THE IMPACT OF SERVICE QUALITY ON THE VIABILITY OF START-UP BUSINESSES

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Abstract

A 3-year long survey was conducted in the Tshwane geographical region of Gauteng Province in South Africa in order to identify and quantify key predictors of adequate municipal services that are routinely provided to customers who operate newly established small businesses in the City of Tshwane, Pretoria, South Africa. Data was collected by using a structured, pre-tested and validated questionnaire of study from a stratified random sample of size 1, 058 small businesses. The key objective of study was to assess the relationship between viability in small businesses and the provision of quality municipal services by the City of Tshwane. The study was conducted against the background of a high failure rate among newly established small businesses in the City of Tshwane. The study was conducted over a 3-year period (2012 to 2014). Data was collected monthly during the three-year period of study on socioeconomic variables that are known to affect the perception of business operators on the quality of municipal services to business operators and the general public. Statistical procedures such as cross-tab analyses, panel data analysis, Markov Chain Monte Carlo (MCMC) algorithms and Bayesian methods were used for estimating parameters. The study showed that there was a significant association between positive perception of business operators on the quality of municipal services provided to them and viability of businesses. The results showed that 87% of viable businesses were satisfied with the quality of routine municipal services that were provided to them by the City of Tshwane. The corresponding figure for non-viable businesses was only 14%. The viability of businesses was significantly influenced by 3 predictor variables. These predictor variables were: lack of capacity for fulfilling the business and entrepreneurial needs of newly established businesses [Hazard Ratio = 3.58; P=0.000; 95% C. I. = (1.45, 5.46)], inappropriate policy [Hazard Ratio = 3.19; P=0.000; 95% C. I. = (1.39, 5.28)], and lack of tailor made training programmes directed at newly established small businesses [Hazard Ratio = 2.89; P=0.000; 95% C. I. = (1.24, 4.77)], in a decreasing order of strength. Similar findings were obtained from the analyses of in-depth interviews.

Keywords: City of Tshwane, Small businesses, Municipal services, Perception, Hazard ratio

1. INTRODUCTION AND BACKGROUND TO STUDY

The primary study was conducted by Khale and Worku (2015) by following up 1, 058 start-up small, micro and medium-sized enterprises (SMMEs) in the Tshwane region of Gauteng Province in South Africa. The key objective of study was to assess the relationship between viability in small businesses and the provision of quality municipal services by the City of Tshwane. The study was conducted against the background of a high failure rate among newly established small businesses in the City of Tshwane. The study was conducted over a 3-year period (2012 to 2014). Data was collected monthly during the three-year period of study on socioeconomic variables that are known to affect the perception of business operators on the quality of municipal services to business operators and the general public.

According to Brownson (2014), Henrekson (2014), Marivate (2014), Khale (2015), Seeletse (2012) and Worku (2014), one key obstacle to sustained growth and viability in small businesses is failure to provide small businesses with high quality and efficient municipal services. The aim of the study was to assess the relationship between the provision of adequate municipal services and viability in newly established SMMEs conducting business in and around the City of Tshwane. Findings obtained from the study conducted by the South African Small Enterprise Development Agency (2013) have shown that 60% of all newly established small businesses in South Africa fail within their first year of operation. The study conducted by Marivate (2014) shows that the quality of routine municipal services that are provided to newly established SMMEs is grossly inadequate. The study by Khale (2015) has shown that lack of efficient municipal services is a key predictor of failure in newly established businesses in the City of Tshwane. A study conducted by the South African Department of Trade and Industry (2013) has pointed out that the degree of support provided to newly established SMMEs in all parts of South Africa is grossly inadequate. As a result of inadequate municipal services, newly established SMMEs are seen failing in a number of areas of specialization (Khale, 2015; Marivate, 2014; South African Chamber of Commerce and Industry, 2013;

South African National Department of Trade and Industry, 2013; South African Small Enterprise Development Agency, 2013; Ladzani & Netswera, 2009).

The aim of the study was to assess the impact of quality services on the viability of start-up SMMEs in the City of Tshwane. The study aimed to identify key causes of failure in newly established businesses in Tshwane. According to the South African Small Enterprise Development Agency (2013: 1-5), although the South African Government promotes the growth and development of small and medium-sized enterprises 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 and medium-sized enterprises is as high as 60%. The study conducted by Ladzani and Netswera (2009: 17-19) has found that small and medium-sized enterprises often fail due to lack of access to finance and lack of entrepreneurial skills.

2. OBJECTIVES OF STUDY

The overall objective of study was to assess the relationship between viability in small businesses and the provision of quality municipal services by the City of Tshwane. The study had the following specific objectives:

- To assess the relationship between viability in newly established SMMEs in the Tshwane region of Gauteng Province and the provision of quality municipal services to small businesses;
- To estimate the percentage of newly established SMMEs in the Tshwane region of Gauteng Province that fail in their first three years of establishment;
- To identify factors that adversely affect sustained growth and viability in small and medium-sized enterprises in the Tshwane region of Gauteng Province;
- To propose suitable and feasible remedial actions that could assist small and medium-sized enterprises in the Tshwane region of Gauteng Province;

3. LITERATURE REVIEW

Studies conducted by Ladzani and Netswera (2009), Seeletse (2012), Marivate (2014), Brownson (2014), Henrekson (2014), Shree and Urban (2012), Booysens (2011), Bezuidenhout and Nenungwi (2012), Asah, Fatoki and Rungani (2012), Edoho (2015) and Worku (2014) have shown that the key obstacles for sustained growth and development in newly established SMMEs in South Africa are lack of entrepreneurial skills, lack of access to finance, poor vocational skills, cumbersome bureaucratic problems and lack of adherence to the fundamental principles of good governance in the management and administration of newly established SMMEs. Khale (2015) has found that newly established SMMEs in Gauteng Province are adversely affected as a result of poor municipal services. The annual report issued by the South African Small Enterprises Development Agency (SEDA, 2014) has also pointed out that newly established SMMEs fail due to lack of adequate municipal services. According to SEDA (2014), small, micro and medium-sized enterprises (SMMEs) are defined as enterprises that employ less than or equal to 250 employees. SMMEs are also 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. Marivate (2014) defines an SMME as an enterprise that has an asset of between 2, 500 and 20 million Rand excluding the cost of land and working capital. There are various business structures that are suitable for small businesses.

Studies conducted in the City of Tshwane by Khale (2015) and Marivate (2014) have shown that the quality of municipal services that are being provided to start-up businesses operating in Tshwane are of poor quality, and that sustained viability in SMMEs was being undermined as a result of this. A similar finding has been reported by the South African Chamber of Commerce and Industry (2013), the South African National Department of Trade and Industry (2013), the South African Small Enterprise Development Agency (2013) and Ladzani and Netswera (2009). The study was prompted by the need to improve the plight of struggling start-up businesses in the various parts of Tshwane by improving the quality of municipal services that are needed routinely by SMMEs operating in the various geographical parts of Tshwane, South Africa.

According to a report issued by the South African Chamber of Commerce and Industry (2013:2-3), more than 30% of the total gross domestic product of South Africa is attributed to small and medium-sized enterprises. About 20% of all units exported by South Africa are produced by small and medium-sized enterprises.

4. METHODS AND MATERIALS OF STUDY

The design of study was longitudinal (2012 to 2014). Data was gathered (Khale, 2015) from a random sample of 1058 small, micro and medium-sized businesses conducting business in and around the City of Tshwane. Monthly data was gathered on a large number of socio-economic variables that affect the long-term survival of businesses. Data were gathered on the perception held by owners and operators of SMMEs on the quality of routine municipal services that are provided to SMMEs by municipal officials and employees. Additional data was collected from the businesses selected for the study on several socioeconomic variables that are known to affect viability in SMMEs. Examples of such variables are the duration of operation, amount of startup capital, level of education of business operators, level of skills of business operators, suitability of business premises, level of support provided by the South African Department of Trade and Industry to small businesses, source of finance, amount of loan borrowed by business operators, profit made, total revenue, operational cost, access to training opportunities on business operations, supervisory assistance, tax amount, method used for tax assessment, access to supplies needed by businesses, demand for goods and services in the local market, perception on level of assistance provided by the government, etc. Data collection was made by the City of Tshwane Metropolitan Municipality (Khale, 2015).

Statistical data analyses were performed by using Pearson's chi-square tests of association (Hair, Black, Rabin and Anderson, 2010), panel data analysis (Cleves, Gould & Gutierrez, 2004) and Marcov Chain Monte Carlo (MCMC) algorithms (Browne & Goldstein, 2010: 453-473). Makov Chain Monte Carlo (MCMC) algorithms (Browne and Goldstein, 2010: 453-473) were used for performing bootstrapping simulations. MCMC algorithms are used for solving multilevel problems that involve the construction of constrained variance matrices in cases where linear estimation techniques fail to produce theoretically reliable estimates of parameters. The statistical package STATA version 13 (STATA Corporation, 2013) was used for data entry and analyses.

5. RESULTS OF STUDY

The results showed that there was a statistically significant association between sustained viability in small businesses and positive perception on the quality of routine municipal services delivered to small businesses. The results showed that 87% of viable businesses were satisfied with the quality of routine municipal services that were provided to them by the City of Tshwane. The corresponding figure for non-viable businesses was only 14%. Table 1 shows the general characteristics of two groups of businesses (viable and non-viable businesses). The table provides frequency proportions for 6 key predictors of viability in small businesses. It can be seen from Table 1 that 631 of the 1058 businesses that took part in the study (59.64%) were viable whereas 427 of them (40.36%) were not viable. The table shows that the perception held by owners and operators of viable businesses were relatively more positive in comparison with the perceptions held by the owners and operators of non-viable businesses with regards to capacity, policy, the suitability of training programmes provided to newly established businesses, the ease of securing loans, entrepreneurial skills and past history of bankruptcy. Viable businesses were operated by owners and managers with relatively higher levels of entrepreneurial skills. Non-viable businesses were characterized by inability to secure loan needed for business operation (65%) and past history of bankruptcy (54%). The corresponding figures for viable businesses were only 27% and 13% respectively.

Table 1. Group proportions with regards to the financial viability of small businesses

Predictor variable	Viable (n=631)	Not viable (n=427)
Perception on the quality of municipal services provided to newly established SMMEs	Positive: 87% Negative: 13%	Positive: 14% Negative: 86%
Capacity for fulfilling the business and entrepreneurial needs of newly established SMMEs	Adequate: 71% Inadequate: 29%	Adequate: 28% Inadequate: 72%
Policy used for supporting newly established small businesses	Adequate: 56% Inadequate: 44%	Adequate: 31% Inadequate: 69%
Presence of tailor-made training programmes for owners and operators of SMMEs	Adequate: 69% Inadequate: 31%	Adequate: 34% Inadequate: 66%
Ability to secure loan needed for business operation	Easy: 73% Difficult: 27%	Easy: 35% Difficult: 65%
Level of entrepreneurial skills of business owners and operators	Adequate: 74% Inadequate: 36%	Adequate: 33% Inadequate: 65%
Past history of bankruptcy	Yes: 13% No: 87%	Yes: 54% No: 46%

Table 2, below, shows adjusted hazard ratios estimated from panel data analysis in which the Cox Proportional Hazards Model was used. It can be seen from the table that failure in small businesses was significantly influenced by 3 predictor variables. These 3 influential predictor variables were: negative perception on the quality of municipal services provided to newly established businesses [Hazard Ratio = 3.58; P=0.000; 95% C. I. = (1.45, 5.46)], inappropriate policy [Hazard Ratio = 3.19; P=0.000; 95% C. I. = (1.39, 5.28)], and lack of tailor made training programmes directed at newly established small businesses [Hazard Ratio = 2.89; P=0.000; 95% C. I. = (1.24, 4.77)], in a decreasing order of strength.

Table 2. Adjusted hazard ratios estimated from panel data analysis

Variable	*Adjusted Hazard Ratio	P-value	95% C.I.
Negative perception on the quality of municipal services	3.58	0.000	(1.45, 5.46)
Inappropriate policy	3.19	0.000	(1.39, 5.28)
Lack of tailor made training programmes	2.89	0.000	(1.24, 4.77)

** Adjustment was done for geographical location, age of owner and gender*

The percentage of overall correct classification for the fitted logistic regression model was equal to 88.53%. The P-value for the Hosmer-Lemeshow goodness-of-fit test was equal to 0.1109 > 0.05, thereby indicating that the fitted logistic regression model was theoretically reliable.

The adjusted hazard ratio of the variable "Negative perception on the quality of municipal services" is 3.58. This shows that businesses that were owned or operated by people with a negative perception on the quality of municipal services provided to newly established businesses were 3.58 times as likely to fail in comparison with businesses that were owned or operated by people with a positive perception on the quality of municipal services provided to newly established businesses. The adjusted hazard ratio of the variable "inappropriate policy" is 3.19. This shows that businesses that were owned or operated by people with the perception that the City of Tshwane was implementing inappropriate policy on the growth and development of newly established SMMEs were 3.19 times as likely to fail in comparison with businesses that were owned or operated by people with the perception that the City of Tshwane was implementing an appropriate policy on the growth and development of newly established SMMEs. The adjusted hazard ratio of the variable "lack of tailor

made training programmes" is 2.89. This shows that businesses that were owned or operated by people with the perception that the City of Tshwane did not have a tailor made training programme for newly established SMMEs were 2.89 times as likely to fail in comparison with businesses that were owned or operated by people with the perception that the City of Tshwane has a tailor made training programme for newly established SMMEs".

5.1. Results obtained from Makov Chain Monte Carlo (MCMC) algorithms

Makov Chain Monte Carlo (MCMC) algorithms (Browne and Goldstein, 2010: 453-473) were used for performing bootstrapping simulations. MCMC algorithms are used for solving multilevel problems that involve the construction of constrained variance matrices in cases where linear estimation techniques fail to produce theoretically reliable estimates of parameters. MCMC algorithms are used extensively as part of Bayesian analysis. Table 3 shows adjusted regression coefficients estimated from MCMC algorithms.

At the 5% level of significance, influential predictor variables of satisfactory performance are characterized by estimated regression coefficients that differ from 0 significantly, P-values that are smaller than 0.05, and 95% confidence intervals that do not contain the number 0.

Table 3. Adjusted linear regression coefficients estimated from MCMC algorithm

Predictor variable	**Adjusted linear regression coefficient*	*95% Confidence Interval*	*P-value*
Negative perception on the quality of municipal services	1.29	(0.79, 3.41)	0.000
Inappropriate policy	1.18	(0.76, 3.39)	0.000
Lack of access to tailor made training programmes	1.08	(0.64, 3.27)	0.000

** Adjustment was done for geographical location, age of owner and gender*

The estimates obtained by using MCMC algorithms and Bayesian analysis were fairly similar to estimates obtained from panel data analysis.

6. DISCUSSION OF RESULTS

The results showed that 87% of viable businesses were satisfied with the quality of routine municipal services that were provided to them by the City of Tshwane. The corresponding figure for non-viable businesses was only 14%. The study found that nearly 60% of the 1058 business owners and operators that were selected for the study were viable whereas the remaining 40% of businesses were not viable. Viable businesses were run by owners and operators who felt that the quality of municipal services provided to newly established SMMEs was generally satisfactory, whereas non-viable SMMEs were run by owners and operators who felt that the quality of municipal services provided to newly established SMMEs was not satisfactory. In general, the perception held by owners and operators of viable businesses were relatively more positive in comparison with the perceptions held by the owners and operators of non-viable businesses with regards to the quality of municipal service delivery, capacity, policy, the suitability of training programmes provided to newly established businesses, the ease of securing loans, entrepreneurial skills and past history of bankruptcy. Viable businesses were operated by owners and managers with relatively higher levels of entrepreneurial skills. Non-viable businesses were characterized by inability to secure loan needed for business operation (65%) and past history of bankruptcy (54%). The corresponding figures for viable businesses were only 27% and 13% respectively.

Results obtained from Pearson's chi-square tests of associations ($P < 0.05$) showed that businesses fail due to lack of initial capital, failure to utilize finance in accordance with business plan, high labour cost, shortage of entrepreneurial skills that are needed for operating business, adverse market conditions, difficulty in securing loans needed for business, inability to pay fees that are required for renting business premises, inability to draw up business plans, inability to do bookkeeping, the practice of selling on credit, the status of business being operated, and lack of training opportunities that are relevant to the business being operated. Businesses that failed were characterized by loss of money, inability to draw up business plans, inability to do book-keeping, inability to acquire technical and vocational skills due to shortage of finance.

Results obtained from panel data analysis and Bayesian analyses showed that failure in newly established small businesses was significantly influenced by 3 predictor variables. These 3 influential predictor variables were: negative perception on the quality of municipal services provided to newly established businesses [Hazard Ratio = 3.58; P=0.000; 95% C. I. = (1.45, 5.46)], inappropriate policy [Hazard Ratio = 3.19; P=0.000; 95% C. I. = (1.39, 5.28)], and lack of tailor made training programmes directed at newly established small businesses [Hazard Ratio = 2.89; P=0.000; 95% C. I. = (1.24, 4.77)], in a decreasing order of strength.

The key findings of this study are in agreement with results reported by Ladzani and Netswera (2009), Seeletse (2012), Marivate (2014), Brownson (2014), Henrekson (2014), Shree and Urban (2012), Booysens (2011), Bezuidenhout and Nenungwi (2012), Asah, Fatoki and Rungani (2012), Worku (2014) and Edoho (2015). The study conducted by Marivate (2014) shows that the South African educational curriculum does not prepare potential entrepreneurs adequately for the task of operating newly established businesses. The content of the curriculum for vocational training at the high school and undergraduate level is vastly inadequate and irrelevant to the specific needs of young graduates who aspire to thrive in business. This failure constitutes a major obstacle to the growth and development in small and medium-sized businesses and enterprises in South Africa.

7. RECOMMENDATIONS

The findings obtained from the study call for intervention from the relevant stakeholders. Based

on findings obtained from the study, the following recommendations are made to the City of Tshwane, the South African National Department of Trade and Industry, the South African National 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 SMMEs in the City of Tshwane.

- The City of Tshwane must develop tailor made customer service programmes that are aimed at providing efficient municipal services to newly established SMMEs that operate in the various parts of the City of Tshwane;
- The South African National Department of Trade and Industry must develop and implement tailor-made skills based training programmes on vocational and entrepreneurial activities for owners and operators of newly established SMMEs;
- It is necessary to provide mentorship and supervisory assistance to newly established SMMEs for a period of at least three years or more;
- It is vital to encourage academic and research institutions to create academic programmes 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. Such programmes should be jointly coordinated and funded by the South African Department of Higher Education and Training, the South African Department of Trade and Industry, and the South African Chamber of Commerce. Doing so has the potential for producing graduates who possess skills that are relevant to the actual needs of business, industry and government;
- 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 Tshwane.

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