





# “Barriers to viability in small businesses in the footwear and textile industry of Tshwane, South Africa”

AUTHORS	Zelege Worku  <a href="https://orcid.org/0000-0002-8808-3052">https://orcid.org/0000-0002-8808-3052</a>
ARTICLE INFO	Zelege Worku (2015). Barriers to viability in small businesses in the footwear and textile industry of Tshwane, South Africa. <i>Problems and Perspectives in Management</i> , 13(3-1), 199-206
RELEASED ON	Tuesday, 24 November 2015
JOURNAL	"Problems and Perspectives in Management"
FOUNDER	LLC "Consulting Publishing Company "Business Perspectives"

		
NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
0	0	0

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Zelege Worku (South Africa)

# Barriers to viability in small businesses in the footwear and textile industry of Tshwane, South Africa

## Abstract

The South African Small Enterprises Development Agency (SEDA) provides financial and non-financial assistance to small, micro and medium-sized enterprises (SMMEs) in various economic sectors as a means of reducing the failure rate among SMMEs. The study is based on the 5-yearlong study (2007 to 2012) of 512 small, micro and medium-sized enterprises (SMMEs) that conduct business in the Tshwane region of South Africa conducted by Marivate (2014). In accordance with the definition of viability provided by Blank (2013), the study defines viable businesses as businesses that could operate without a loss for at least 3 years after start-up. The sample consists of 187 businesses that utilized financial services provided by the South African Government and 325 businesses that utilized non-financial services. The results show that long-term viability in the businesses that were selected for the study is significantly influenced by utilization of financial services, degree of entrepreneurial skills, and the ability to order large volumes of stock in bulk, in a decreasing order of strength. Utilization of financial services is significantly influenced by the degree of entrepreneurial skills, the ability to order large volumes of stock in bulk, and access to training opportunities on entrepreneurial or vocational skills. Utilization of non-financial services is significantly influenced by the age of business, past history of bankruptcy, and the practice of selling on credit.

**Keywords:** SMME, Tshwane, entrepreneurial skills, footwear and textile industry, panel data analysis, logit analysis.

**JEL Classification:** D24, M48.

## Introduction

The study was based on the 5-yearlong study (2007 to 2012) of small, micro and medium-sized enterprises (SMMEs) that conduct business in the Tshwane region of Gauteng Province in South Africa conducted by Marivate (2014). The purpose of study was to assess the benefits of government-initiated support programs for promoting the growth and development of small, micro and medium-sized enterprises (SMMEs) in South Africa. The study was based on a survey of 512 SMMEs conducting business in the footwear and textile industry in and around the Tshwane region of Gauteng Province in South Africa. The objective of study was to assess the benefits of government-initiated support programs for promoting the growth and development of SMMEs in South Africa. One of the aims of study was to identify and quantify key predictors of viability and long-term survival in SMMEs. A start-up business is said to be viable if it has been able to operate without making a loss for 3 years (Blank, 2013, pp. 63-72).

### 1. Objective of study

The overall objective of this study was to identify and quantify factors that affect long-term viability in SMMEs operating in the footwear and textile industry of Tshwane, and to propose feasible remedial actions so that support could be provided to struggling SMMEs. The study had the following specific objectives:

- ◆ to describe the characteristics of SMMEs in the footwear and textile industry of Tshwane;
- ◆ to assess the benefit of providing financial assistance to newly established SMMEs in the footwear and textile industry of Tshwane;
- ◆ to assess the benefit of providing non-financial assistance to newly established SMMEs in the footwear and textile industry of Tshwane; and
- ◆ to identify and quantify risk factors for early failure in newly established SMMEs in the footwear and textile industry of Tshwane.

**1.1. Research questions.** This study aims to provide adequate answers to the following research questions:

- ◆ What are the socioeconomic characteristics of SMMEs operating in the footwear and textile industry of Tshwane?
- ◆ How beneficial are the provision of financial and non-financial assistance to newly established SMMEs in the footwear and textile industry of Tshwane?
- ◆ What are the key factors that adversely affect long-term viability in newly established SMMEs in the footwear and textile industry of Tshwane?

### 2. Literature review

According to the South African Small Enterprise Finance Agency (2015), although the South African Government promotes the growth and development of SMMEs by massively investing in local institutions such as the South African Centre for Small Business Promotion (CSBP), Ntsika Enterprise Promotion Agency and Khula Enterprise Finance, the failure rate in newly established South African small, micro and medium-sized enterprises

is as high as 60%. Studies conducted by Ladzani & Netswera (2009) and Buckley & Ghauri (2012) have found that small and medium-sized enterprises often fail due to lack of access to finance and lack of entrepreneurial skills. At the national level, South African SMMEs in all economic sectors are characterized by an acute shortage of entrepreneurial and technical skills and difficulty in raising finance from micro-lending institutions at favorable rates (South African Small Enterprise Finance Agency, 2015). According to research conducted by the South African Chamber of Commerce and Industry (2015), the situation at the Pretoria region is not different from the situation at the national level. The purpose of the study is to identify and quantify key factors that are responsible for failure in small and medium-sized enterprises operating in the Pretoria region.

Studies conducted by Kolk and Van den Buuse (2012) and Marivate (2014) have shown that access to finance on favorable terms as well as the practice of coaching and mentoring of newly established small businesses are key predictors of viability and long-term survival in newly established small enterprises in developing nations such as South Africa. The study conducted by Chandra and Long (2013) has identified 3 key firm-level differential factors that affect profitability and long-term survival in start-up businesses in China. These three predictors were access to finance, coaching and mentoring and continuous improvement of entrepreneurial skills. The study conducted by Brynjolfsson and Hitt (2003) has shown that firm level characteristics such as degree of entrepreneurial skills, initial capital, current capital, source of initial capital, age of business, gender, level of education, ownership of premises, cost of labor and past history of bankruptcy are key predictors of long-term viability in start-up businesses. Studies conducted by Kolk and Van den Buuse (2012) and Marivate (2014) have shown that access to finance on favorable terms as well as the practice of coaching and mentoring of newly established small businesses are key predictors of viability and long-term survival in newly established small enterprises in developing nations such as South Africa. The study conducted by Collins and Hussey (2013) has shown that firm level characteristics such as the ability to develop business plans, the ability to conduct routine audit and bookkeeping, the ability to network with potential customers and rivals are influential predictor variables.

According to Rogerson (2013), micro and medium-sized enterprises are defined as an enterprise with a maximum asset base of about 10 million Rand excluding land and working capital in which between 10 and 300 employees work. According to Urban &

Naidoo (2012), SMMEs are defined as enterprises that have an asset of between 2,500 and 20 million Rand excluding the cost of land and working capital. According to the National Small Business Act of South Africa (the South African Department of Trade and Industry, 2015), micro enterprises are defined as businesses with a growth potential that involves the owner and family members or at most four employees, and have a turnover of less than 150, 000 Rand (the threshold for VAT registration). Small enterprises are defined as businesses with 5 to 100 employees that are managed by the owner and fulfil all relevant regulations. Medium-sized enterprises are defined as businesses that employ between 100 and 200 employees, are managed by their owners, and fulfil all relevant regulations. Small, micro, medium-scale enterprises (SMMEs) are also defined as enterprises with a minimum asset base of 25 million Rand excluding the cost of land and working capital by the South African Department of Trade and Industry (2015).

Based on findings reported by Qian, Theodore, Peng & Zeming (2010), Chen, Papazafeiropoulou & Dwivedi (2010) and Chetty & Stangl (2010), the survival of newly established SMMEs depends on equity and debt. Equity is often not available for newly established SMMEs in the form of venture capital or stock exchange due to relatively small levels of financing preferred by newly established SMMEs. As such, newly established SMMEs often depend upon bank loans, overdrafts and credit for early stage financing. The authors have found that SMMEs in Taiwan enjoy the benefit of integration with well-established supply chains and the manufacturing sector of the national economy in Taiwan. A report published by the World Bank (2014) shows that the viability and profitability of small businesses operating in developing nations is hampered by lack of efficiency in resolving bureaucratic matters, lack of good governance, accountability, transparency and good leadership, as well as the practice of rampant corruption. A similar finding was reported previously by Rogerson (2013) and Worku (2013). According to Marivate (2014) and Kelley, Singer & Herrington (2015), bureaucracy, red tape and corruption are well known factors that stifle growth in the SMME sectors of the economies of Sub-Saharan African countries. The author has found that the various programs of support designed for promoting SMMEs have not been fully utilized optimally by SMMEs who could benefit from the programs.

### 3. Methods and materials of study

The design of the 5-yearlong study (2007 to 2012) was descriptive and longitudinal. The study was based on a stratified random sample of 512 SMMEs

conducting business in the footwear and textile industry in the Tshwane region of Gauteng Province in South Africa. Geographical zones (central, east, west, north and south of Gauteng Province) were used as strata. The 5-yearlong study was conducted in order to assess the benefits of government-initiated support programs for promoting the growth and development of small, micro and medium-sized enterprises (SMMEs) in South Africa.

Data were collected from each one of the 512 SMMEs in the study on firm level characteristics such as viability (yes, no), financial assistance from the South African Government (yes, no) non-financial assistance from the South African Government (yes, no), level of entrepreneurial skills (adequate, inadequate), initial capital (100,000 Rand or less, greater than 100,000 Rand), age of business (1 year or less, 2 to 5 years, more than 5 years), labor cost (low, high), source of initial capital (loan, family or friends, own savings), past history of bankruptcy, past failure in loan repayment (yes, no), level of education (matric level or less, certificate, diploma, degree or above), gender (male, female), paying tax to the South African Revenue Services (yes, no), access to loan on favorable terms (yes, no), ownership of business premises (yes, no), availability of business plan (yes, no), book-keeping skills (yes, no), the practice of selling on credit (yes, no), ability to use social capital (yes, no), ability to order bulk stock on credit (yes, no), training opportunities on vocational skills (yes, no). The degree of entrepreneurial skills in each of the 512 businesses that were selected for the study was measured by using a 5-point Likert scale (poor, below average, average, above average, good) as recommended by Le Brasseur, Zannibbi & Zinger (2013). The 5 categories were subsequently collapsed into 2 categories (inadequate, adequate) for performing data analyses.

The study had 2 dependent or explanatory variables of study. These were utilization of financial services ( $Y_1$ ) and utilization of non-financial services ( $Y_2$ ). Data were collected from each of the 512 businesses selected for the study on a large number of socioeconomic variables of study denoted by  $X_1, X_2, \dots, X_k$

$$Y_1 = \begin{cases} 1 & \text{if financial services are used} \\ 0 & \text{otherwise} \end{cases}$$

$$Y_2 = \begin{cases} 1 & \text{if non-financial services are used} \\ 0 & \text{otherwise} \end{cases}$$

The functional form for multiple linear regression analysis is given by:

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k + \varepsilon_i$$

for  $i = 1, 2, \dots, n$ ,

where

$X_1, X_2, \dots, X_k$  represent the independent variables of study on which data were collected from the 512 small businesses that were selected for the study. Each of the  $k$  independent variables of study was dichotomous (Yes, No). Estimates are obtained for the  $k+1$  regression coefficients  $\beta_0, \beta_1, \dots, \beta_k$  by using maximum likelihood estimation. The fitted line of regression can be used to predict values of  $Y$  given values of the  $X$  variables. The expression  $\varepsilon$  denotes the random error term in the model. The usual tests produced by most statistical packages assume that the errors are independent, and follow a normal distribution with mean 0 and constant variance  $\sigma^2$ . That is,  $\varepsilon \sim N(0, \sigma^2 I_n)$ . The variance  $\sigma^2$  is estimated by the sample variance  $S^2$ .

The fitted or estimated line of regression is expressed as:

$$\hat{Y} = \hat{\beta}_0 + \hat{\beta}_1 X_1 + \dots + \hat{\beta}_k X_k = E(Y|X = x).$$

**3.1. The binary logistic regression model.**  $Y_1$  and  $Y_2$  are each regressed on the predictor variables  $X_1, X_2, \dots, X_k$ .

$X_1, X_2, \dots, X_k$  are a combination of  $r$  discrete and continuous explanatory variables that affect the outcome variables  $Y_1$  and  $Y_2$ .

Let  $p_i$  denote the probability that an SMME utilizes financial or non-financial services. The possible values of  $Y_1$  (utilization of financial services) are 1 if yes, and 0 otherwise. Likewise, the possible values of  $Y_2$  (utilization of non-financial services) are 1 if yes, and 0 otherwise.  $Y_i$  denotes the utilization status of the  $i^{th}$  SMME in the study where  $i = 1, \dots, n$ .

$$p_i = \frac{\exp[\beta_0 + \beta_1 x_1 + \dots + \beta_r x_r]}{1 + \exp[\beta_0 + \beta_1 x_1 + \dots + \beta_r x_r]} = \frac{\exp(X\beta)}{1 + \exp(X\beta)}.$$

The non-linear model shown above for  $p_i$  can be transformed into a multiple linear regression model by applying the logarithmic transformation as shown below:



$$\log \text{it } (p_i) = \log \left( \frac{p_i}{1-p_i} \right) = \hat{\beta}_0 + \hat{\beta}_1 X_1 + \dots + \hat{\beta}_r X_r$$

The statistical models for  $Y_1$  and  $Y_2$  have analogous expressions.

**3.2. The Cox proportional hazards model.** The design of the study was descriptive and longitudinal (01 January 2007 to 31 December 2012) and descriptive. Data were gathered on a monthly basis from each of the 512 businesses that were selected for the study (Marivate, 2014). The Cox proportional hazards model (Cleves, Gould & Gutierrez, 2004) was used for estimating hazard ratios for key predictors of viability. Some of the 512 businesses in the study were right censored. The adequacy of the fitted Cox regression model was assessed using the likelihood ratio test and Akaike's information criterion (AIC) statistic. The fulfilment of the proportional hazards assumption was tested by use of log-minus-log plots. The duration of survival of businesses was measured for each of the 512 enterprises in the study by using 01 January 2007 as the starting point. Enterprises that were still operational at the end of the study period (31 December 2012) were considered right-censored observations as their exact durations of survival could not be measured due to administrative censoring (inability to measure the survival times of businesses beyond the date at which the study came to an end) at the end of the study period. For enterprises that ceased operation prior to 31 December 2012, survival time was defined as the number of days of operation between 01 January 2007 and the date of closure.

The Cox proportional hazards model takes censored observations into account, and this property of the model makes it quite attractive in comparison with other models used for panel data analysis in economic studies. Hazard ratios were used as an econometric measure of effect. Key predictors of survival are identified and estimated based on hazard ratios. Kaplan-Meier survival probability curves were used for comparing businesses that survived the 5-year study period (viable businesses) with businesses that did not survive the study period (non-viable businesses) with regards to key predictors of survival. Kaplan-Meier survival probability curves were used for comparing viable businesses with non-viable businesses graphically. At the 5% level of significance, influential predictors of survival are characterized by hazard ratios that differ from 1 significantly, 95% confidence intervals of hazard ratios that do not contain 1, and  $p$ -values that are smaller than 0.05.

Maximum Likelihood estimators were used for estimating parameters. The statistical package STATA version 13 (STATA Corporation, 2012) was used for data entry and analyses.

#### 4. Results of data analyses

During the 5-year study period (2007 to 2012), 187 of the 512 SMMEs selected for the study (36.52%) utilized financial services at least once in the course of study, whereas 325 of the 512 SMMEs in the study (63.48%) utilized non-financial services at least once in the course of study. Out of the 187 businesses that utilized financial services, 85.42% of them were viable, whereas 14.58% of them were not viable. Out of the 325 businesses that utilized non-financial services, 43.25% of them were viable, whereas 56.75% of them were not viable. These findings suggest that the 187 businesses that utilized financial services (36.52%) were relatively more viable in comparison with businesses that utilized non-financial services (63.48%).

Table 1 shows a comparison between businesses that utilized financial services and businesses that did not utilize financial services with regards to general characteristics, as observed at the end of the 5-year study period. It can be seen from the table that businesses that utilized financial services were more viable and skilled in comparison with businesses that did not utilize financial services. Businesses that utilized financial services were characterized by more viability, relatively better entrepreneurial skills, relatively larger initial and current capital, relatively better profit, relatively larger number of employees, relatively older duration of operation, the ability to secure loan from money lending institutions such as commercial banks, relatively low prevalence of past failure and bankruptcy, relatively better formal education, and the ability to pay tax to the South African Receiver of Revenue (SARS). The table shows that businesses that utilized financial services from Government support agencies managed to increase their current capital much better in comparison with businesses that did not utilize financial services from Government support agencies.

Table 1. Comparison with regards to general characteristics

Characteristic	Businesses that utilized financial services (n=187)	Businesses that did not utilize financial services (n=325)
Viability	Yes: 85.42% No: 14.58%	Yes: 43.25% No: 56.75%
Entrepreneurial skills	Adequate: 82.29% Poor: 17.71%	Adequate: 29.17% Poor: 70.83%
Initial capital	≤ 100,000 Rand: 17.04% > 100,000 Rand: 82.96%	≤ 100,000 Rand: 54.17% > 100,000 Rand: 45.83%
Current capital	≤ 300,000 Rand: 34.74% > 300,000 Rand: 65.26%	≤ 300,000 Rand: 76.15% > 300,000 Rand: 23.85%

Table 1 (cont). Comparison with regards to general characteristics

Characteristic	Businesses that utilized financial services (n=187)	Businesses that did not utilize financial services (n=325)
Average monthly profit	≤ 50,000 Rand: 92.81% > 50,000 Rand: 7.19%	≤ 50,000 Rand: 97.56% > 50,000 Rand: 2.44%
Age of businesses in years	1 year or less: 12.48% 2 to 5 years: 32.15% More than 5 years: 55.37%	1 year or less: 34.26% 2 to 5 years: 36.66% More than 5 years: 29.08%
Number of employees	2 or fewer: 88.96% 3 or more: 11.04%	2 or fewer: 94.34% 3 or more: 5.66%
Labour cost	Fair: 84.38% High: 15.63%	Fair: 25.00% High: 75.00%
Source of initial capital	Loan: 55.25% Family or friends: 21.58% Own savings: 23.17%	Loan: 17.45% Family or friends: 49.08% Own savings: 33.47%
Past failure in loan repayment ever	Yes: 11.56% No: 88.44%	Yes: 66.35% No: 33.65%
Highest level of education	≤ Matric level: 12.25% Certificate: 10.05% Diploma: 32.15% Degree of above: 45.55%	≤ Matric level: 39.75% Certificate: 18.36% Diploma: 24.33% Degree of above: 17.56%
Gender of business operator	Male: 75.00% Female: 25.00%	Male: 87.50% Female: 12.50%
Paying tax to SARS	Yes: 85.42% No: 14.58%	Yes: 61.09% No: 38.91%

Table 2 shows a comparison between businesses that utilized financial services and businesses that did not utilize financial services with regards to well-known indicators of viability and long-term survival in SMMEs operating in Sub-Saharan African countries including South Africa, as observed at the end of the 5-year study period. It can be seen from the table that businesses that utilized financial services were characterized by easy access to loans, ownership of premises used for conducting business, the ability to draw up business plans, the ability to conduct bookkeeping, participation in social capital, the ability to order large volumes of stock in bulk on credit, and easy access to skills-related and vocational skills.

Table 2. Comparison with regards to indicators of viability in SMMEs

Characteristic	Businesses that utilized financial services (n=187)	Businesses that did not utilize financial services (n=325)
Access to loan	Yes: 86.46% No: 13.54%	Yes: 33.33% No: 66.67%
Business premises	Own: 46.88% Rent: 53.13%	Own: 25.00% Rent: 75.00%
Business plan	Available: 77.08% Not available: 22.92%	Available: 54.17% Not available: 45.83%
Book-keeping skills	Yes: 75.00% No: 25.00%	Yes: 15.00% No: 85.00%
Selling on credit	Yes: 1.04% No: 98.96%	Yes: 54.17% No: 45.83%

Use of social capital	Yes: 9.38% No: 90.63%	Yes: 4.17% No: 95.83%
Ability to order bulk stock on credit	Yes: 9.38% No: 90.63%	Yes: 4.17% No: 95.83%
Training opportunities on entrepreneurial or vocational skills	Yes: 9.38% No: 90.63%	Yes: 4.17% No: 95.83%

Table 3 shows adjusted odds ratios estimated from logistic regression analysis (Hosmer & Lemeshow, 2002) in which odds ratios were estimated for 5 factors that significantly influenced viability in the 512 businesses that were selected for the study. Adjustment was done for geographical location, age of business operator and gender. It can be seen from the table that viability in all businesses was significantly influenced by utilization of financial services, degree of entrepreneurial skills, the ability to order large volumes of stock in bulk, access to training opportunities on entrepreneurial or vocational skills, and source of initial capital, in a decreasing order of strength.

Table 3. Odds ratios estimated from logistic regression analysis (n = 512)

Factors that affect viability of businesses	Odds ratio	95% Confidence interval	p-value
Utilization of financial services	5.08	[2.12, 7.89]	0.0000***
Entrepreneurial skills	4.65	[2.01, 6.68]	0.0000***
Ability to order bulk stock on credit	3.83	[1.89, 5.46]	0.0000***
Training opportunities on entrepreneurial or vocational skills	2.89	[1.49, 5.36]	0.0000***
Source of initial capital	2.57	[1.39, 5.22]	0.0000***

Key: Significance at \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$  levels

In Table 3, the adjusted odds ratio of the variable utilization of financial services is equal to 5.08. This shows that a business that fails to utilize financial services is 5.08 times as likely not be viable in comparison with a business that utilizes financial services. The adjusted odds ratio of the variable entrepreneurial skills is equal to 4.65. This shows that a business that is run by someone who does not have adequate entrepreneurial skills is 4.65 times as likely not be viable in comparison with a business that is run by someone who has adequate entrepreneurial skills. The adjusted odds ratio of the variable ordering bulk stock on credit is equal to 3.83. This shows that a business that is run by someone who does not have the capacity for ordering bulk stock on credit is 3.83 times as likely not be viable in comparison with a business that is run by someone who has the capacity for ordering bulk stock on credit. Likewise, similar interpretations could be provided for the last two variables in Table 3.

Table 4 shows adjusted hazard ratios that were estimated from the Cox proportional hazards model.

The Table shows that long-term viability in the 512 businesses that were selected for the study was significantly influenced by utilization of financial services, degree of entrepreneurial skills, and the ability to order large volumes of stock in bulk on credit, in a decreasing order of strength. Adjustment was done for geographical location, age of business operator and gender.

Table 4. Hazard ratios estimated from the Cox proportional hazards model (n = 512)

Factors that affect long-term viability and survival	Hazard ratio	95% confidence interval	p-value
Utilization of financial services	3.28	[1.36, 5.79]	0.0000***
Degree of entrepreneurial skills	2.88	[1.14, 4.86]	0.0000***
Ability to order large volumes of stock in bulk on credit	2.41	[1.13, 4.67]	0.0000***

Key: Significance at \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$  levels

The hazard ratios estimated from the Cox Proportional Hazards Model in Table 4 are fairly similar to the odds ratios estimated from binary logistic regression analysis in Table 3. Hazard ratios estimated from the Cox proportional hazards model carry more weight theoretically in comparison with odds ratios estimated from binary logistic regression model. As such, interpretation of results will be made based on hazard ratios.

The adequacy of the fitted Cox model was assessed using log-minus-log plots, the likelihood ratio test and the AIC (Akaike's Information Criterion) as diagnostic procedures. All log-minus-log plots were parallel, showing that the assumption of proportional hazards was satisfied. The  $p$ -value from the likelihood ratio test was small ( $0.0001 < 0.01$ ), thereby showing that the 3 variables constituting the fitted Cox model were jointly efficient in explaining variability in long term survival at the 1% level of significance. The estimated value of the AIC statistic was also small (9.47), thereby showing that the discrepancy between the fitted and true models was insignificant (Verbeek, 2000).

Figure 1 shows a Kaplan-Meier survival probability curve that compares the survival probability of businesses that were run by operators with adequate entrepreneurial skills with the survival probability of businesses that were run by operators with inadequate entrepreneurial skills. The X-axis in Table 1 below represents the duration of study in months (5 years or 60 months). The Y-axis represents probabilities of survival, varying from 0 to 1. It can be seen from the figure that the survival probabilities of businesses that were run by operators with adequate entrepreneurial skills were better throughout the 5-year duration of study.

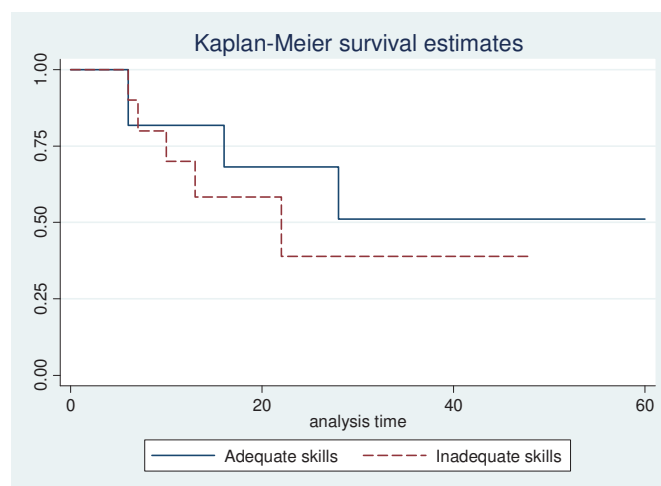


Fig. 1. Kaplan-Meier survival probabilities by level of entrepreneurial skills

## Discussions of results

Findings obtained from the study are consistent with similar findings reported by Marivate (2014). Findings of the study have shown that both financial and non-financial assistances are beneficial to newly established SMMEs. During the study period, 187 of the 512 SMMEs selected for the study (36.52%) utilized financial services at least once in the course of study, where as 325 of the 512 SMMEs in the study (63.48%) utilized non-financial services at least once

in the course of study. Out of the 187 businesses that utilized financial services, 85.42% of them were viable, whereas 14.58% of them were not viable. Out of the 325 businesses that utilized non-financial services, 43.25% of them were viable, whereas 56.75% of them were not viable. These findings suggest that the 187 businesses that utilized financial services (36.52%) were relatively more viable in comparison with businesses that utilized non-financial services (63.48%).

A comparison was made between businesses that utilized financial services and businesses that did not utilize financial services with regards to general characteristics. The results showed that businesses that utilized financial services were more viable and skilled in comparison with businesses that did not utilize financial services. Businesses that utilized financial services were characterized by more viability, relatively better entrepreneurial skills, relatively larger initial and current capital, relatively older duration of operation, the ability to secure loan from money lending institutions such as commercial banks, relatively low prevalence of past failure and bankruptcy, relatively better formal education, and the ability to pay tax to the South African Receiver of Revenue (SARS). The results showed that businesses that utilized financial services from Government support agencies managed to increase their current capital much better in comparison with businesses that did not utilize financial services from Government support agencies.

Results obtained from the study showed that businesses that utilized financial services were characterized by easy access to loans, ownership of premises used for conducting business, the ability to draw up business plans, the ability to conduct bookkeeping, participation in social capital, the ability to order large volumes of stock in bulk on credit, and easy access to skills-related and vocational skills.

Based on results obtained from binary logistic regression analysis, viability in the 512 businesses that were selected for the study was significantly influenced by utilization of financial services, degree of entrepreneurial skills, the ability to order large volumes of stock in bulk, access to training opportunities on entrepreneurial or vocational skills, and source of initial capital, in a decreasing order of strength. The top 3 predictors of utilization of financial services in the 187 businesses that utilized financial services were degree of entrepreneurial skills, the ability to order large volumes of stock in bulk, and access to training opportunities on entrepreneurial or vocational skills, in a decreasing order of strength. The top 3 predictors of utilization of non-financial services in the 325 businesses that utilized non-financial services were the age of business, past history of bankruptcy, and the practice of selling on credit, in a decreasing order of strength.

### Recommendations

The study has produced key findings based on results obtained from the study. The following recommendations are consistent with recommendations made by Marivate (2014), and are

made to the South African National Department of Trade and Industry, the South African Department of Higher Education and Training, and the South African Chamber of Commerce and Industry with a view to improve viability in small and medium-sized enterprises operating in the Pretoria region of Gauteng Province. The recommendations have the potential for improving the plight of struggling small and medium-sized enterprises in the Tshwane region of Gauteng Province.

- ◆ It is necessary to establish a comprehensive database of SMMEs operating in the various sectors of the South African economy.
- ◆ It is necessary to design relevant and tailor-made skills based training programs on vocational and entrepreneurial activities in which young matric graduates can be equipped with the skills they need to run businesses successfully.
- ◆ It is necessary to provide mentorship and supervisory assistance to newly established small and medium-sized enterprises for a period of at least three years or more.
- ◆ It is vital to encourage academic and research institutions to create academic programs in which trainees can acquire experiential training by working for businesses and industries as part of their academic training in South African institutions of higher learning.
- ◆ It is necessary to monitor and evaluate the viability of newly established small businesses on a monthly basis. This task falls under the ambit of the South African Department of Trade and Industry. Such an intervention has the potential for minimizing the rate at which newly established small businesses fail in and around the city of Pretoria.

### Limitation of study

The study was conducted only in the Tshwane region of Gauteng Province in South Africa mostly due to shortage of resources. Small, micro and medium-sized enterprises operating in and around Tshwane have a relatively smaller capacity in terms of trade volume and exposure to the general South African market in comparison with businesses that operate in and around the city of Johannesburg. As such, it would be worthwhile to extend the study to the city of Johannesburg. Findings obtained from this particular study may not be generalized to businesses that operate in and around the city of Johannesburg.

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