Determinants of Informal Sector Business Success in Botswana

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ABSTRACT

The informal sector plays a critical role in many countries as it provides alternative sources of employment and economic diversification. This paper investigates the determinants of the success of the informal sector in Botswana, using a logit regression model. The study uses data from the 2006/07 Informal Sector Survey conducted by Statistics Botswana. The results reveal that education of the business owner and age of the business enhance business success. Firms that have no employees are also more likely to succeed. Further, firms that operate in manufacturing, services, agriculture and construction sectors were found to be more likely to succeed than those operating in the retail sector. The study recommends that public policy should focus on assisting start-ups as they are more likely to fail, in order to reduce high business discontinuation rate. In addition, government should continue to implement its policy of universal education as more educated entrepreneurs are more likely to succeed in business. Firms with no employees are likely to succeed than those with more employees, suggesting that business owners are unable to manage their human resources. This calls for the introduction of programs aimed at capacitating business owners in the area of business management in general and in particular human resource management.

Keywords: Botswana, SMME, success/failure, Entrepreneurship, Lussier

1. INTRODUCTION

Globally, many countries have discovered that the development and promotion of employment creating economic activities is vital for both economic growth and diversification. Recently, African countries have shown a great improvement in terms of their remarkable economic growth (ECA, 2015). However, the continent still faces the difficulty of creating adequate jobs for the vast majority of youth that enter the labour market annually. According to Fine et al. (2012), Africa's labour force has been projected to grow by 122 million workers by the year 2020, however over the past 10 years only 37 million new individuals were hired in wage paying jobs, yet 91 million joined the labour force, leading to high levels of unemployment.

In 2013 the informal sector accounted for 70% of employment in the Sub-Saharan region, and it remains the largest contributor to job creation in Africa (AfDB, 2013). Informal jobs, in most countries are found in the agricultural, manufacturing and services sectors (ECA, 2015). Many countries consider entrepreneurs and the self-employed as potential drivers of economic development, poverty reduction and employment creation. Most entrepreneurs in developing countries are forced to function informally due to the many challenges the sector faces. Some of these challenges include; lack of vocational and technical training, misalignment of the educational curricula to demands of the labour market, and inadequate investments in technology, infrastructure and innovation (ECA, 2015). Even with these challenges, many African countries see significant increases in income generation, employment creation and poverty reduction especially among youth and women who dominate the informal sector (Moffat and Kapunda, 2015).

In the case of Botswana, the role of the informal sector with regard to employment creation and poverty alleviation cannot be overemphasized since unemployment is considered high, and based on the $1 a day poverty line, Botswana's income poverty is considered high in comparison to other upper middle income countries such as Brazil, Malaysia, Mexico, Turkey and Venezuela (Ulriksen, 2012). For example, the national unemployment rate was estimated at 17.6%, while youth unemployment was estimated 25.2% in 2016 (Statistics Botswana, 2016a) and the headcount ratio of poverty stood at 19.3% in 2009/10 (Statistics Botswana, 2016b).

According to Central Statistics Office (2007), an informal sector business can be defined by certain elements such as; non- registration of a company with the registering authority, having informal accounts or none at all, not having a minimum of five paid employees, the firm often being temporary or situated in owner's home and not being able to differentiate firm expenses from household expenses. The growth of the informal sector is seen as crucial for reducing unemployment and poverty.

Botswana has recognized the importance of the informal sector and has therefore over the years tried to increase productivity, income as well as employment creation in the

sector through different policies, strategies and regulations. Some of the policies that have over the years attempted to develop small businesses are, The Small Medium and Micro Enterprises (SMME) Policy, the Industrial Development Policy, Financial Assistance Policy (FAP), Reservation Policy, Companies Act, Industrial Development Act, Trade and Liquor Act and many more. The National Development Plans (NDPs) also encourage the informal sector as the sector is seen as a way to boost Botswana's industrial development (Menyah, 2009). Despite such efforts the failure rate of SMMEs which form the majority of the informal sector in Botswana is extremely high. For example, Mannathoko (2011) revealed that SMME failure rate in Botswana was around 80%, with the majority (over 70%) failing within the first eighteen months of operation.

The informal sector can only contribute positively to economic growth and diversification as well as reduction in both poverty and unemployment rates if they are successful. Defining a firm's success is a challenging task in any kind of business, especially when it comes to small businesses (Perez and Canino, 2009). In business studies, success is often measured as a firm's financial performance. However, there is no universally accepted definition of business or firm success, and success can be defined in many different ways (Chittithaworn et al., 2011). Some studies have focused more on entry and exit of entrepreneurs and continued business operations (Headd, 2003; Mannathoko, 2011; Worku, 2013 and Chittithaworn et al., 2011), while others have used financial performance indicators such as profitability, revenue, bankruptcy, turnover and growth as measures of business success (Hyder and Lussier, 2016; Teng et al., 2011 and Lussier and Corman, 1996).

The need to analyze factors that cause informal sector businesses to succeed has been highlighted by many studies (Hyder and Lussier, 2016; Chittithaworm et al., 2011; Mannathoko, 2011; Teng et al., 2011; Block and Sadner, 2007; Lussier and Pfeifer, 2001; Taylor, 1999; Lussier and Corman, 1996; Lussier, 1995). In line with these studies, this paper analyses factors determining the success of the informal sector in Botswana. If government wants new and existing businesses to survive and grow, it is important to establish the factors that contribute to their success. Once the success factors have been identified, it would be easier for government and other stakeholders to assist informal businesses to succeed. In addition, understanding such factors would allow entrepreneurs to concentrate on the success factors, thereby increasing their chances of survival.

Previous studies in Botswana focused on the survival of SMMEs (Mannathoko, 2011) and concentrated on business characteristics using descriptive and inferential statistics (Temtime and Pansiri, 2004). To our knowledge no study has performed econometric modelling of the determinants of informal sector business success in Botswana. This study therefore uses econometric tools to investigate the determinants of informal sector business success in Botswana using the 2006/07 Informal Sector Survey (ISS) data.

The rest of the paper is organized as follows. Section 2 describes the informal sector in Botswana, Section 3 reviews related empirical literature. In section 4, we discuss the methodology, data and descriptive statistics. The empirical results are then presented in Section 5, while Section 6 provides conclusions and policy implications.

2. INFORMAL SECTOR IN BOTSWANA

The Government of Botswana recognizes the importance of the informal sector in reducing unemployment and eradicating poverty. Government of Botswana (2010), identified the informal sector as one of the crucial sectors that provide self-employment and could assist in eradicating poverty and achieving full employment. There has been a significant growth in the informal sector over the years. This was shown by the two national surveys on the informal sector in 1999 and 2007. The national surveys show that there was a 72.3% increase in the number of informal businesses, from 23,454 businesses in 1999 to 40,421 businesses in 2007 (CSO, 2007). Moffat and Kapunda (2015) found that 40% of individuals in the informal sector entered the sector because they were unemployed, while 35% entered because they were interested in being self-employed. The remaining 25% enter because they wanted a better income.

Small businesses in Botswana face challenges, such as limited management skills, lack of access to markets, poor work ethics and financial constraints (Mutoko, 2014). Several measures have been proposed to address some of these constraints. First, in order to address the challenge of lack of access to markets, government should take advantage of trade agreements which most countries in Sub-Saharan Africa are entering into (Mutoko, 2014). Secondly, the government should come up with policies that are geared towards helping SMMEs access markets in the African continent. Lastly, to improve management skills, entrepreneurial studies should be introduced in the education curriculum (at primary and secondary school levels) to encourage and educate students on how to start and run businesses (Temtime and Pansiri, 2004).

3. LITERATURE REVIEW

There have been different approaches to studying business success or failure, especially when it comes to selecting suitable indicators of business success. Some studies have adopted prediction models such as the 'Lussier Model' to determine business success or failure (Hyder and Lussier, 2016; Teng et al., 2011; Lussier and Pfeifer, 2001 and Lussier and Corman, 1996). This model generally considers non-financial variables that have been identified to have an impact on the success or failure of small businesses. Other studies have focused on business performance and environmental variables (Chowdhury et al., 2013 and Chittithaworn et al., 2011), while some have found that customer related or non-financial factors were more effective at explaining business success or failure than financial indicators (Perez and Canino, 2009). This study focuses on the non-financial factors which include record keeping and financial control, planning,

professional advisor, education, staffing, age of owner, partnership, size of business, age of business, location, sector of business, previous employment and gender of owner. The review of the literature is therefore, based on these variables. The review classifies these variables into three areas, namely; characteristics of the business owner (education, age, experience and gender of the business owner), firm characteristics (staffing, ownership structure, size, age, location of the business as well as the sector in which the business operates), and planning and control (record keeping and financial controls, planning and the availability of professional advisors).

3.1 CHARACTERISTICS OF THE BUSINESS OWNER

The education level of the business owner is seen as an important determinant of success. Studies undertaken in Bangladesh (Chowdhury et al., 2013), the USA (Headd, 2003), Central Eastern Europe (Lusier and Pfeifer, 2001), New England (Lussier and Corman, 1996), and South Pacific (Yusuf, 1995) found education level of the business owner to enhance business success. Similarly, Chowdhury et al. (2013) found that, in Bangladesh, educational background was important for the development of new firms. However, in Singapore (Teng et al., 2011) and Pakistan (Hyder and Lussier, 2016) found that education level of business owner was not a significant determinant of business success/ failure.

The effect of the age of the owner on business success has produced mixed results, with some studies Headd (2003) concluding that the age of the business owner has a positive effect on business success. This could be because older entrepreneurs have more resources and skills, which increase chances of success. On the contrary, Chowdhury et al. (2013) found that younger entrepreneurs were more likely to succeed than older ones as they had more energy and were less risk-averse. Most studies have found that age of the business owner has had no influence on business success (Hyder and Lussier, 2016; Teng et al., 2011; Lussier and Pfeifer, 2001; Lussier and Corman, 1996; and Yusuf, 1995).

Those individuals that have previous employment (especially industry experience) are found to be more successful as opposed to individuals without business experience (Chowdhury et al., 2013; Mannathoko, 2011; Temtime and Pansiri, 2004). Mannathoko (2011) tested the variable in Botswana and found that previous employment had no impact on business survival.

The literature has also found that businesses owned by males tend to be more successful and survive longer than those owned by females (Carter et al., 1997 and Tiggers and Green, 1994). Mannathoko (2011) found that women owned firms were more likely to succeed than male owned firms. Cater et al. (1997), discovered that women owned businesses lack human and financial resources as compared to businesses owned by men and that is why the chances of business failure is higher for women.

3.2   FIRM CHARACTERISTICS

Staffing refers to the attraction and retention of quality employees. The effect of staffing on business success has produced mixed results. Some studies have revealed that staffing promotes business success in Singapore (Teng e.al., 2011), the USA (Headd, 2003), Central Eastern Europe (Lussier and Pfeifer, 2001), and New England (Lussier and Corman, 1996). However, Lussier (1995) found staffing to adversely affect business success in the South Pacific.

Partnership refers to the ownership structure of the business, particularly the number of business owners a firm has. None of the reviewed literature has found ownership structure to be a significant determinant of business success (Lussier and Pfeifer, 2001; Lussier and Corman; 1996 and Yusuf, 1995). This is most likely due to the fact that, in the informal sector, most firms are owned by one person, hence existence of lack of diversity in ownership structure, which prevents analysis of the influence of the number of owners on business success.

When a business grows in size, the assumption is that it is succeeding. Size of the business is usually measured in terms of revenue or the number of employees a firm has. Teng et al. (2011) and Headd (2003) found that the size of the business positively influenced business success in Singapore and the USA. The length of time a firm has been in operation is an indicator of success. Mannathoko (2011) found that the risk of failure is highest during adolescence or start-up phase and that it tends to decline as the firm gets acquainted with the market.

Firms located in urban areas have better access to resources and customers, and hence they are more likely to succeed than rural businesses. Mannathoko (2011) tested the location and sector variables in a survival analysis study for Botswana and found that location had no impact on the likelihood of survival, while the sector variable showed that only the retail sector had a low likelihood of failure in Botswana.

3.3   PLANNING AND CONTROL

Record keeping was found not to be significant in determining business success or failure in Pakistan (Hyder and Lussier, 2016), Singapore (Teng et al., 2011), the USA (Headd, 2003), Central Eastern Europe (Lussier and Pfeifer, 2001), and New England (Yusuf, 1995). However, Lussier and Corman (1996) found that record keeping and financial control was important and had a positive impact in predicting success and failure of businesses in New England.

Availability of business plans was found to be significant and positive in determining business success or failure in Pakistan (Hyder and Lussier, 2016), Central Eastern Europe (Lussier and Pfeifer, 2001), and New England (Lussier and Corman, 1996 and

Lussier, 1995). Hyder and Lussier (2016) found that most business owners were not properly educated when it comes to preparing a business plan and those that actually had business plans did not prepare them themselves. Hence, training of business owners on business planning would be an important intervention for promoting business success.

A firm that has professional advisors, such as lawyers, bankers and accountants, has a greater chance of success compared to one that does not have professional advisors. In most cases start-up businesses only seek the services of lawyers when they face legal problems. Bankers are used when a business owner requests for a loan and accountants are not used very often. Studies conducted in Central Eastern Europe (Lussier and Pfeifer, 2001), New England (Lussier and Corman; 1996), and South Pacific (Yusuf, 1995) found professional advisors to have a positive and significant impact on firm success.

4. METHODOLOGY

4.1 BACKGROUND OF THE MODEL

This study adopts the 'Lussier Model' to analyse the determinants of informal sector business success in Botswana. The Lussier model is a success versus failure prediction model, and it is a non-financial model that is suitable for small business research (Hyder and Lussier, 2016). The model evolved from a broad review of literature on the causes of business success or failure. The Lussier model considers 15 factors associated with a firm's success and failure. According to Hyder and Lussier (2016), these 15 variables were the most frequently used in previous studies. This model has been utilized and tested by many countries and has been successful in predicting firm success or failure (Hyder and Lussier, 2016; Teng et al., 2011; Lussier and Pfeifer, 2001 and Lussier, 1995).

The 15 factors in the Lussier model are; record keeping and financial control, sufficiency of start-up capital, industry experience, management experience, availability of professional advisors, owner's level of education, quality of staff, product/service timing, owner's age, economic timing, existence of partners, business-owning parents (Parents own a business), minority group, business planning and marketing skills. According to Lussier and Pfeifer (2001), the Lussier model comes in two forms; (i) the full model which includes all the 15 explanatory factors and (ii) the reduced model which includes only those variables which were found to be statistically significant using United States data (model was first tested with USA data). The reduced model includes measures of quality of staffing, education level of owner, business planning and professional advisors. Both the full and reduced models are said to effectively predict small firm success or failure and therefore this study adopts the reduced model due to availability of data.

4.2   MODEL SPECIFICATION AND DATA

This study uses a binary logistic regression model because our dependent variable is a dichotomous variable: success or failure. Most literature on business success use the logit model to investigate the determinants of business success (Hyder and Lussier, 2016; Teng et al., 2011 and Lussier and Corman, 1996). The model is expressed as:

$$ln\left[\frac{P_i}{1-P_i}\right] = \beta o + \sum_{j=1}^{n} \beta_j X_{ij} + \varepsilon_i \qquad\qquad \varepsilon_i \sim \left(0, \pi^{\frac{2}{3}}\right)$$

where P_i is the probability that firm i has made positive profits, β_0 and β_j are parameters to be estimated, X_{ij} represent explanatory variable j for firm i, ε_i is the error term, and *ln* denotes natural logarithm.

Following Hyder and Lussier (2016), the dependent variable used in this study is a measure of business success. A firm is defined as successful if it is currently making a profit and it is failing if it is making a loss. Therefore, the dependent variable is a dummy variable that takes the value of 1 if the firm made positive profits and 0 if the firm made negative profits (a loss). Profits were computed as the total revenue less the total cost, where total costs (included raw materials, rental of premises, rental of machinery and equipment, water and electricity, telephone costs, transport costs, repairs and maintenance, repayment of loans, insurance, tax etc). The 14 variables (including dependent variable) used in this study are listed and described in Table 1.

4.3   DESCRIPTION OF DATA

The study uses secondary data from 2006/07 Informal Sector Survey (ISS) conducted by Statistics Botswana. The ISS is a nationally representative survey which provides data on; characteristics of the informal sector, its economic activities and contribution to the economy. The informal sector firms in the survey totaled 5,635. However, the sample used in this study has been reduced to 5316 firms due to missing information. The 2007 ISS is used because no recent data on informal businesses or SMMEs is available that captures all the variables used in the model. A stratified two-stage probability sample design was used to sample business households (CSO, 2007). The data was collected in cities/towns, urban villages and rural areas using two questionnaires, namely; the household questionnaire and the individual questionnaire. The household questionnaire was used to identify people eligible for the individual interview, and the individual interviews collected information on those people who were self-employed. This information was then used to identify operators of businesses in the informal sector.

Table 1: Definition of variables used in the logit model

Variable	Variable description
Business Success	Profit Status: 1=firm has made a profit, 0= firm has made a loss
Gender	Gender of the owner: 1= male, 0=female
Record keeping	Record keeping of business: 1=kept formal accounts, 0=otherwise
Prior Employment	Prior employment of owner: 1=previously unemployed, 0=otherwise
Education	Education level of owner: 1=no formal education, 0=otherwise
Planning	Business has plans for growth: 1= yes, 0=no
Professional Advice	Business has professional advisor: 1= yes, 0=no
Staffing	Employees have been trained in the last 3months: 1= yes, 0=no
Size of business	Business has no employees: 1= yes, 0=no
Age	Age of the Owner in Years
Age_Sq	Square of Age of the Owner
Ownership Structure	
Sole Proprietor	Owner is a sole proprietor: 1= sole proprietor, 0= otherwise
Family Member	Owner is a family member: 1= family member, 0= otherwise
Partner	Owner is a partner: 1= partner: 0= otherwise
Coop	Owner is cooperative: 1= cooperative, 0= otherwise
Sector	
Retail trade	Business is in the retail trade sector: 1=retail trade, 0=otherwise
Construction	Business is in the construction sector: 1=construction, 0=otherwise
Agriculture	Business is in the agriculture sector: 1=agriculture, 0=otherwise
Manufacturing	Business is in the manufacturing sector: 1=manufacturing, 0=otherwise
Transport	Business is in the transport sector: 1=transport, 0=otherwise
Services	Business is in the services sector: 1=services, 0=otherwise
Location	
City/town	Business is located in city/town: 1=cities/town, 0=otherwise
Urban	Business is located in urban village: 1=urban village, 0=otherwise
Rural	Business is located in rural area: 1=rural area, 0=otherwise
Age of business	
Agebuss1 (Age<1)	Business is less than 1 year: 1= Age<1, 0=otherwise
Agebuss2 (1≤Age <3)	Business is from 1year but less than 3 years: 1= 1≤Age<3, 0=otherwise
Agebuss3 (3≤Age <5)	Business is from 3years but less than 5 years: 1= 3≤Age<5, 0=otherwise
Agebuss4 (5≤Age <10)	Business is from 5years but less than 10 years: 1= 5≤Age<10, 0=otherwise
Agebuss5 (Age≥10)	Business is 10 or more years: 1= Age≥10, 0=otherwise

4.4 DESCRIPTIVE STATISTICS

The descriptive statistics are presented in Table 2. As evident in Table 2, 78% of firms made a profit, and the remaining 22% made a loss. Most of the independent variables were dummies, taking values of 0 and 1, except for age and age squared. Females accounted for 68% of firm owners and males accounted for the remaining 32%. In terms of the structure of the organization, 15% were in a partnership (Partners, co-op and family business), and the remaining 85% were sole proprietors. Only 11% of firms kept formal records, while 89% did not keep formal records. In terms of employment, 66% of business owners were previously unemployed, while only 34% were previously employed. Business owners with no formal education account for 27% of the sample, while those with formal education account for the remaining 73%. The mean age of the business owner was 43 years.

Planning was measured in terms of those who had plans of growth for the firm and not the availability of business plans. As common in previous studies, this was due to data availability. We found that 98% of the businesses had a plan for growth, while only 2% did not. Only 3% of the sample used professional advisors while 97% did not. Size of the business was measured in terms of the number of employees. Most firms had no employees (80%), and 20% had at least 1 employee. Staffing was measured in terms of firms that trained their staff in the last 3 months. As seen, 96% of the firms had not trained staff in the last three months, and only 4% had trained staff.

Considering the sector variable, we found that the retail trade sector represented the majority of businesses (47%), while agriculture accounted for the lowest share (2%). The location variable classified firms into 3 geographical areas namely, city/town, urban villages and rural areas. Cities/towns accounted for most of the businesses (49%), while rural areas accounted the lowest share of businesses (14%). Age of business was categorized into 5 groups, with the lowest being less than 1 year and the highest being more than 10 years. Majority of the businesses had been in operation for 1-3 years (24%) and those that had been in business for at least 10 years accounted for only 20% of the firms.

Table 2: Descriptive statistics of variables used in the logit regression model

Variable	Mean	Standard Deviation
Business Success	0.78	0.41
Gender	0.68	0.46
Record keeping	0.11	0.31
Prior Employment	0.66	0.47
Education	0.27	0.44
Planning	0.98	0.13
Professional Advice	0.03	0.18
Staffing	0.96	0.20
Size of Business	0.81	0.39
Age	43	13
Age_Sq	1983	1266
Ownership Structure		
Sole Proprietor	0.85	0.35
Family Member	0.12	0.32
Partner	0.02	0.17
Coop	0.01	0.02
Sector		
Retail trade	0.47	0.49
Construction	0.03	0.17
Agriculture	0.02	0.15
Manufacturing	0.12	0.32
Transport	0.03	0.17
Services	0.33	0.47
Location		
City/town	0.49	0.50
Urban	0.37	0.48
Rural	0.14	0.35
Age of business		
Agebuss1 (Age<1)	0.23	0.42
Agebuss2 (1≤Age <3)	0.24	0.43
Agebuss3 (3≤Age <5)	0.14	0.35
Agebuss4 (5≤Age <10)	0.19	0.39
Agebuss5 (Age≥10)	0.20	0.40

Source: Author computed from ISS 2006/07

5. EMPIRICAL RESULTS

Table 3 reports the results from the estimated logit model. The table shows the coefficients, the associated p-values and their marginal effects. Statistical significance of the overall model is shown by the log-likelihood ratio (LR) test. The LR test shows that the model is a good fit for the data ($p< 0.001$). The pseudo-R^2 (0.0465) is low which is common for cross-sectional data. A diagnostic test for multicollinearity was conducted using the variance inflation factors (VIF). Low VIFs were produced from the test with the highest, lowest and the mean recorded at 1.67, 1.01 and 1.23, respectively. Since the VIFs are less than 10 we can conclude that multicollinearity is not a serious problem (Stock and Watson, 2003).

In addition, two model specification tests were conducted to test for goodness of fit. The first one involved computing the Ramsey Reset test which detests whether there is any omitted variable bias in the model. The test yielded a p-value of 0.0774 which is greater than the threshold of 0.05 (95% significance). We therefore conclude that we do not need more variables in the model. The second test is the 'link test' that uses the fitted values from our model to predict the dependent variable to test whether there is a specification problem in the model. Since the test produced a p-value of 0.93 (0.93>0.05), we fail to reject the null hypothesis that the model is correctly specified (Stock and Watson, 2003).

The results indicate that four variables (education, age of business, sector of business and size of the business) are statistically significant. The coefficient for the education variable is negative and statistically significant, and it suggests that businesses whose owners have no formal education are 3.3 percentage points less likely to succeed in business (to make positive profits) than those that have some form of education. This is an expected result since educated individuals are knowledgeable and skilled, which enhances success in business. These results are consistent with those of Chowdhury et al. (2013), Lussier and Pfeifer (2001), and Yusuf (1995). Size of the business was defined as the number of employees that the firm has. The marginal effect shows that a firm with no employees is 3.9 percentage points more likely to succeed than a firm that has employees.

Age of the business has had an influence on business success. Results reveal that firms that have been in business for 3-5 years are 3.4 percentage points more likely to succeed in business than those that have been in business for less than 1 year. Similarly, firms that have been in business for more than 10 years are 4.3 percentage points more likely to succeed than firms that have been in business for less than 1 year. The results are reflective of the fact that firm experience enhances success, probably because of networks and efficiencies that are built over time.

The sectors of services, agriculture, manufacturing and construction carry positive and statistically significant coefficients. This means that firms in these sectors have higher chances of success than firms in the retail sector. Businesses in the services sector are 17.4

percentage points more likely to succeed than those in the retail trade sector (reference category). According to te Velde and Cali (2007) the services sector in Botswana has potential for growth and is very important when it comes to employment creation; it accounted for about 61% of total employment in 2007. The sector also plays a significant role when it comes to economic diversification. Businesses in the manufacturing and agriculture sectors are 8.8 percentage points and 5.5 percentage points more likely to succeed than those in the retail trade sector. Those in the construction sector are 8 percentage points more likely to succeed than those in the retail trade sector. Firms in the transport sector are not different from those in the retail sector in terms of the probability of business success.

Table 3: Logit estimates of the determinants of business success

Variable	Coefficients	P-value	Marginal Effects
Gender	-0.0269	0.752	-0.004
Record keeping	-0.0193	0.867	-0.0032
Prior Employment	0.0219	0.771	0.0036
Education	-0.1974	0.013**	-0.0331
Staffing	0.2186	0.215	0.0377
Planning	0.2658	0.296	0.0466
Professional Advice	0.0678	0.730	0.0109
Size of Business	0.2296	0.019**	0.0390
Age	-0.0051	0.730	-0.0008
Age_Sq	0.0001	0.665	0.0001
Sector (Ref: Retail trade)			
Construction	0.5842	0.009***	0.0803
Agriculture	0.3769	0.082*	0.0551
Manufacturing	0.6219	0.000***	0.0875
Transport	0.3014	0.139	0.0451
Services	1.1942	0.000***	0.1735
Location (city/town)			
Urban	-0.0651	0.385	-0.0107
Rural	-0.0141	0.888	-0.0023
Ownership Structure (Sole-Proprietor)			
Family Member	-0.0943	0.383	-0.0157

Partner	0.1005	0.648	0.0159
Coop	-0.8979	0.479	-0.1826
Age of business (Agebuss1 reference)			
Agebuss2 (1≤Age <3)	0.0139	0.883	0.0023
Agebuss3 (3≤Age <5)	0.2194	0.058*	0.0341
Agebuss4 (5≤Age <10)	0.1583	0.140	0.0251
Agebuss5 (Age≥10)	0.2793	0.011**	0.0433

Pseudo R-Square	0.0465	
Log Likelihood	-2670.4645	
LR Chi-Square	266.11	0.000***
No. of Observations	5427	
Link test	0.93	
Ramsey Rest test	0.0774	

***; ** and * statistically significant at 1, 5 and 10 percent, respectively.

6.   CONCLUSIONS AND POLICY IMPLICATIONS

The main aim of this paper was to identify the factors that contribute to business success and to gain more insight on the informal sector in Botswana in general. Lussier prediction model was used to identify the independent variables and logistic regression was used to analyze informal sector business success in Botswana. The study found that age of the business, education level of owner, sector of business and size of business were the key determinants of business success in Botswana.

Age of the business is positively related to business success, meaning that those firms that have been in existence for longer periods of time are more likely to succeed than start-ups. Therefore, programs and policies for promoting business growth need to focus more on firms that are in start-up phase and early stages of operation. This means that more government support should target start-ups and firms at early stages of operation.

Education level of the owner is an important determinant of firm success. The results show that a firm owned by a person with no formal education is more likely to fail than that owned by a person with some formal education. Therefore, more emphasis needs to be put on education and training of the business owners. Training could be done as a pre-requisite for awarding grants or funding to a business. Also, entrepreneurial education needs to be introduced to learners as early as primary school to teach the youth about the basic skills of running a business.

A sector in which a firm operates also has an impact on business success. Firms that operate in services, manufacturing, agriculture and construction are more likely to succeed than those that operate in the retail sector. The four sectors have contributed little to GDP, but are labour-intensive. Strategies and policies need to be put in place to promote their growth in order to make firms in these sectors to flourish and succeed.

Size of the business was also found to influence business success. Firms that have no employees are more likely to succeed. This suggests that business owners are unable to manage the labour resources in order to attain success. However, because of the high unemployment in the country, government needs to assist in the growth of informal businesses who have more employees in order to encourage job creation. Capacitating business owners on business management skills, especially management of the human resources, is critical for the success of the businesses.

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