

DETERMINANTS OF SMALL AND MEDIUM ENTERPRISES FAILURE IN ZIMBABWE: A CASE STUDY OF BINDURA

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Abstract

The study seeks to establish the major causes of Small and Medium Enterprises (SMEs) failure in Zimbabwe. Basing on a case study for Bindura, Ordinary Least Squares (OLS) estimation criteria was employed to estimate the change in return on investment function which was used as proxy for SME failure. Data were gathered through formal and informal interviews, questionnaires and focus group discussions with SMEs which were randomly selected from different clusters representing different industries. Results showed that lack of general knowledge on business management, unavailability of credit, import competition and high cost of raw materials are the major causes of SME failure in Zimbabwe.

Key words: Small and Medium Enterprises, Informal Sectors, Economic growth

JEL: E26, O17

1. INTRODUCTION

The growth of Small to Medium Enterprises (SMEs) is a critical ingredient in the sustainable development of developing economies. The history of economic development tells us that promotion of infant industries is one of the major drivers behind the success of industrialization in Europe (Rostow, 1960). Furthermore, improvement in SME productivity and size is also cited as a crucial phase in the successful implementation of export led growth (ELG) strategy employed by East Asian countries which resulted in a remarkable increase in economic growth in those countries (Singh, 1999). However, the growth and development of SMEs in Zimbabwe is generally undermined by a lot of challenges resulting in a high rate of failure of such businesses (SEDCO, 2004). According to SEDCO (2004), about 60% of SMEs in Zimbabwe fail in the first year of establishment, 25% fail within the first three years and the remaining 15% are likely to survive. This therefore implies that about

85% of SMEs will eventually collapse. This is a high statistic which is a major draw back to economic development and hence it is important to determine the major causes of SME failure so as to reduce the damage caused by SME failure.

Small to Medium Enterprises have taken a centre stage in the social and economic development of many nations (UNDP, 2000). In Zimbabwe, SMEs in both formal and informal sectors have long acted as engines of economic growth. According to Storey. and Westhead (1994.) SMEs are regarded as the seed-bed for the development of large companies and are the life blood of commerce and industry at large.

In Countries like China and India, SMEs have led to economic expansion which in turn has resulted in employment creation, poverty reduction, expansion of the domestic market and widening of the tax base (Balassa, 1982). SMEs have also laid a

strong foundation for the development of a competitive domestic private sector industry as well as a self-sustaining market economy. Furthermore, SMEs have the potential of increasing a country's exports of manufactured goods and reduce over dependency on the export of primary commodities. It is against this background that this study seeks to examine the major causes of SMEs failure in Zimbabwe.

2.1 Theoretical Literature

The Production Theory as in Laidler (1972) postulates that small firms are inefficient because they do not operate at the minimum efficient scale where economies of scale are enjoyed. This is because their average costs are always falling. The theory further asserts that if firms do not find a way of increasing their scale so as to be able to enjoy economies of scale, they remain uncompetitive and hence have a high likelihood of failing. Since SMEs generally do not enjoy economies of scale, the current study also examines the extent to which failing to attain economies of scale can be a cause of failure.

The Technological Capabilities Theory popularised by Lall (2001) argues that smallness is dangerous just like in the animal kingdom where younger and smaller animals are easy prey for predators. The theory postulates that small firms do not easily access funds from financial institutions because they lack collateral and hence lending to them is viewed as highly risky. This means that the only plausible way that SMEs can raise capital is through self-financing, but since their initial capital is small and their sales value is also small against very high operating costs, they are caught in a vicious circle of smallness which is hard to break out of and may result in eventual collapse of SMEs.

2.2 Evidence from past studies

Past studies on SME failure show that lack of managerial experience is one of the main reasons for SME failure. In a case study of Ghana, Inkoun (2003) found out that SMEs performance is closely linked to entrepreneurial skills of the proprietor. He found out that proprietors with business related qualifications tended to survive by 30% more than non-qualified proprietors. Similarly, Ramis (2002) found out that although management training for proprietors is important for SMEs in Peru, it is more important when the company has higher growth potential than it is when the growth potential is low. He however, found out that competition from both domestic and foreign firms is more predatory than entrepreneurial skills. In his study, SMEs faced with competition were three times more prone to collapse than those without competition.

In a study of SME failure in eleven African countries using panel data, Pack (1993) found out that in nine of them, the cost and availability of credit is a major factor that affects SME development as it stifles availability of funds for further investment. He also found out that import competition affects manufacturing and processing firms more than it does to those that are in retailing.

Furthermore, Koush (2008) in his study of SME failure in Korea found out that foreign competition is more predatory to SMEs that are in manufacturing than domestic competition. This study split the competition variable into domestic competition and competition from imports in order to establish the relative strength of the different competition sources to the determination of SME failure in different industries.

3. METHODOLOGY

The study adopted the model by Tian (2005) who proxied SME failure by the change in Return On Investment (ROI). The Ordinary Least Squares (OLS) estimation method is then used to estimate the change in ROI function as in Chan (1996)

3.1 The Model

Most empirical studies on failure of SMEs use the change in return on investment (ROI) to infer viability of SMEs. Persistent negative changes will result in eventual collapse of the entity since they don't have a solid financial base to continue shielding the losses. Thus the study shall adopt the change in ROI as a measure of SME failure. Following Tian (2005) the change in ROI function can be modeled as follows:

$$\Delta\left(\frac{N\pi}{\phi}\right) = f(ED, CR, RM, DC, M, K) \quad (1)$$

Where, Δ is change

$N\pi$ is net profit for an entity

ϕ is initial capital

$\frac{N\pi}{\phi}$ is return on investment ROI

ED , is education level of the owner / proprietor

CR is the amount of credit extended

RM is cost of raw material

DC is domestic competition

M is foreign competition/imports

K is capital stock

Thus equation 1 can be expressed as:

$$\Delta\left(\frac{N\pi}{\phi}\right) = \alpha_0 + \beta_0 ED + \beta_1 CR + \beta_2 RM + \beta_3 DC + \beta_4 M + \beta_5 K + \varepsilon \quad (2)$$

Where ε is the stochastic error term, representing the influence of all the other variables

However, heterogeneous SMEs in different industries have different sizes such that a firm that might qualify as an SME in one

industry might not qualify in another industry. Therefore taking absolute values of the quantitative variables will result in high variance leading to the problem of heteroscedasticity, thus in the study we shall standardize variables by dividing through all quantitative variables by initial capital ϕ . More so, it is reasonable to assume that import competition affects manufacturing and processing firms more than it does on the other clusters. Equation 2 becomes:

$$\Delta\left(\frac{N\pi}{\phi}\right) = \alpha_0 + \beta_0 ED + \beta_1 \frac{CR}{\phi} + \beta_2 \frac{RM}{\phi} + \beta_3 DC + \beta_4 M + \beta_5 \frac{K}{\phi} + \varepsilon \quad (3)$$

For SMEs however, no major capital injection in the business are expected especially in a short time period of say two years and hence $K \approx \phi$. It is also important to note that the cost of raw materials affect firms in the secondary stage of production (manufacturing, processing and construction) more than it does to firms in the tertiary stage (retailing and transport). This is so because cost of raw materials constitutes a significant proportion of the cost of production in the former clusters of firms than it does in the latter. thus equation 3 reduces to:

$$\Delta\left(\frac{N\pi}{\phi}\right) = (\alpha_0 + \beta_5) + \beta_0 ED + \beta_1 \frac{CR}{\phi} + \beta_2 \frac{RM}{\phi} + \beta_3 DC + \beta_4 M + \beta_6 \frac{RM}{\phi} D + \varepsilon \quad (4)$$

Where, $\frac{RM}{\phi} D$ shows the interaction between cost of raw materials and being in either secondary stage of production or in tertiary stage of production.

Equation 4 can be rewritten in compact form as equation 5 which we are going to estimate.

$$\Delta\theta = \sigma + \beta_0 D_1 + \beta_1 \varpi + \beta_2 \psi + \beta_3 D_2 + \beta_4 D_3 + \beta_6 D_4 \Psi + \varepsilon \quad (5)$$

Where $\varpi = \frac{CR}{\phi}$ and $\psi = \frac{RM}{\phi}$

ED , DC , and M are qualitative variables

and we shall use dummy variables $D_1, D_2,$ and D_3 respectively to capture them.

$D_1 = 1$ if proprietor holds any business related qualification

$D_1 = 0$ otherwise

$D_2 = 1$ if SME faces domestic competition

$D_2 = 0$ otherwise

$D_3 = 1$ if SME faces competition from imports (ie, if it is in manufacturing or processing)

$D_3 = 0$ otherwise

$D_4 = 1$ if a firm is in the secondary stage of production

$D_4 = 0$ otherwise

3.2 Estimation method

The study shall employed Ordinary Least Squares OLS in estimating the ROI equation in order to determine the causes of SME failure in Zimbabwe. A linear model (equation 5) was estimated for a cross section of 37 SMEs in Bindura urban. The sign and significance of the coefficients shall be determined. The MICROFIT software package was used in this respect.

Ordinary least squares works by minimizing the sum of squared deviations of the predicted values from the actual ones.

$$\sum \varepsilon^2 = \sum [\Delta\theta - (\sigma + \beta_0 D_1 + \beta_1 \pi + \beta_2 \psi + \beta_3 D_2 + \beta_4 D_3 + \beta_6 D_4 \Psi)]^2$$

so as to find the best unbiased estimates of the parameters of the independent variables. The estimated parameters were then used to make inferences on the relative importance of the independent variables so as to deduce requisite policy measures.

3.3 Justification of variables

Education, ED

If the proprietor holds any business related qualification he is expected to make better quality decisions to manage the entity in a way that reduces the likelihood of failure of the entity. Therefore the sign of the coefficient of D_1 is expected to be positive.

Availability of credit, CR

Availability of credit ensures smooth operation of SMEs as it injects working capital. The more available the credit, the less the likelihood of failure thus we expect a positive relationship.

Cost of Raw materials, RM

Expensive raw materials reduces net profit and increases the change of failure, therefore a negative relationship is expected

Domestic competition, DC

If faced with competition from established/big domestic firms, the chances of survival of SMEs will be slim. A negative relationship is thus expected.

Imports, M

Competition from cheap foreign products will reduce the market share of SMEs which stifles development of the SMEs, therefore a negative relationship is also expected.

3.4 Data sources and problems

The study used primary data collected from 37 firms in Bindura Urban for the period 2008 to 2009. The choice of the period was informed by the fact that most SMEs have a short lifespan and quite a number would collapse within the first 2 years of their operation (ZES, 2001). The study grouped firms in Bindura into five different clusters namely manufacturing, transport, processing, construction and retailing. Out of the total population of over sixty firms, nine are in construction related business such as durawalling, brick moulding and building. Seventeen were in manufacturing related ventures such as soap making, floor polish manufacturing, candle making and tailoring. Six were in processing industry which includes cooking oil pressing, peanut butter processing, and grinding mills. Eight were in transport related businesses which include commuter omnibus operators and haulage trucks and twenty are in retailing. It is important to note that the study limited retailers to those occupying permanent structures since during the period of the

study most people were retailers. Although there are some challenges that we expected to be common in different industries/clusters such as availability of credit, there are however other problems that are specific to certain industries but not others. For example import competition is expected to affect firms that are in manufacturing and/or processing but not those that are in transport or retailing because they benefit directly from the imports. Our sampling technique should thus be able to capture the heterogeneity of the population. Cluster Sampling was used to select interview subjects from different industry categories in order to allow for diversity of information given that different industries are faced with different challenges. Interviews were conducted within randomly selected SMEs in each cluster across different industries in Bindura to get data on main challenges that they face.

4. RESULTS AND DISCUSSION

After estimating equation 5, the following results were obtained.

Table 1: Results for the OLS estimation

Variable	Coefficient	Standard Error	T-Ratio	P-value
constant	4.9942***	1.0554	4.7322	0.000
D_1	0.73459*	0.39910	1.8406	0.080
ϖ	6.0926 **	1.7836	3.4158	0.003
ψ	-7.4746**	2.8808	-2.5946	0.017
D_2	-0.62915	0.55996	-1.1236	0.274
D_3	-0.4523**	0.17671	-2.5598	0.034
D_4	0.6921***	0.14022	4.9357	0.000

*,(**) and (***) significant at 10%, 5% and 1% respectively.

Adjusted R Squared 0.95262
 F-stat. F(6, 30) 105.5610 [0.000]
 DW-statistic 2.2472

The results, in table 1 show that all but one variable are statistically significant at least at the 10% level of significance. It is also interesting to note all the variables do carry

expected signs consistent to economic theory. The coefficient on the education variable of 0.73 shows that SMEs whose proprietors held any business related qualification have a 73% chance of survival.

Furthermore the coefficient on credit available to the SMEs is 6.092. It is positive implying that the more the credit available the greater the change in ROI. Since change in ROI proxies survival of the SME, it implies that SMEs that obtain high credit as a proportion of their initial capital are likely to survive. The coefficient of raw material cost as a fraction of the initial capital exhibit a negative relationship implying that firms that face high cost of raw materials as a proportion of initial capital face a high risk of failure.

Also interesting is the interaction of raw material cost and firms in the secondary stage of production. The coefficient of the variable is negative and statistically significant at the 1% level of significance. This implies that as the cost of raw materials increases for manufacturing and processing firms, the likelihood of survival falls by approximately 69%.

The coefficient of domestic competition is insignificant. However, the coefficient of foreign competition or imports is -0.452 implying that SMEs that face competition from imports have a high risk of failure since a 1% increase in competition from imports results in a 45% decrease in ROI. This shows that SMEs are inefficient which is consistent with production theory which states that SMEs face high average costs which makes them unable to produce at the minimum efficient scale rendering them uncompetitive.

Diagnostic tests show us that our model does not suffer from any serious problems. The adjusted R-squared is 0.95262 implying

that over 95% of the variation in ROI is explained by variation in the explanatory variables. The DW statistic of 2.2472 indicates that there is no major problem of autocorrelation since it is closer to 2. The F test of 105.5610 is statistically significant at all levels. This signifies that the model is correctly specified.

4.1 Discussion of results

The results reported above show that the challenges faced by SMEs in different industries tend to be heterogeneous as expected. However, some challenges tended to be universal. For example, management skills affected firms in all industries. The result is reasonable and consistent with previous studies, for example Koush (2002), who argued that basic management skills are important irregardless of the nature of the business that the SME undertakes and failure to have it will result in suboptimal decisions and eventual collapse.

Also universal across all clusters was availability of credit. The results show that availability of credit is an important factor affecting survival of SMEs in entirely all clusters. This is probably because all firms require loans to finance working capital or make new investment that would ensure continuity and growth. The findings are in line with the Technological Capabilities Theory by Lall (2001) which postulates that availability of credit ensures that firms invest in new, state of the art technology that is efficient and cost saving which enables them to withstand competition from both domestic established firms and imports.

The findings show that some challenges affect firms in some industries more than they affect firms in other industries. Such challenges include raw material cost which according to the findings affects firms in manufacturing, processing and construction

(secondary industries) more than it does to SMEs in transport and retail industry. The probable reason for this finding is that firms in secondary production rely heavily on raw materials that they would convert into final products. For retailing and transport, raw materials are an insignificant proportion of the total production cost or are simply non-existent. Thus the effect of high raw material cost is not as high in secondary industries as they are in transport and retail industry. This finding is also consistent with Tian (2005) who found out that raw material cost is a major impediment of SME growth for firms in manufacturing industry than it is for SMEs in service provision in Malaysia.

The results also show that competition from imports increases the probability of failure for firms that are in manufacturing and processing than those that are in construction, transport and retailing. This is conceivable because small firms in manufacturing and processing are high cost producers and cannot withstand competition from imports. On the other hand for retailers and transport operators, competition from imports is very insignificant or non-existent at all.

4.2 Conclusion and policy recommendations

The study sought to establish the major causes of SME failure in Zimbabwe in an effort to reduce the damage on economic development caused by underdeveloped SME sector. From literature it has been established that SME growth is a key ingredient of economic development especially in LDCs which are in their early stages of development. The results have shown that most SMEs in Zimbabwe fail because of lack of general knowledge on how to run the business as indicated by a high significance level of the coefficient of education (of the proprietor) on survival

chances (proxied by ROI). The results also show that unavailability of credit is another significant cause of SME failure. This is consistent with the theory of technological capabilities by Lall (2001) which states that SMEs fail because of lack of finance to use both as working capital and for investment in state of the art technology which enables them to withstand competition from bigger firms. In addition competition from imports and high cost of raw materials emerged as other major causes of SME failure.

From the results of the study it is necessary for the authorities to assist proprietors in getting basic understanding on how to run businesses in order to increase chances of small business survival. This could be done through offering business coaching and seminars which specifically targets SME business owners. It is also imperative that credit lines are made more available to SMEs. Thus the government can offer securities that can be used by financial institutions as collateral to allow SMEs to easily access loans. SMEs also need to be supported from cheap imports possibly through subsidising them on purchasing raw materials or by imposing import restrictions such as import duties on imports that are in direct competition with output of our domestic infant industries.

4.3 Suggestion for further studies

Future studies should try to model SME failure in the context of panel framework including a number of provinces in Zimbabwe in order to improve the representativeness of the sample to the whole of Zimbabwe.

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