

DETERMINANTS OF SME GROWTH IN BOTSWANA

*Okurut Francis Nathan, Lesego Molefhe, Christopher Mupimpila,
Micheal Nkuba and Margaret Leah Okurut*

ABSTRACT

The study examined the factors that influence the growth of micro, small and medium enterprises (SMEs) in Botswana. The crucial role played by these enterprises in employment creation and augmenting economic growth motivated this study. The study investigated how the internal firm specific characteristics and business environmental factors impact on the growth of SMEs. The OLS model estimation results indicate that the growth of SMEs is positively influenced by firm leverage, short term liquidity, employment size, firm assets labour productivity and firm size. All the external firm characteristics (with exception of firm experience) were found to be statistically insignificant in explaining the growth of these enterprises. The policy recommendations from this study are that government should continuously provide an enabling environment for growth of SMEs through enhanced access to credit and capacity building.

Key Words: *SME Growth; Botswana*

1. INTRODUCTION

Government policies in developing countries are increasingly targeting the development of micro, small and medium scale enterprises (SMEs). The SMEs are instrumental drivers of economic growth, employment creation, and poverty reduction in both low and high income countries (Hallberg, 2000; OECD, 2004; Endinburgh Group, 2012). According to Dalberg (2011) the SME sector accounts for over 60% of private jobs and contribute an average of 16% to GDP in most of the developing countries. In Botswana, the sector absorbs more than 30% of the workforce and contributes between 15 and 20% to the country's GDP (BIDPA, 2011). SMEs are also critical for women empowerment as approximately 67% of micro enterprises in Botswana are owned by women (Okurut and Ama, 2013). Botswana's unemployment rate is estimated at 17.8% (CSO, 2009) which is very high for a small country with a total population of 2.1 million people. The youth in Botswana remain the most affected group with an unemployment rate of

* Prof Francis Nathan Okurut, Department of Economics, University of Botswana,
E-mail: Okurutf@mopipi.ub.bw

34.9% (CSO, 2009). Unemployment rate among graduates is also disturbingly high at 29.1% (CSO, 2009), signifying limited job opportunities in both the public and private sector for tertiary school graduates.

Poverty is also a great concern in Botswana despite the positive economic growth the country has experienced over time. Statistics show that the level of poverty in Botswana stands at 20.7% (MFDP, 2010). Rural villages are heavily stricken, with over 38% of the population estimated to be living in severe poverty. High growth of SMEs is postulated to enhance Botswana government efforts in the fight against unemployment and poverty (BIDPA, 2011).

Government support to SME sector is also critical to provide a conducive environment and mitigate business environment constraints that impede the development and growth of SMEs. Some of the constraints faced by SMEs include; limited access to bank credit, restrictive government regulation and tax policies (Hagen and Sannarnes, 2007; Okurut *et al.*, 2011; Stanbic Bank Report, 2012; Pissarides *et al.*, 2003). These constraints have compromised not only the growth of these firms but also their survival. In Botswana the failure rate of SMEs is estimated at over 80% (BIDPA, 2011).

SMEs are also noted to lack some important business management attributes necessary to run successful enterprises which include business training, managerial experience, business acumen and effective performance management of employees (Richardson *et al.*, 2004; Chiliya, 2012). Commercial lending institutions have also pointed that the inability of the SMEs entrepreneurs to keep proper financial records is one of the main reasons why they ration out SMEs from their loanable funds (Okurut *et al.*, 2011).

Many countries including Botswana have set up business development and support institutions to address the environment and managerial capability constraints facing SMEs. The broad mandate of these institutions is to promote and facilitate the development of SMEs through provision of financial assistance, incubation, policy advocacy, training and capacity building (Davidsson and Henrekson, 2002).

This paper examines the determinants of SME growth in Botswana with specific focus on how the financial structure and productivity of the SMEs together with the business environment factors affect their growth.

2. OBJECTIVES OF THE STUDY

The overall objective of the study was to investigate the factors that influence the growth and development of SMEs in Botswana. The specific study objectives were:

- i. To analyse the effects of factor productivity, physical capacity, current liquidity and degree of leverage on SME growth in Botswana
- ii. To examine how ICT adoption by SMEs impact on their growth.
- iii. To derive policy recommendations to promote SME growth in Botswana

3. THE SME SECTOR IN BOTSWANA

SMEs in Botswana are classified into three groups namely; micro, small and medium size firms (Government of Botswana, 1999). The SME sector is dominated by micro firms, constituting 58% of the entire sector, small firms constitute 32% while medium firms constitute only 10%. These firms are evenly distributed between cities/towns and urban villages, very few operates in rural villages (CSO, 2006). The categorization of SMEs takes into account two main components, namely, number of employees and annual turnover¹.

Most of the micro firms operate in the informal sector and are mostly owned by women while majority of small and medium firms are registered and licensed entities (CSO, 2009; CSO 2006). A report by BIDPA (2011) indicates that a good number of the micro and small firms operate in the retail and services sector while most of the medium firms are in the manufacturing sector. By virtue of their dominance in the SME sector, micro and small enterprises absorb the largest share of the private workforce, accounting for over 87% of the total employment provide by the SME sector.

SMEs in Botswana contribute immensely to the economic development of the country, accounting for over 30% of private jobs and contributing between 15 and 20% to the country's GDP (BIDPA, 2011). Most women in Botswana derive their livelihood from the SME sector and most of the microenterprises (67%) are owned by women (Okurut and Ama, 2013). The survival rate of these firms however is very low, 80% of them fail and close business within the first 5 years of business. Studies conducted in Botswana on SME development identified the following factors as the main impediments to SME development and growth; limited access to bank credit, lack of business skills, lack of market and excessive government regulation (BIDPA, 2011; Okurut *et al.*, 2011; Okurut and Ama, 2013; Stanbic Bank., 2011). To support the development of the SME sector, the government of Botswana put in place specific institutions such as Citizen Entrepreneurial Development Agency (CEDA)² and Local Enterprise Authority (LEA)³.

4. LITERATURE REVIEW

According to Storey (1994) the growth of SMEs depends on the entrepreneur and firm characteristics. Entrepreneur characteristics include the

entrepreneur's age, managerial experience, education qualification and his or her motivation for starting the business. Firm characteristics on the other hand include the firm sector, age and location. Storey (1994) asserts that SME growth is positively associated with high managerial experience; high education qualification; firm experience; and urban location.

Davidsson and Henrekson (2002) however argued that firm growth is not only explained by the entrepreneur characteristics and external firm attributes such as firm sector, age and location. There are internal firm characteristics that pertain to the financial structure and production efficiency of the firm that highly explains SME growth. These internal firm characteristics include; degree of firm leverage, liquidity, physical capacity and factor productivity.

Theory also asserts that government regulation and policy plays an important role in influencing the performance and growth of SMEs (Libutti, 2000; Powell, 1990; Davidsson and Henrekson, 2002). According to Davidsson and Henrekson (2002) excessive government regulation and bureaucratic business registration procedures hinders the development of SMEs. Institutional support on the other hand promotes the performance and growth of these enterprises (Cumbers *et al.*, 2003). Some of the institutional support services to SMEs include; provision of credit, grants, subsidies, business training, mentoring and incubation.

SME growth has been measured in different ways in empirical literature which include changes in number of people employed by the firm, the firm's total assets, firm's annual turnover, firm earnings and firm profits (Liedholm, 2002; Glancey, 1998; Delmar *et al.*, 2003). The explanatory variables that influence SME growth include entrepreneur characteristics (such as age, gender, marital status, education level), enterprise characteristics (such as sector, labour productivity, capital productivity, leverage, experience), and environmental factors (such as access to credit, government regulation). The pertinent literature reviewed here specifically refers to enterprise characteristics and environmental factors because these were the variables that were captured in the 2006/07 census of enterprises and establishments (CEE) undertaken by Statistics Botswana (2006/07) which was used for this study.

Access to Credit

Investment and growth of SMEs has been found to be positively influenced by accessibility to business credit (Kapunda *et al.*, (2007); Bigsten *et al.*, 2003). Different studies have found that most SMEs do not have access to credit, a phenomenon that lowers investment and growth of SMEs (Oshikoya, 1994; Morewagae *et al.*, 1995). Kapunda *et al.* (2007) further argued that government finance schemes (such as CEDA) have not solved the problem

of limited access to credit by SMEs, particularly for female owned small and micro enterprises. Bigsten *et al.* (2000), their study of the performance of the manufacturing sector in African countries, found that the return to physical capital in the manufacturing sector is low in Africa due to scarcity of credit among other factors.

ICT Adoption

ICT adoption captures the impact of the use of modern technological products/services (such as websites, on-line sales and computerized production system) on the growth of SMEs. Levy and Yetton (2002) found SMEs involved in e-commerce attract high earnings and hence grow faster because of their ability to cover a wide range of potential buyers at a low operational cost. According to Oliner and Sichel (2000) and Goss (2001) productivity growth of SMEs in the late 1990's in the US was to large extent explained by the high degree of technological adoption in their business operation. OECD (2002) observed that SMEs in Africa experience low growth on account of limited ICT adoption.

Location of the Business

Glancey (2008) observed that firms located in urban areas tend to grow faster as compared to those located in rural areas. The reason advanced is that urban firms have access to a large market of consumers with high purchasing power compared to firms operating in rural areas. Garoma (2012) dichotomized the location of the business into; firms operated or run at home and firms operated outside home. It was observed that firms that operated at home to performed better and were more likely to grow faster than firms operated outside home because of low operational cost (such as no rent costs). Mead and Liedholm (1998) however argued that firms operated in open spaces such as streets markets were more profitable and more likely to expand than firms operated at home because of their exposure to a large market.

Sector of the Firm

Most studies have found the sector of the firm to be having a significant influence on the performance and growth of SMEs (Mead & Liedholm, 1998; Niskanen and Niskanen, 2005; Garoma, 2012). Mead & Liedholm (1998) found that SMEs in all sectors in Kenya expanded more rapidly than those in the retail trade sector. Garoma (2012) found the service sector in Ethiopia to be the most profitable sector and hence SMEs operating in this sector are more likely to expand faster than those in other sectors. Niskanen and Niskanen (2005) compared SMEs in the manufacturing sector and those in the non-manufacturing sector in Finland. They found that SMEs in the

manufacturing sector perform better and experience high growth levels than those in the non-manufacturing sector. Some studies however have found the sector in which the firm operates in to be insignificant in influencing the performance and growth of SMEs (Barkham, 1992; Storey et al., 1987).

Business Experience

Firm experience is measured by the number of years the firm has been in existence. Akoten *et al.* (2006) and Kira and He (2012) found the relationship between firm experience the growth of SMEs to be positive. According to them commercial banks usually prefer to give loans to enterprises which have been operating for a longer period of time. The belief is that experience enhances competence in doing business, hence highly experienced firms are more likely to attract high profits and less likely to default on loan payment. Woldie *et al.* (2008) also found that older firms are more likely to grow faster than younger firms because of the social capital they have gathered over time.

However Olutunla and Obamunyi (2008), in their study of factors associated with the profitability of small and medium - firms in Nigeria, observed a negative relationship between the age of the firm and business growth. They attributed this phenomenon to the fact new firms are more innovative and more likely to easily adapt to the current business environment than older firms. Glancey (2008) and Niskanen & Niskanen (2005) also found that young enterprises have significantly higher profits and growth rates than the older firms. They argued that accumulation of experience by older firms does not give them a competitive advantage over new firms. Salman & Yazdanfa (2012) however found the influence of firm experience on SME growth to be negative but statistically insignificant in Sweden.

Degree of Leverage

The degree of leverage is measured by the amount of debt relative to the owner's equity. If the debt highly exceeds the firm's equity then the firm is said to be highly leveraged (Goddard, 2005). Mateev and Anastasov (2010) and Honjo and Haranda (2006) found the relationship between SME growth and leverage to be positive. According to Mateev and Anastasov (2010) this results shows that SMEs in growing economies need increased access to external capital to finance their assets growth. However Honjo and Haranda (2006) argued that the positive relationship between SME growth and leverage holds only when the firm's profits exceed the loan cost. A negative relationship between SME growth and degree of leverage was postulated by Leung and Yu (1996) and Goddard *et al.* (2005). Their argument was that firms that are highly leveraged often find it hard to meet there debt

obligations, which in extreme cases result in repossession of firm assets by lending institutions and hence adversely affecting firm growth.

Current Liquidity

Current liquidity measures the capability of SMEs to maintain short-term liquidity. The variable is captured by the proportion of current assets to current liabilities (Mateev and Anastasov, 2010). Goddard *et al.* (2005) found current liquidity to be positively and strongly associated with SME growth. They pointed that high liquidity enables the firm to respond quickly to changes in the business environment and this enhances the level of their growth. Nickell and Nicolitsas (1999) also found the relationship between liquidity and firm growth to be positive, arguing that firms that are able to maintain high liquidity are not exposed to the risk of failing to meet their financial obligations. Deloof (2003) however argued that even though current liquidity has a positive effect on firm growth, holding high proportion of liquid assets may constrain the firm from taking advantage of long term investment opportunities and hence compromise future growth. This line of thought was supported by Mateev and Anastasov (2010) who found the influence of current ratio on firm growth to be negative. According to them, this result reflects that enterprises with better business investment opportunities will opt to maintain low levels of liquidity to finance future growth.

Factor Productivity (Capital and Labour Productivity)

Factor productivity measures the influence of efficiency in the SME's operations on the performance and growth of these firms (Salman and Yazdanfar, 2012). According to the superior firm hypothesis by Demsetz (1973), the level of efficiency is a key factor in distinguishing high performing firms from low performing firms. Jovanovic (1982) noted that both capital and labour productivity positively and significantly influence firm growth. Highly efficient firms in different sectors increase their output and grow in size over time while less efficient firms are pushed out of business in the long run. Wiboonchutikula (2002), in the study of SMEs growth in Thailand, found that SMEs experience high growth levels when the productivity of both capital and labour is greater and more persistent. Mateev and Anastasov (2010) also found a positive relationship between factor productivity and SMEs growth in Central and Eastern Europe.

Ownership Structure

This variable measures the influence of SMEs ownership structure on their performance and growth. According to Garoma (2012) ownership structure affect SMEs performance and growth through the degree of risk taking. The key argument is that sole proprietors are usually risk averse and more

often prefer investing in low risk projects which attract low rates of return. On the other hand, partnership and joint ventures are risk-takers who venture into risky projects which attract high rates of return and propel their growth. The Ethiopian Chamber of Commerce (2006) report also found that SME growth is high among SMEs owned through partnerships as compared to those owned through sole proprietorship. The reason advanced for this disparity in growth level was that SMEs owned through partnership had easier access to external funding as opposed to sole proprietorship who rely mostly on own savings to finance their business activities. Niskanen and Niskanen (2005) also found sole proprietorship to have a negative impact on SME growth, pointing out that the level of risk aversion is high among firms owned by individuals.

Wiboonchutikula (2002) found high SMEs growth rates to be associated with public sector companies. He argued that public sector SMEs have easier access to external funding and hence are more likely to grow at a faster rate than private SMEs. Mateev and Anastasov (2010) found no significant difference in the growth rates between public SMEs and private SMEs, concluding that ownership structure is not an important determinant of SMEs growth.

Government Regulation and Institutions

This variable measures the impact of business taxes, business registration regulations and institutional policy and programmes on the performance and growth of SMEs.

Government Business Taxes

According to Hagen and Sannarnes (2007) high government taxes discourage entrepreneurship and increases the failure rate of existing firms and deters market entry of new firms (Boadway and Tremblay, 2005). The UK Employment Department reviewed the impact of the 1980 tax cut on the UK economy and found that business investment grew as a result of the tax cut. The implication is that the high pre 1980 tax rates was impeding business investment (Wren and Storey, 2002). Davidsson and Henrekson (2002) found business growth in Sweden to be negatively affected by business taxes especially in sectors where tax rates are relatively high. However some studies have found out that there are enterprises which benefit from the government taxes in the form of, tax deduction on business expenses and low social security contributions (OECD, 1994; Holtz EaKin, 2000).

Business Registration

The occupational choice model asserts that bureaucratic business registration procedures impact negatively on domestic entrepreneurship

and the economy as a whole as it impedes entry of new firms into the market (Davidsson and Henrekson, 2002). Studies have found the desire to start-up firms and early stage growth of firms to be low in countries where business or company registration is characterized by long and complex procedures (Djankov *et al.*, 2002). He observed that until recent times, the process of starting a business in Italy involved more than sixteen procedures at a total cost of US\$4000.00 and a waiting period of sixty-two days for the completion of the business permit. This explains why business entry rate was low in Italy especially among SMEs as compared to countries like Canada where starting a business involves only two procedures at a total cost of US\$280.

Institutional Factors

This variable measures the impact of both public and private institutions on the performance and growth of SMEs. These are institutions whose mandate is to promote the development of SMEs through business funding, capacity building and business incubation (Davidsson and Henrekson, 2002). Private institutions have been found to be highly effective in promoting SMEs development compared to public institutions in Australia (Davidsson and Henrekson, 2002). This is because until recent times, public institutions were not common in Australia with almost one-half of SMEs sourcing assistance from private accountants, banks and corporate lawyers. Robson *et al.* (2008) found the take up rate of public institutions support programs to be low among immigrants and minority ethnic groups who often survive on informal business activities. Other studies have however found both private and public institutions to be equally effective in the development of SMEs. According to Bosma *et al.* (2004) both public and private institutions have a significant and positive impact in the survival and growth of SMEs. Wren and Storey (2002) assessed the impact of British Enterprise Investment Scheme (a public scheme in Britain) on the performance and growth of SMEs and found it to be having a positive and significant impact on the performance and growth of medium-size firms but not on small firms.

4. METHODOLOGY

4.1. Data Sources

This study used the 2006/07 census of enterprises and establishments (CEE) data which was collected and compiled by Statistics Botswana (2006/07). The survey collected data on the firm characteristics, entrepreneur socioeconomic characteristics and business environmental factors. The firm characteristics captured by the survey include; geographical location of the firm, industry of the firm, annual turnover of the firm, financial assets and

liabilities, firm expenditure and the number of people employed by the firm. Information pertaining to the socioeconomic characteristics of the entrepreneur (gender, age, education level and business training) was collected only for sole proprietors (micro firms). These entrepreneur characteristics were not used in the analysis because information was missing for small and medium firms. This study restricted the analysis only to firm characteristics and business environmental factors in assessing determinants of SME growth in Botswana. The data was analyzed using STATA software.

4.2. Model Estimation

The econometric model for estimating the factors that influence the growth of SMEs in Botswana was adapted from Glancey (2008) and Matev and Anastasov (2010) with few modifications. In this model, business growth is proxied by the change in the annual turnover of the SME. The explanatory variables are: external firm characteristics (firm experience, location and sector); internal firm-specific characteristics (adoption of ICT by the firm, short-term liquidity, firm's degree of leverage, firm assets, factor productivity, number of employees and ownership structure); business environmental factors (access to credit).

The construction of the model variables was anchored largely on the available information captured by the survey. The dependent variable (business growth) was captured by the change in annual business turnover between the year 2005 and 2006. The independent variables on the other hand were measured as follows: *firm age* or *experience* was captured by the difference between the establishment year of the firm and the year in which the survey was conducted (2007). The geographical locations of the firms were classified into 3 groups (cities/towns, urban villages and rural villages) following the Statistics Botswana (2011) geographical taxonomy. The *firm location* dummy was created equal to 1 if the firm was located in cities/towns and urban villages zero otherwise. In the model this is referred to as the *urban dummy*. The survey also identified over 14 economic activities under which SMEs conduct business. These activities were compressed into 5 main sectors following statistics Botswana economic sectors guide and separate dummies were created for each sector. In the model, agriculture is used as the reference category. *ICT adoption* was constructed as a dummy variable which takes the value 1 if the firm has a website and 0 if the firm has no website. The variable *Access to credit* was captured as a dummy taking the value 1 if the firm had accessed loan(s), otherwise zero. *Ownership structure* of the firm was also captured as dummy variable, assuming the value 1 if the firm is a private entity, zero otherwise.

Leverage (which is a proxy for the firm's capital structure) was constructed as a ratio of total debt to total assets, where *total debt* was computed as the sum of loans and creditors. *Total assets* was computed as the sum of inventory brought forward from 2005 and fixed assets purchased in 2006, less sales of fixed assets in 2006. The survey did not capture the value of fixed assets brought forth from 2005; therefore the study used the above computation to proxy total assets of the firm. The capability of the firm to sustain short term liquidity was proxied by *current ratio* which was constructed as a ratio of current assets to current liabilities. *Current assets* include cash, bank deposit, debtors and advances while *current liabilities* include creditors, loans and equity. The study used factor productivity (*capital productivity* and *labour productivity*) to capture the efficiency of the firm's operations. *Capital productivity* (output/capital) was proxied by the ratio of total annual turnover to total assets of the firm whilst *labour productivity* (output/labour) was proxied by the ratio of total annual turnover to total number of paid workers employed by the firm.

4.3. Model Specification

The model is estimated using the OLS method of estimation. The model is specified as follows:

$$Y_i = \alpha_0 + \beta_i X_i + \delta_i Z_i + \mu \quad (1)$$

For $i = 1, 2, 3, \dots, n$

Where;

Y = the firm growth measured by the change in the annual turnover of the firm.

X = a vector of SME characteristics which include experience, industry, location, adoption of ICT, current ratio, leverage, capital productivity, labour productivity and ownership structure

Z = the business environmental factors proxied by access to credit

α, β, δ , are model parameters to be estimated

μ = the error term which captures the effect of all the variables that are not included in the model

n = the sample size

4.4. Definition of Variables and the Expected Signs

The following table gives the definitions of the model variables and their expected signs. The model was estimated in logarithms for all the continuous variables.

Table 1
Measurement of variables and the expected signs

<i>Variables</i>	<i>Definition and method of measurement</i>	<i>Expected sign</i>
Dependent Variable		
Log of Annual turnover	Change in annual business turnover between 2005 and 2006	
Explanatory Variables		
Log of firm Experience	Number of year the firm has been in existence	+
Sector of the SME	Separate dummies for 6 main SME sectors; agriculture, manufacturing, transport and communication, construction, wholesale/retail trade and the service sector. Agricultural sector used as the reference category.	+
Geographical location of the business	A dummy for geographical location of the firm assuming the value 1 if a firm is located in cities and towns or urban villages, 0 otherwise	+
Adoption of ICT	A dummy variable that measures the use of computer technology in the business operations of SMEs (1 = the firm has a website, 0 =the firm has no website)	+
Access to credit	Dummy for access to external funding (1= has access, 0 = no access)	+
Log of employment size	Number of paid workers employed by the firm, proxy for firm size	+
Log of Total firm assets	Total value of firm assets, proxy for firm size	+
Log of Capital productivity	Annual business turnover divided by total assets for the year 2006, used as proxy for capital productivity.	+
Log of Labour productivity	Annual business turnover divided by number of paid employees for the year 2006, proxy for labour productivity.	+
Log of Current ratio	Current assets divided by current liabilities, proxy for short-term liquidity of the firm for the years 2006.	+/-
Log of leverage	Total debt divided by total asset, proxy for the capital structure of the firm.	+/-
ownership structure	Ownership structure of SME, a dummy that takes value of 1 for private firms, otherwise zero	+/-

5. ECONOMETRIC ESTIMATION RESULTS

The regression results based on equation 1 are presented in the table below. The dependent variable is given by the logarithm of the change in the SME's annual turnover.

Table 2
Regression Model Estimation Results

<i>Explanatory variables</i>	<i>Coefficients</i>	<i>Standard Error</i>	<i>t-statistic</i>	<i>P>t</i>
log of firm experience	-0.2257	0.0886	-2.55	0.0110
manufacturing sector dummy	0.3845	0.6653	0.58	0.5640
construction sector dummy	0.8261	0.8135	1.02	0.3110
service sector dummy	0.1986	0.6557	0.3	0.7620
wholesale/retail sector dummy	0.1984	0.6486	0.31	0.7600
urban dummy	0.7539	0.6479	1.16	0.2450
log of firm assets	0.3368	0.0628	5.37	0.0000
ICT use	-0.3297	0.5926	-0.56	0.5780
access to credit	-0.2265	0.1672	-1.35	0.1770
log of employment size	0.6213	0.1081	5.75	0.0000
log of labour productivity	0.4352	0.0675	6.45	0.0000
log of leverage	0.2072	0.0549	3.78	0.0000
log of current ratio	0.1403	0.0587	2.39	0.0170
ownership structure	0.7409	1.0173	0.73	0.4670
Constant	1.1523	1.5177	0.76	0.4480
Number of observations	357			
F(14, 342)	15.02			
PROB > F	0.0000			
R-squared	0.3808			
Adjusted R-squared	0.3555			

The results of the model estimation indicate that the parameter estimates are jointly statistically different from zero with the probability of the F-statistic being significant at 1% level. The adjusted R-Square which measures the goodness of fit of the model is 0.3555, which is consistent with cross-sectional data.

According to the results, firm experience has a negative and statistically significant effect on SME growth (at 10% significance level). This result is consistent with other studies (Olutunla and Obamunyi, 2008; Glancey, 2008; Niskanen & Niskanen, 2005) that observed that young SMEs perform better and grow faster than older SMEs. Young SMEs are said to be more innovative and adapt easily to the modern day business environment such as the immense use of computer technology, relative to older SMEs. The results also show that firm size has a positive and highly significant effect SME growth (at 1% significance level) which is consistent with empirical literature (Wiklund and Shepherd, 2005; M. Niskanen & J. Niskanen, 2005; Mateev and Anastasov, 2010). The justification of this phenomenon is that large firms (measured by total assets and employment size) have more entrepreneurial skills and capital assets to support growth than small firms.

The study also found the estimated coefficient of current ratio (which is used as a proxy for short term liquidity of the firm) to be positive and significant at 10% significance level. A one percent increase in short term liquidity increases the SME growth by 0.14%. This finding is consistent with Nickell and Nicolitsas (1999) and Goddard *et al.* (2005). According to Goddard *et al.* (2005) high liquidity enables the firm to respond quickly to changes in the business environment, this enhance the level of firm growth. Nickell and Nicolitsas (1999) also argued that firms that are able to maintain high liquidity are not exposed to the risk of failing to meet their financial obligations which might compromise their working relationship with their creditors. The degree of leverage a firm uses is also found to be having a positive and significant impact on the SME growth. According to Mateev and Anastasov, (2010) this result reflects the important role played by external credit in supporting the capital structure of SMEs.

Production efficiency of the firm in this model was proxied by capital and labour productivity. Capital productivity was however dropped from the model due to the problem of multicollinearity, leaving labour productivity as the sole proxy for production efficiency. The results indicate that labour productivity has a positive and strong explanatory power on the growth of SMEs. A percentage increase in the productivity of labour increases the SME growth by 0.44%. The results correspond to the findings by Mateev and Anastasov (2010) and Wiboonchutikula (2002). The common belief is that highly efficient SMEs experience rapid growth in output and in sales revenue.

When the survey was conducted in 2006/07, adoption of ICT among SMEs was minimal, less than 2% of these firms reported having an active website. The influence of ICT adoption on SME growth was therefore found to be insignificant and carrying an unexpected sign. Also firm location and all the sector dummies in our model were found to be statistically insignificant in explaining the growth of SMEs in Botswana. The model results also show that ownership structure and access to credit are statistically insignificant in influencing SME growth and they carry wrong signs.

6. CONCLUSIONS AND POLICY RECOMMENDATIONS

The major conclusion of this study is that internal specific firm characteristics play a significant role in explaining the growth of SMEs in Botswana. Most of the external firm characteristics and business environmental factors are found to be insignificant in explaining the growth of these enterprises. The capital structure of the SME, its physical capacity and productivity of its human capital are paramount in influencing the growth of these firms. The number of years the SME has been in business and its ability to maintain short term liquidity are also important factors that explains the growth of SMEs though their influence is weakly

significant. The influence of ICT adoption by the SME, accessibility to credit, its ownership structure, the sector under which it operates and its geographical location were found to be insignificant in explaining growth of SMEs in Botswana.

The study found highly leveraged SMEs to be experiencing rapid growth, a clear reflection of the vital role played by external finance in promoting the development and growth of SMEs. Policy focus should be on improving SMEs access to external finance especially bank credit.

Labour productivity was also identified by the study as a key driver of SME growth in Botswana. To enhance labour productivity of SMEs, policy focus should be on continuous capacity building of SMEs.

The study also identified the employment size of the firm as one of the principal drivers of SME growth. The government should therefore consider the use of employment tax incentives as a policy instrument to enhance the employment size of these firms. SMEs could be granted tax breaks in exchange for absorbing more workers especially the youth. Such a policy will not only support the growth of SMEs but it will also address the problem of high unemployment rate in the country, particularly youth unemployment.

Notes

1. Micro enterprises employ not more than six employees and annual turnover of less than P60 000(US \$ 7,500). Small enterprises employ less than 25 employees and make an annual turnover of between P60 000 and P1 500 000(US \$7,500-US \$ 187,500). Medium firms employ less than 100 paid workers and make an annual turnover of between P1 500 000 and P8 000 000(US \$ 187,500-US\$ 1,000,000).
2. CEDA provides different lines of credit to SMEs including debt finance for retail operations, service operations, credit guarantee scheme, and invoice discounting.
3. LEA mandate includes provision of highly specialised development and support services such as facilitation of business planning, providing training, mentoring and advisory services, identifying business opportunities for existing and future enterprises.

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