal, 2002). Under the Venture Capital Trust Fund Act, 2004 (Act 680), a Small and Medium-Scale Enterprise (SME) is characterized as an industry, project undertaking or economic activity whose total asset base, excluding land   and building does not exceed the cedi equivalent of US$1 million in value. Small scale enterprises in Ghana includes, but not limited to agro-based (milling, cassava processing, distillery, brewing and fishing), wood-based (carpentry, charcoal burning), clothing (tailoring, seam stressing), repairs (bicycle, vehicle repairs and vulcanizing), service (hair dressing, chop bar, food processing), metal-based (blacksmithing) and art-based (pottery, basketry).

Employment generation in developing countries like Ghana can be achieved through the development of Small and Medium scale Enterprises (SME) (Awosika, 1997; Schmitz, 1995). According to Gunu (2004) and Aremu (2010), Small Scale Enterprises provide income, savings and employment generation. They are seen as actual engines for the development of entrepreneurial capabilities and indigenous technology which generate employment. It has been estimated that SME's employ 22% of the adult population in developing countries (Daniel, 1994 and Fissaeha, 1991). They serve to speed up the rate of social economic development of many developing countries. Promotion of such enterprises in developing economies is of paramount importance since it brings about a great distribution of income and wealth, economic self-dependence, entrepreneurial development employment and a host of other positive, economic uplifting factors (Aremu 2004). Kilby (1975) sees SMEs as a quasi-sponge for urban employment and a provider of inexpensive consumer goods with little or no import content, serving an important pressure-releasing and welfare-augmenting function. SMEs also contribute to long-run industrial growth by producing an increasing number of firms that grow up and out of the small-scale sector. They make up the largest portion of the employment base in Ghana and are the bedrock of the local private sector. In Ghana, SME's contribute about 85% of manufacturing employment and account for about 92% of businesses (Steel and Webster, 1991).

Despite the wide-ranging economic reforms instituted in the region, SMEs still face a variety of constraints owing to the difficulty of absorbing large fixed costs, the absence of economies of scale and scope in key factors of production, and the higher unit costs of providing services to smaller firms (Schmitz, 1982; Liedholm & Mead, 1987; Steel & Webster, 1990). It is against this backdrop that the present study attempts to quantify the factors influencing performance of small scale enterprise in AMA and also identify the potential constraints associated with small scale enterprise performance in Ghana.

2.0 Materials and Methods

2.1 Study Area and Data Collection

Accra Metropolitan Area (AMA) is made up of Ablekuma Central, Ablekuma North, Ablekuma South, Ashiedu Keteke, Ayawaso Central, Ayawaso East, Ayawaso West Wogon. La, Okaikoi North, Okaikoi South and Osu Klotey. It has a total land size of 200 square kilometres. The Metropolis is one of the most populated and fast growing Metropolis of Africa with an annual growth rate of 3.36% and a population of about 1,848,614 million people (2010 National Population Census). The primacy of the Accra Metropolitan Area as an administrative, educational, industrial and commercial centre in attracting people from all over Ghana, continues to be the major force for rapid population growth, with migration contributing to over 35% of the population increase. Accra's population like that of other urban centres is a very youthful one with 56% of the population under the age of 24years. It is the second most industrialized area in Ghana, contributing over 10% to the GDP. Seventy-five percent (75%) of the jobs are in small-scale industries, while 91% of the industries employed 30 persons or less (30 is the upper limit for small-scale industries). Female employment in manufacturing is over 53%, the majority of whom are self-employed, particularly in the service sector.   Commercial activities are characterized by a few large and medium size enterprises engaged in import, export, wholesale, distribution, and retail businesses and a myriad of small-scale traders, suppliers, transporters, and retailers.   Commerce is the largest and most visible sub-sectoral activity (www.ama.ghanadistricts.gov.gh).

The study was conducted between March and April, 2012. The basic information for the analysis was obtained from primary data collected with the aid of a structured questionnaire. A total of 150 entrepreneurs were systematically selected and interviewed. The selection of the entrepreneurs followed a multi-stage systematic random sampling technique. In the first stage, ten communities were purposively selected. Secondly, five (5) entrepreneurs each were randomly selected within each of the selected communities. In addition to the survey, key informants interviews and focus group discussion were conducted to augment the household survey.

2.2 Method of Analysis

2.2.1 Empirical Model

Small scale enterprise performance is affected by a number of socio-economic and institutional factors. The empirical model for quantifying the determinants of the performance of small scale enterprise is specified as follows:

$$Y_i = \beta_0 + \beta_1 Ag + \beta_2 Gend + \beta_3 Mast + \beta_4 Edu + \beta_5 Exp + \beta_6 Emplys + \beta_7 Ownsta + \beta_8 Initcap + \beta_9 Anualcos + U_i \qquad (1)$$

Where   = profit (used as proxy for performance). The proxy measurement of performance is consistent with the measurement in the study by Aworemi, Abdul-Azeez & Opoola (2010). is age of entrepreneur, is gender of entrepreneur, is marital status of entrepreneur, is number of formal years of education of entrepreneur, is the number of years of experience, is the number of employees, is the ownership status, is initial capital injected into the business, is the annual cost incurred by the business, is the base constant, …., are the regression coefficients and   is the stochastic error term. The explanatory variables definition and measurements used in the empirical model are presented in Table 1. The OLS estimation method is employed to determine the regression coefficients due to the continuous variable of the dependent variable.

2.2.2 Description of Variables

The age of the household head could have a positive or negative effect on the performance of SSE. It is a proxy measure of experience and availability of resources. It is possible that older and more experienced heads are able to take better production decisions and have greater contacts, which allow trading opportunities to be discovered at lower cost than younger ones. Younger entrepreneurs may also be more dynamic in their adoption of innovations which may influence their productivity and marketability at a lower cost (Sindi 2008; Enete and Igbokwe 2009). Various researchers have reported that gender influences business performance as a result of its close association with decision-making, business management, strategy formulation and the functional areas emphasised (Carter, Williams, & Reynolds, 1997; Fielden, Davidson, Dawe & Makin, 2003; Mukhtar, 2002). Generally, men and women

are inherently different because of differences in their socialization, training and experiences encountered prior to entry into particular work positions. As a consequence, women adopt different approaches to work which may, or may not be as equally effective as those adopted by men (Fischer et al., 1993). The level of education is posited to affect the total revenue positively. Education is likely to inform decision and also affect the levels of skills and experience one may take into the business. The number of employees in the business will influence performance positively. It is assumed in this study that the number of employees in the business with the required level of skill will increase performance. The size of the business is assumed to influence total revenue positively. The amount of initial capital injection is expected to have a positive influence on total revenue in the long term. Businesses require some initial amount of capital as an input to production which influences the business revenue and profit. Therefore the sign of the coefficient of the variable for start-up finance is expected to be positive. Annual total cost is made up of fixed costs and variable costs. Fixed costs consist of monthly payments for rent and salaries. Variable costs comprise of monthly payments for electricity, water, telephone, wages for assistants and miscellaneous payments. It is assumed that the increase in cost can increase revenue, depending on the price that one is selling and also the quantity sold. Thus, the sign of the coefficient for total cost is expected to be either positive or negative.

2.3 Constraints of Small Scale Enterprises

2.3.1 The Kendall's Coefficient of Concordance

The Kendall's concordance analysis was used to test for the agreement between the ranked constraints of small scale enterprises. It establishes the extent of disagreements and agreements among responses. The Kendall's coefficient of concordance (W) is the measure of the degree of agreement among *m* set of *n* ranks. *W* is an index that measures the ratio of the observed variance of the sum of ranks to the maximum possible variance of sum of ranks. If the rankings are in perfect agreement, the variability among sums will be a maximum (Mattson, 1986). Computing the total rank score for each constraint and objective, the constraint and objective with the least score is ranked as the most pressing whilst the one with the highest score is ranked as the least pressing. The total rank score computed is then used to calculate for the coefficient of concordance (*W*), to measure the degree of agreement in the rankings (Edwards, 1964).

The formula for the coefficient of concordance W is then given by:

$$W = \frac{(\sum T^2 - (\sum T)^2/n)/n}{m^2(n^2-1)/12} \qquad (2)$$

The formula is further simplified as follows:

$$W = \frac{12[\sum T^2 - (\sum T)^2/n]}{nm^2(n^2-1)} \qquad (3)$$

Where; T = sum of ranks for each factor being ranked.

m= number of rankings (small scale enterprises) and

n = number of factors being ranked

The following hypothesis is tested for the potential constraints as follows:

H_0: There is no agreement among the constraints faced by small scale enterprises.

H_1: There is agreement among the constraints faced by small scale enterprises.

The Coefficient of concordance *W* is tested for significance using the F distribution.

3.0 Result and Discussions

3.1 Determinants of Performance of Small-Scale Enterprises

The E-views software was used to estimate the parameters and marginal effects of the determinants of the performance of small scale enterprises. The F-value is highly significant at 1% which indicates that the explanatory variables included in the regression model jointly influence the performance of small scale enterprises. The R-squared value indicates that 92% of the variation in the performance of small scale businesses is explained by the independent variables (Table 2).

The performance of small scale enterprise in Accra Metropolitan Area (AMA) is significantly determined by age of the entrepreneur, number of years of education, initial capital invested in the business and the annual cost incurred at the 1% significant level. Marital status of entrepreneur, number of years of experience in the business and the number of employees in the enterprise significantly affect small scale enterprise at the 5% level of significance. Statistically and numerically, the age of entrepreneur is the most influential determinant of performance of small scale enterprise (Table 2).

The age of respondent is negatively associated with the performance of small scale enterprises in the AMA. Older people engaged in small scale enterprises are less likely to increase their revenue though they may have enough experience in operating businesses. Aworemi et al., (2010) established a contrary view. They established a positive relationship between performance and age of respondents in their study on "Impact of Socio-economic Factors on the Performance of Small Scale Enterprises in Osun State, Nigeria". The present finding may be due to lack of innovativeness on the part of older people which is likely to impact negatively in their revenue level. Performance decrease by 188 for every additional year of age attained by any individual engaged in small scale business. Entrepreneurs that are married do not perform well in their enterprises. The result indicates that the performance of married entrepreneurs is lower than those that are not married by 819. Low performance can be attributed to the high expenditure incurred by married entrepreneurs as they have to take care of the needs of their spouse. However, spouses can serve as a form of labour in increasing the revenue base of the enterprise. The number of years of formal education attained by an entrepreneur is positively associated with the performance of small scale enterprise. The result is consistent with the findings by Aworemi et al., (2010). An additional year of education attained by a respondent will lead to an increase in revenue by 137. Education enables the individual to appreciate and adopt innovations as well as make informed decision which is likely to impact positively on performance. The number of years of experience influences the profit of small scale enterprises positively. Experienced individuals employed in small scale businesses are able to take better production decisions and have greater contacts which allow trading opportunities to be discovered at lower cost. Performance of small scale enterprises increases by 123 for every additional year of experience attained by the individual involve in that business. The performance of small scale enterprise is significantly influenced positively by the number of employees engaged in that business. For every additional employee engaged in small scale enterprise, the revenue increases by 536. Employees serve as input in the production process and the higher the number of employees engaged in small scale business, the more likely it is for the revenue to be impacted positively *ceteris paribus*. The initial capital invested in the business significantly affects performance negatively. The performance of business decreases by 1.5 for every additional capital injection into the business. This result indicates that revenue falls with increase in initial capital injection which is contrary to the *a priori* expectation. The initial capital injection is necessary as it provides the opportunity for small scale businesses to purchase the basic required inputs to commence the business. However, the negative relationship may be due to unfavorable market which reduces the total revenue. It may also be due to lack of requisite skill in investment due to competing needs of the entrepreneur. Finally, the annual cost incurred by small scale enterprises significantly affects the revenue of businesses positively. For every additional cost of Ghana cedi incurred in the operation of business will lead to an increase in profit by 1.96. This finding is inconsistent with the *a priori* expectation. It is expected that increase in cost as a result of bad managerial decision may impacts negatively on performance. The positive effect of cost on performance may be as a result of excessive spending (staff motivation, hire of professional, additional purchase of inputs etc.) in business that translates into increase in revenue (Table 2).

3.2 Constraints of Small Scale Enterprises' Performance in Accra Metropolitan Area

The factors that restraint small scale enterprises in the AMA according to the survey is presented in Table 3. The Kendall's 'W' is found to be 0.914 and significant at 1% level. The result indicates that there is high level of agreement among the constraints faced by small scale enterprises. The null hypothesis is rejected in favour of the alternate hypothesis. The Kendall's 'W' of 0.914 indicates that there is 91% agreement between the respondents in the ranking of the constraints faced in the small scale businesses. Among the identified constraints, high cost of borrowing, cost of input, lack of credit and transportation cost are the top four most constraining factors (Table 3). Higher interest charges by banks, impedes most businesses from borrowing thus are unable to expand. The depreciation of the cedi against the dollar is a contributing factor in the increase cost of inputs as the majority of the respondents depend on foreign inputs. Most banks provide credit facility to businesses that are able to provide collateral which is a major challenge to most small scale enterprises. In situations where there are opportunities in terms of credit facility to small scale enterprises, requirement such as loan administration fees and proper documentation normally prevents them from accessing this facility. Lack of banking habit and improper management of businesses by most enterprises makes it more difficult for them to access loan from banks. The recent increase in fares has led to the increase in the recurrent cost which erodes the profitability of business. Insecurity, high rental and utility charges, competition, and low demand are the next constraining factors of small scale enterprises. High rental and utility charges contribute immensely to the total cost incurred which makes it difficult for entrepreneurs to expand and employ. Among the list of constraints, activities of hawkers pose the least threat to small scale enterprises. Most of the activities of these hawkers do not have a direct bearing on the small businesses. However, these hawkers pose threat to those enterprises in the area of commerce. Some customers may prefer to buy from hawkers to save them precious time. As a result of this, the revenue base of these businesses in the area of commerce is affected (Table 3).

4.0 Conclusion and Recommendations

The performance of small scale enterprises in Accra Metropolitan Area is mostly influenced by age and the number of years of formal education of the entrepreneur. Younger entrepreneurs are more likely to adopt innovations that will translate to higher revenues. High cost of borrowing was the most important constraint faced by the small scale entrepreneurs in AMA. The situation is aggravated by the collateral requirement coupled with high loan processing fee. It is recommended that policy should aim at attracting and linking the youth to the Local Enterprise and Skills Development Program (LESDEP) and National Youth Employment Programme (NYEP). The Microfinance and Small Loans Centre (MASLOC) must be thoroughly equipped to disburse funds at a lower interest rate to young entrepreneurs irrespective of their political affiliation.

Acknowledgement

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List of Tables

Table 1: Description of the Variables used in the Regression Model

Profit (Y_i) – Used as proxy measurement of small scale enterprises' performance

EXPLANATORY VARIABLES

Variables	Description	Measurement	Expected Sign
Age	Age of respondent	Number of years	+/-
Gender	Gender of respondent	D = 1 if male; 0 = otherwise	+/-
Marital Status	Marital status of respondent	D = 1 if married; 0 = otherwise	+/-
Education	Years of formal education	Number of years of education	+
Experience	Number of years of experience	Number of years	+/-
Employees	Number of Employees	Number	+
Ownership	Ownership status	D = 1 if owned; 0 = otherwise	+/-
Initial capital	Initial seed capital injected	Ghana cedi (GH¢)	+
Annual cost	Annual cost incurred	Ghana cedi (GH¢)	+/-

Table 2: Regression Estimates of the Determinants of Small Scale Enterprises Performance

Variable	ESTIMATED RESULT OF REGRESSION MODEL		
	Coefficient	Std Error	Prob.
Constant	2562.86	1372.07	0.0639
Age of respondent	-187.92***	51.95	0.0004
Gender	-148.34	377.56	0.6950
Marital status	-818.98**	403.53	0.0443
Number of years of education	137.03***	48.49	0.0054
Number of years of experience	123.72**	56.26	0.0295
Number of employees	536.77**	240.38	0.0271
Business ownership status	583.21	570.77	0.3086
Initial capital invested in the business	-1.46***	0.49	0.0033
Annual cost incurred	1.95***	0.07	0.0000
Number of Observations 150			
F-statistic 172.5575			
Prob 0.000			(F-Statistic)
R-squared 0.92			
Log -1349.346			likelihood

Source: Regression Estimation from Author's Survey Data (2012)   ***$p < 0.01$, **$p < 0.05$ and *$p < 0.10$

Table 3: Constraints of Small Scale Performance

Identified Constraints	Mean Rank
High cost of borrowing	1.93
High cost of inputs	2.16
Lack of credit	2.68
High cost of transportation	3.43
Insecurity	5.75
High rental and utilities charges	6.63
Increased competition	6.67
Low demand	7.57
Debt collection	8.80
Power interruptions	9.85
Unfavourable business laws	10.75
Political instability	12.17
Activities of hawkers	12.62
Number of observation	150
Kendall's W[a]	0.914
Chi-square	1646.081
df	12
Assymp. Sig.	0.000

Source: Estimation from Author's Survey Data (2012)

Appendix

OLS Estimates of Small Scale Performance

Dependent Variable: PROFIT

Method: Least Squares

Included observations: 150

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AG	-187.9247	51.94954	-3.617446	0.0004
GEND	-148.3388	377.5567	-0.392892	0.6950
MARSTA	-818.9775	403.5265	-2.029551	0.0443
EDU	137.0296	48.49195	2.825822	0.0054
EXPER	123.7160	56.26307	2.198885	0.0295
EMPLYS	536.7684	240.3785	2.233013	0.0271
OWNSTA	583.2086	570.7747	1.021784	0.3086
INITCAP	-1.463580	0.490037	-2.986670	0.0033
ANUALCOS	1.951524	0.066285	29.44127	0.0000
C	2562.864	1372.068	1.867884	0.0639

R-squared	0.917307	Mean dependent var	9612.000
Adjusted R-squared	0.911991	S.D. dependent var	6811.417
S.E. of regression	2020.691	Akaike info criterion	18.12461
Sum squared resid	5.72E+08	Schwarz criterion	18.32532
Log likelihood	-1349.346	F-statistic	172.5575
Durbin-Watson stat	1.585593	Prob(F-statistic)	0.000000