

# SMALL BUSINESS CONSTRAINTS: THE INFLUENCE OF TIME

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## ABSTRACT

*The objective of this article was to determine whether the number of years in business influences the constraints experienced by small businesses in the City of Tshwane. A total of 270 questionnaires were distributed and 249 were returned. Data were collected and analyzed using the mean and standard deviation for the descriptive statistics and Cronbach's alpha was used to test the reliability of the questions. The findings showed that a lack of financial support is the highest-rated constraint faced by small businesses, followed by high transport costs, high input costs, a lack of business information sources, and intensive competition. Furthermore, there is an inverse relationship between the number of years in business and operational costs; and on the contrary, a positive correlation exists between the number of years and operational costs.*

**Keywords:** Small Business, Constraints, Time, Finance, Marketing, Infrastructure, Technology, Operations.

## INTRODUCTION

Small businesses are essential for economic development (Van Praag & Versloot, 2007; Acs et al., 2008; Fumo & Jabbour, 2011), and in South Africa they make up 91% of the formal businesses, contribute 34% towards the Gross Domestic Product (GDP) and absorb 60% of the labor force (Small Medium Enterprise, 2015). Small businesses are in a better position than larger businesses to assume a more expedient role in economic development, especially within the economies of developing countries (Kayed & Hassan, 2011). Booyens (2011) confirms that South African small businesses play a significant role in job creation and poverty alleviation.

South Africa is not regarded as a robust entrepreneurial economy. Small businesses struggle to grow, despite South Africa's efforts to foster their growth (Maye, 2014). This lack of growth and robust entrepreneurial economy is because South Africa has a larger necessity-motivated rather than opportunity-motivated nascent entrepreneurial population (Lindsay, 2014). This is to be expected against the background of a high unemployment rate of 25.27% from 2000 until 2015 (Trading Economics, 2016).

Small businesses, however, face numerous constraints (Bridge et al., 2003; Department of Trade & Industry, 2004), impairing both their performance and survival rates (Reiss, 2006). The survival of small business is influenced by the business life cycle. Little is documented on small business constraints in Africa (Irwin, 2011a) and in South Africa. Some small businesses want to grow, but are constrained by attitudinal, resource, operational and strategic barriers to business development (Westhead, et al., 2011), which lead to most businesses failing within a

year or two (Brink et al., 2003; Kuratko, 2014). Considering the above-mentioned, the College of Economic and Management Sciences at the University of South Africa commissioned the Bureau of Market Research to conduct a needs analysis of small business constraints in the City of Tshwane. This article is based on a research report conducted by the Bureau of Market Research for the establishment of a small business development hub (center) at the University of South Africa (Bureau of Market Research, 2014).

The purpose of this article was to determine whether the number of years in business influences the constraints experienced by small businesses in the City of Tshwane. Although small businesses experienced many challenges and constraints the authors wish to determine whether the longer you are in business will help to decrease the impact of these constraints on their business. The article is divided as follows: first the background information is provided, after which a literature review, the methodological procedures, the findings, a discussion and a conclusion will follow.

## **BACKGROUND**

The City of Tshwane has a population of 2.9 million (Census 2011 Municipal Report - Gauteng/Statistics South Africa, 2012) and is located within the Gauteng Province in South Africa. It is the smallest of South Africa's nine provinces, regarded as the economic hub of South Africa and has a large concentration of informal community settlements characterized by abject poverty (Organization for Economic Co-operation and Development, 2011). The City of Tshwane has an unemployment rate of 24.2% (City of Tshwane, 2013). According to Mahadea et al. (2013) the solution to address the problem of unemployment lies in job creation through the small business sector.

Based on the context of this research, a small business would be described according to the South African National Small Business Amendment Act No. 29 of 2004. In South Africa, a small business means any entity that consists of persons carrying on business concerns in any economic sector and that are established to promote the interests of/or representing small business concerns (National Small Business Amendment Act No. 29 of 2004). The National Small Business Amendment Act No. 29 of 2004 classifies businesses according to size (class), namely micro, very small, small and medium businesses. The number of employees varies by sector (or sub-sector). There are also additional categories of total annual turnover and total gross asset value. Undoubtedly, due to the high rates of unemployment, the South African government has put in place various initiatives and policies to support the small business sector; yet this sector still experiences major constraints.

## **LITERATURE REVIEW**

Most small businesses cease to trade within three years of inception (Storey, 1994; Westhead et al., 2011). According to the Small Business Administration (2012); seven out of ten new businesses survive for two years, and five out of ten survive for five years (Lind, 2012). Specifically, the failure rate of small businesses during their first five years of operation is more than 50% (Reiss, 2006). As such, South Africa is not exempt from this peril, with fewer than 20% of new small businesses surviving beyond two years of operation (Lind, 2012). Small businesses fail without realizing that their businesses are in trouble until it is too late (Lussier et al., 2015). They fail without identifying what their problems are - or even without knowing that they have problems (Byrd & Megginson, 2013).

Small businesses fail for different reasons (Mahadea et al., 2013) and the constraints hampering them include inadequate financing, inadequate management strategies and capabilities (Byrd & Megginson, 2013), the economic climate, a lack of start-up capital and unexpected growth (Haralson & Pompa, 2003). Sweeney & McFarlin (2015) identified high unemployment and insufficient electricity provision as constraints faced by small businesses in South Africa, alongside crime and corruption, technology, a lack of management skills, inadequate skilled labor, the need for finance and credit, access to markets and developing relationships with customers (Small Medium Enterprise, 2015). Crime, in particular, is a key macro environmental variable affecting small, medium and micro enterprises in South Africa (Irwin, 2011; Cant & Widd, 2013) and includes theft, robbery, vandalism and arson (Islam, 2014). A negative relationship exists between economic growth and crime (Fanjzylber et al., 2000; Dutta & Zakir, 2009) and it retards the growth and performance of the small business (Islam, 2014). This article will look at the constraints of small businesses which includes, lack of small business management, finance, technology, marketing, infrastructure and operations management. These constraints were the most commonly cited challenges in the literature regarding small businesses.

### **Small Business Management**

Small businesses are characterized by features that hamper any enterprising behaviour. These features include business survival and development, limited knowledge of the business environment, not attracting specialist staff, and not allowing enough time for planning. These shortcomings result in short term planning that fosters a survival/lifestyle perspective rather than a growth perspective. Encouraging a reactive rather than a proactive stance to the external environment, and a short-term opportunistic stance rather than a long-term strategic competitive advantage stance (Westhead et al., 2011). Resulting in the survivalist nature in small businesses in South Africa, informal businesses (unregistered small businesses) in South Africa consume any surplus revenue, which limits their opportunities for expansion into a viable business (Woodward et al., 2011). Small business owners are not necessarily interested in growth, but rather see themselves as successful when their businesses are profitable (Nieuwenhuizen, 2014) and financially stable.

### **Finance**

However, research has shown that finance is a constraint for small businesses. It includes a lack of start-up capital (Haralson & Pompa, 2003; Naudé & Havenga, 2007; Hatten, 2016) and inadequate access to finance (Rouse & Jayawarna, 2006; Robson & Obeng 2008; Rogerson, 2008; Kerr & Nanda, 2011; Herrington & Kelley, 2012; Byrd & Megginson, 2013; Mahadea et al., 2013; Kshetri, 2014; Small Medium Enterprise, 2015). The World Bank's enterprise surveys highlight access to finance as a key obstacle to 45% of businesses in sub Saharan Africa, compared to 13% in the Organization for Economic Co-operation and Development countries (Kshetri, 2014). As a result, small businesses rely on informal credit and insurance schemes because of a lack of collateral and personal savings, rather than on bank loans as the main form of start-up funding (Naudé & Havenga, 2007; Hatten, 2016). Reasons for a lack of access to finance for small businesses in South Africa include, but are not limited to, a high risk of default when banks grant credit, high cost of screening, low returns, and specifically, issues that deal with informal sector businesses such as language and cultural barriers (Schoombee, 2000).

Angela Motsa & Associates (2004) found that banks are not able to interact effectively with business owners because of “*The quality of communication and the level of understanding of their businesses by bank officials*”.

Various South African government agencies such as the Industrial Development Corporation; the Land Bank; the Small Enterprise Development Agency; the National Youth Development Agency; and the Small Enterprise Finance Agency provide funds to small businesses (Mahadea et al., 2013; Nieman, 2014). In addition, private companies are also active in the funding of businesses; for example, Business Partners and local business support centers (Mahadea et al., 2013; Nieman, 2014). Even so, despite a wide range of available finance options, small businesses still struggle to access the finance they need (Rouse & Jayawarna, 2006). Even though there is an availability of support, Phillips et al. (2014) found that the respondents in their study were not aware of the support initiatives and the same is resonated by Naidoo & Hilton (2006) who found that only one respondent had received financial assistance.

## **Marketing**

In addition to access to finance, small business owners/managers in South Africa find it difficult to market their businesses; identify how and when to perform marketing research or know how to hire and manage staff (Young Business for South Africa, 2013). Small businesses also fail because of product and market problems (poor timing, product design problems); inappropriate distribution strategies; and an unclear business definition or overreliance on one customer (Bates, 2005; Michael & Combs, 2008; Forbes & Kirsch, 2011). The problems are compounded as the niche markets that small businesses serve can easily be lured away by larger, low-cost competitors. A study conducted by Cant & Widd (2013) shows that small businesses in South Africa are affected by the wrong pricing strategies; low demands for products; a poor knowledge of the target audience; and, the inappropriate location of the business. Location has an impact on the market potential and growth opportunities of the small business (Dahl & Sorenson, 2007) and can be the difference between success and failure (Byrd & Megginson, 2013). The choice of location is a key strategic decision for the future success of the business, as a dynamic relationship exists between location, strategy and success (Galbraith et al., 2008). In addition to marketing challenges, infrastructure in South Africa is also an inhibiting factor for small businesses.

## **Infrastructure**

Inadequate infrastructure impedes entrepreneurship in developing economies (Kearney & Hisrich, 2014). Efficient and effective infrastructure includes transportation systems, communication networks, an adequate supply of appropriately located business premises, and a steady energy supply (Samli, 2009). The growth prospects of small businesses in South Africa are inhibited by poor infrastructure (Fatoki & Garwe, 2010). Poorly maintained transport infrastructure (dangerous road conditions and untarred roads) can be the downfall of a small business (Mahadea et al., 2013) and toll fees on major roads in the Gauteng Province, also hamstringing them. The impact of the electronic road toll (e-toll) system, however, depends mainly on the sector the small business operates in, because businesses with a significant road transport component (deliveries, rented vehicles, driving to customers' premises) are mostly affected by the e-toll system (Simply Biz, 2012). The deplorable state of transportation, information

communication and technology, and erratic electricity supply hampers businesses to a considerable degree (Fatoki & Garwe, 2010).

### **Technology**

Limited research has been conducted on the use of information communication and technology as a value-adding tool among small businesses in South Africa (Ismail et al., 2011). The extent of the use of different information communication and technologies, the stumbling blocks to the actual adoption of information communication and technology, and the perceptions of business owners with regards to information communication and technology's adoption and use have not been fully explored (Ismail et al., 2011). Not all small businesses have taken up information communication and technology, nor do they necessarily intend to do so (Ramsey et al., 2003). Another problem experienced in South Africa is the expensive connectivity costs coupled with a lack of infrastructure, particularly in rural areas, which remain largely underdeveloped (Ismail et al., 2011). A study conducted by Naudé & Havenga (2007) found that there is little technological transfer and development through the business sector in Africa due to a lack of physical, financial and human resources to effectively adapt and to adopt new technologies. The available technologies may not be suitable for the African market (Musaazi, 2012). Businesses in South Africa lag in the adoption and implementation of information communication and technology (Chiliya et al., 2011) and are also exposed to technological risks, especially with the escalation in large-scale cyber-attacks (Institute of Risk Management South Africa, 2015). According to Lussier et al. (2015), technology forces small businesses to enlarge their scope of operations and production management to include functions such as the creation of utility, tangible products and/or intangible services.

### **Operations Management**

The survival and growth of businesses are threatened by obstacles in the operations functional area (Ibrahim & Soufani, 2002; Urban & Naidoo, 2012) as it is at the heart of organizations (Pycraft et al., 2003). The rising costs of inputs in South Africa and the cost of electricity and petroleum constrain the growth of the small business (Fatoki & Garwe, 2010). Close monitoring of the costs of production is therefore necessary to reduce wastage, and to determine the most efficient means of production (Fatoki & Garwe, 2010). The operations function should therefore embrace competitive priorities of low production costs, fast on-time deliveries, high-quality products and customer services (Urban & Naidoo, 2012). Continuous upgrades as to how businesses are conducted may lead to constant improvement in businesses (De Wit et al., 2007).

## **METHODOLOGY**

For the purpose of this article, the primary data of a need analysis of small business constraints in the City of Tshwane was used. It should be noted that this study is part of a larger research project done in 2014 that was conducted by the Bureau of Market Research, as commissioned by the College of Economic and Management Sciences at the University of South Africa who collected data from small businesses. The Bureau of Market Research was established by the University of South Africa as a research institute in 1960. They conduct research on client request and maintain a database in various fields, which is mainly funded by

the University of South Africa as well as companies and institutions who subscribe to research by the Bureau of Market Research (University of South Africa, 2015).

The population for this article was small businesses in the City of Tshwane. In the absence of a complete list (sample frame) of all small businesses in the City of Tshwane, a purposive sampling method was used. Furthermore, based on the availability and willingness of small businesses in the City of Tshwane. In total, 270 structured questionnaires were distributed and 249 were returned, which translates to a response rate of 92%. Respondents were given twenty constraints to rate them on a seven-point scale, which ranged from “not a constraint at all” to “serious constraint”. Fieldworkers, trained by the Bureau of Market Research, administered the questionnaires at the businesses’ premises. Data capturing was done, and the database was exported into an Excel spreadsheet. Further data cleaning was conducted and exported into the Statistical Package for Social Sciences, and data was processed and analyzed.

To achieve the objective of the article, data was collected and initially analyzed the mean and standard deviation for the descriptive and inferential statistics, insight was gathered into the nature of the data. A factor analysis was done, and simple linear regression analysis was carried out. Cronbach’s alpha was used to test the reliability of the questions regarding the constraints of small businesses. The researchers carried out the reliability testing of the instrument on all business constraints questions, employing Cronbach’s alpha ( $\alpha$ ). Cronbach’s alpha ( $\alpha$ ) indicates the overall reliability of a questionnaire and values around .8 and .7 are good for ability tests (Field, 2009). The measuring instrument was tested for reliability and was found to conform to the Cronbach’s alpha.

## FINDINGS

The objective of the article was to determine whether the number of years in business influences the constraints experienced by small businesses in the City of Tshwane. The reliability of the instruments was confirmed by a Cronbach’s alpha value of 0.862 (Table 1). Table 2 indicates the Cronbach’s alpha values of the individual constraints. The Cronbach’s alpha values of both tables indicate that the questions on constraints were consistent and they tested what they were supposed to test. The Cronbach’s alpha is illustrated in Tables 1 & 2.

| <b>Cronbach’s alpha</b> | <b>Cronbach’s alpha based on standardized items</b> | <b>Number of items</b> |
|-------------------------|---|------------------------|
| 0.862                   | 0.861   | 20                     |

All twenty questions about constraints faced by small businesses in the City of Tshwane were found to be reliable with Cronbach’s alpha ( $\alpha$ ) =0.862. It is an indication that the questions that were used to collect the data from respondents are consistent and reliable. Table 2 shows the mean, variance, correlation and Cronbach’s alpha of each small business constraint that were used in the questionnaire.

**Table 2**  
**RELIABILITY ANALYSIS FOR THE QUESTIONS TESTING CONSTRAINTS OF SMALL BUSINESSES IN THE CITY OF TSHWANE**

| <b>Constraint</b>                       | <b>Scale mean if item deleted</b> | <b>Scale variance if item deleted</b> | <b>Corrected item total correlation</b> | <b>Squared multiple correlation</b> | <b>Cronbach's alpha if item deleted</b> |
|---|-----------------------------------|---------------------------------------|---|-------------------------------------|---|
| Lack of own transport                   | 68.88                             | 493.340                               | 0.318                                   | 0.439                               | 0.861                                   |
| Lack of business premises or a building | 68.60                             | 479.606                               | 0.459                                   | 0.440                               | 0.855                                   |
| Lack of production equipment            | 68.77                             | 474.311                               | 0.559                                   | 0.511                               | 0.851                                   |
| Lack of technological devices           | 68.05                             | 474.568                               | 0.526                                   | 0.416                               | 0.852                                   |
| High transport costs                    | 67.34                             | 479.825                               | 0.497                                   | 0.599                               | 0.854                                   |
| High input costs                        | 67.51                             | 488.267                               | 0.456                                   | 0.596                               | 0.855                                   |
| Lack of financial support               | 67.20                             | 464.857                               | 0.655                                   | 0.547                               | 0.847                                   |
| Lack of business information sources    | 67.83                             | 468.853                               | 0.618                                   | 0.514                               | 0.849                                   |
| High salary costs                       | 68.00                             | 475.526                               | 0.584                                   | 0.499                               | 0.851                                   |
| No suppliers locally                    | 68.63                             | 479.182                               | 0.517                                   | 0.409                               | 0.853                                   |
| Lack of customers                       | 68.46                             | 504.176                               | 0.304                                   | 0.247                               | 0.861                                   |
| Customers not paying their debts        | 68.46                             | 496.310                               | 0.330                                   | 0.299                               | 0.860                                   |
| Intensive competition                   | 67.86                             | 501.262                               | 0.294                                   | 0.278                               | 0.861                                   |
| Lack of business skills                 | 68.55                             | 489.479                               | 0.453                                   | 0.401                               | 0.855                                   |
| Lack of effective business support      | 68.06                             | 470.219                               | 0.664                                   | 0.646                               | 0.848                                   |
| Lack of technical skills                | 68.62                             | 488.223                               | 0.455                                   | 0.500                               | 0.855                                   |
| Lack of water                           | 69.92                             | 503.260                               | 0.301                                   | 0.655                               | 0.861                                   |
| Lack of electricity                     | 69.77                             | 508.103                               | 0.246                                   | 0.611                               | 0.863                                   |
| No business licence/permit              | 69.38                             | 486.325                               | 0.453                                   | 0.342                               | 0.855                                   |
| Theft                                   | 67.99                             | 491.363                               | 0.352                                   | 0.315                               | 0.860                                   |

As illustrated in Table 1, questions on all constraints faced by small businesses in the City of Tshwane have good internal consistency,  $\alpha = 0.862$ . Table 2 reflects the Cronbach's alpha values for the individual constraints, and all items have been retained. The greatest increase in alpha came from removing "*Lack of Electricity*", although the removal would increase alpha by only 0.001. All items correlated with total scale to a good degree (lower  $r = 0.30$ ). An analysis of the average mean of the responses given by small businesses in the City of Tshwane yielded the results as shown in Table 3.

Respondents were requested to rate on a scale of 1 to 7 the severity of the constraints encountered during business operation. As seen from Table 3, a lack of financial support was rated as the most serious constraint facing respondents. This item received an average rating score of 4.79. The second highest-ranking constraint was high transport costs with 4.65, followed by high input costs with a rating of 4.49. The results further pointed out a lack of business information sources with 4.16 and intensive competition with 4.13. Theft (including crime) as a business constraint had a ranking of 4.01.

Inferential statistics were done, making use of factor analysis and simple linear regression analysis. Initially, a factor analysis was done and 20 items (constraints) were examined (Table 4). There were well-recognized criteria for the factorability of correlation employed. It was observed that all 20 items correlated at least 0.4. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.826, above the recommended value of 0.6, while Bartlett's test of sphericity was significant ( $\chi^2 (190) = 1332.438, p < 0.00$ ) as indicated in Table 4.

| <b>Constraint</b>                       | <b>Mean</b> | <b>Standard Deviation</b> | <b>Population (N)</b> |
|---|-------------|---------------------------|-----------------------|
| Lack of own transport                   | 3.12        | 2.474                     | 136                   |
| Lack of business premises or a building | 3.40        | 2.432                     | 136                   |
| Lack of production equipment            | 3.22        | 2.260                     | 136                   |
| Lack of technological devices           | 3.94        | 2.369                     | 136                   |
| High transport costs                    | 4.65        | 2.272                     | 136                   |
| High input costs                        | 4.49        | 2.076                     | 136                   |
| Lack of financial support               | 4.79        | 2.281                     | 136                   |
| Lack of business information sources    | 4.16        | 2.261                     | 136                   |
| High salary costs                       | 3.99        | 2.134                     | 136                   |
| No suppliers locally                    | 3.36        | 2.223                     | 136                   |
| Lack of customers                       | 3.54        | 1.943                     | 136                   |
| Customers not paying their debts        | 3.53        | 2.247                     | 136                   |
| Intensive competition                   | 4.13        | 2.166                     | 136                   |
| Lack of business skills                 | 3.44        | 2.036                     | 136                   |
| Lack of effective business support      | 3.93        | 2.081                     | 136                   |
| Lack of technical skills                | 3.38        | 2.083                     | 136                   |
| Lack of water                           | 2.07        | 2.010                     | 136                   |
| Lack of electricity                     | 2.22        | 2.014                     | 136                   |
| No business license/permit              | 2.62        | 2.171                     | 136                   |
| Theft                                   | 4.01        | 2.396                     | 136                   |

|  |                    |          |
|--|--------------------|----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. |                    | 0.803    |
| Bartlett's Test of Sphericity                    | Approx. Chi-Square | 1013.526 |
|  | df                 | 190      |
|  | Sig.               | 0.000    |

According to the Kaiser- Meyer-Olin test of sampling adequacy in Table 5, the sample size is adequate to perform factor analysis with a value of 0.803, which is close to 1. The Bartlett's test of Sphericity is less than 0.05 and this indicate there is correlation between the items. The P- value (Sig 0.000) indicates that there is a correlation between the items and allows for factor analysis.

| <b>Constraint</b>                    | <b>Component 1</b> | <b>2</b> | <b>3</b> | <b>4</b> |
|--------------------------------------|--------------------|----------|----------|----------|
| Lack of effective business support   | 0.822              |          |          |          |
| Lack of technical skills             | 0.705              |          |          |          |
| Lack of financial support            | 0.665              |          |          |          |
| Lack of business skills              | 0.650              |          |          |          |
| Lack of business information sources | 0.626              |          |          |          |
| No suppliers locally                 | 0.608              |          |          |          |
| Lack of technological devices        | 0.581              |          |          |          |
| Lack of production equipment         | 0.546              | 0.484    |          |          |
| High transport costs                 |                    | 0.792    |          |          |
| Lack of own transport                |                    | 0.776    |          |          |



|   |       |       |       |       |
|---|-------|-------|-------|-------|
| High input costs                        |       | 0.748 |       |       |
| Lack of business premises or a building | 0.419 | 0.545 |       |       |
| Theft                                   |       |       | 0.641 |       |
| Intensive competition                   |       |       | 0.611 |       |
| Customers not paying their debts        |       |       | 0.609 |       |
| Lack of customers                       |       |       | 0.573 |       |
| High salary costs                       | 0.419 |       | 0.498 |       |
| Lack of water                           |       |       |       | 0.896 |
| Lack of electricity                     |       |       |       | 0.874 |
| No business license/permit              |       |       |       | 0.416 |

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser normalization

<sup>a</sup>Rotation converged in 7 iterations

The factor loadings for constraints produced four factors. Factor 1 was strongly correlated to “Lack of effective business support”, “*Lack of technical skills*”, “*Lack of financial support*”, “*Lack of business skills*”, “*Lack of business information sources*”, “*No suppliers locally*”, “*Lack of technological devices*”, and “*Lack of production equipment*”. This means that small businesses in this factor face operational and skills constraints. In factor 2, small businesses experienced constraints related to logistics and production since the strong correlations are “*High transport costs*”, “*Lack of own transport*”, “*High input costs*”, and “*Lack of business premises or a building*”. In factor 3, small businesses experienced market constraints as they face “*Theft*”, “*Intensive competition*”, “*Customers not paying their debts*”, “*Lack of customers*”, and “*High salary costs*”. In factor 4, small businesses faced infrastructural constraints as they include “*Lack of water*”, “*Lack of electricity*”, and “*No business license/permit*”. The constraints faced by the small businesses are also in line with the literature. These are the constraints encountered by small businesses in the City of Tshwane as they run their businesses.

For the purposes of this article, the authors also researched the influence of the number of years in business on the constraints faced by the small businesses in the City of Tshwane. The authors are of the opinion, that the longer the small business is in operation, the better the experience to deal with constraints in the business. This gives rise to the following question:

*What is the influence of the number of years in business on the constraints faced by the small businesses in the City of Tshwane?*

To answer this question, a simple linear regression analysis was used as per Table 6.

|       |                    |                   |                            |                 |          | Change Statistics |     |               |               |
|-------|--------------------|-------------------|----------------------------|-----------------|----------|-------------------|-----|---------------|---------------|
| Model | R                  | Adjusted R Square | Std. Error of the Estimate | R Square Change | F Change | df1               | df2 | Sig. F Change | Durbin-Watson |
| 1     | 0.404 <sup>a</sup> | 0.163             | 1.178                      | 0.163           | 6.394    | 4                 | 131 | 0.000         | 1.531         |

Predictors<sup>a</sup>: (constant), Infrastructural, Market, Logistics/Production, Operational/Skills

Dependent variable<sup>b</sup>: Period under current management.

Table 6 indicates that the constraints faced by small businesses in the City of Tshwane are closely related to the number of years the owner/manager has been running the business  $R=0.404$ . The value of  $R^2=0.163$  means that 16.3% of the variance in the constraints is accounted for by the number of years the small business owner/manager has been running the business. The correlation coefficient squared (known as the coefficient of determination  $R^2$ ) is a measure of the amount of variability in one variable that is shared by the other.  $R^2$  is used to show how much of this variability is shared by predictors (Field, 2009).

| Model |            | Sum of Squares | Df  | Mean Square | F     | Sig.               |
|-------|------------|----------------|-----|-------------|-------|--------------------|
| 1     | Regression | 35.463         | 4   | 8.866       | 6.394 | 0.000 <sup>b</sup> |
| 2     | Residual   | 181.647        | 131 | 1.387       |       |                    |
| 3     | Total      | 217.110        | 135 |             |       |                    |

<sup>a</sup>Dependent variable: Period under current management

<sup>b</sup>Predictors: (constant), Infrastructural, Market, Logistics/Production, Operational/Skills

Analysis of variance (ANOVA) aims to show whether the overall model results in a significantly good degree of prediction of the outcome variable (Field, 2009). When tested at 95% confidence interval and 5% margin of error, the results illustrated that the constraints faced by small businesses in the City of Tshwane are significantly affected by the number of years in business. This can be seen from  $F(4,131) = 6.394$   $p < 0.05$ , which indicates significance of the model.

| Model                | Unstandardised Coefficients |            | Standardised Coefficients | T      | Sig.  | Collinearity Statistics |       |
|----------------------|-----------------------------|------------|---------------------------|--------|-------|-------------------------|-------|
|                      | B                           | Std. Error | Beta                      |        |       | Tolerance               | VIF   |
| (Constant)           | 2.419                       | 0.101      |                           | 23.958 | 0.000 |                         |       |
| Operational/Skills   | -0.325                      | 0.101      | -0.257                    | -3.210 | 0.002 | 1.000                   | 1.000 |
| Logistics/Production | 0.126                       | 0.101      | 0.099                     | 1.244  | 0.216 | 1.000                   | 1.000 |
| Market               | 0.326                       | 0.101      | 0.257                     | 3.216  | 0.002 | 1.000                   | 1.000 |
| Infrastructural      | -0.186                      | 0.101      | -0.147                    | -1.839 | 0.068 | 1.000                   | 1.000 |

<sup>a</sup>Dependent variable: Period under current management

As observed in Table 7, Operational/Skills constraints ( $p > 0.002$ ) and Market constraints ( $p > 0.002$ ) are found to be significant with the number of years in business; whereas Infrastructural constraints ( $p < 0.068$ ) and Logistics/Production constraints ( $p < 0.216$ ) are not significant with the number of years in business. The question now arises:

*What are the major constraints faced by the small businesses in the City of Tshwane?*

Market constraints ( $\beta = 0.326$ ) are the major constraints faced by small businesses in the City of Tshwane, followed by Operational/Skills constraints ( $\beta = -0.325$ ). The other two constraints, namely, Logistics/Production and Infrastructural constraints fall behind with respective Beta values ( $\beta = 0.126$ ) and ( $\beta = -0.186$ ).

## DISCUSSION

The means of the constraints Table 3 showed that a lack of financial support (4.79), high transport costs (4.65) and high input costs (4.49) were the highest-rated constraints. This finding is in line with what other researchers have found (Haralson & Pompa, 2003; Rouse & Jayawarna, 2006; Naudé & Havenga, 2007; Robson & Obeng, 2008; Rogerson, 2008; Kerr & Nanda 2011; Herrington & Kelley, 2012; Byrd & Megginson, 2013; Mahadea et al., 2013; Kshetri, 2014; Small Medium Enterprise, 2015; Hatten, 2016), indicating that financial support is a common small business constraint faced in most parts of the world. A lack of business information sources (4.16) and intensive competition (4.13) reiterate the views found in the literature, supporting other researchers (Fatoki & Garwe, 2010; Hatten, 2012; Scarborough, 2012; Byrd & Megginson, 2013; Cant & Widd, 2013; Kshetri, 2014), who found that intensive competition impedes small business development. Based on the afore mentioned, our finding is that small businesses in the City of Tshwane, South Africa, do not differ from those depicted in the literature.

Theft (including crime) as a business constraint had a ranking of 4.01 and is supported in the literature (Fanjzylber et al., 2000; Dutta & Zakir, 2009; Irwin, 2011b; Cant & Wiid, 2013; Islam, 2014). Our research further indicates that small businesses in the City of Tshwane viewed theft as a constraint. Although there are numerous studies on theft and crime, they were not done in the context of a small business constraint.

To achieve the aim of the research, the constraints were grouped using factor analysis (Table 5) and four factors emerged, namely Operational/Skills, Logistics/Production, Market and Infrastructural. These were regressed with the number of years that the small business has been in operation. Market constraints ( $\beta=0.326$ ) Table 8 had a positive correlation with the years that the business has been in operation. This implies that with an increase in the number of years that the small business has been in operation, there is an increase in the market constraints. Market constraints were classified as “*Theft*”, “*Intensive competition*”, “*Customers not paying their debts*”, “*Lack of customers*”, and “*High salary costs*”. One would assume that enterprises that have been in business for some years would have acquired efficiencies and mastered the art of marketing because there should have been a built-up of knowledge of their market conditions over the years. However, our research shows that enterprises that have been in business for many years still face the same market constraints as small business entrants.

Operational costs have a negative correlation (inverse relationship) to the years that the small business has been in operation. This is indicated by the negative Beta ( $\beta=-0.325$ ) (Table 8). The negative Beta implies that an increase in the number of years that the small business has been in operation results in a decrease in the Operational/Skills constraints faced by the small business. This is to be expected when looking at the theory on the organizational life cycle, according to which a business in the emerging growth stage has overcome the concern of survival and wants to expand the business. Hence, they seek to invest in the number of employees and customers (Dodge & Robbins, 1992; Jawahar & McLaughlin, 2001). This is the case with small businesses in the City of Tshwane as they are experiencing high salary costs as part of their operational constraints.

As a small business goes through its life cycle, it experiences different constraints. According to Kuratko (2009); Katz & Green (2011) when a small business goes through its growth stage in the life cycle and is reaching maturity, it experiences harsh market conditions; hence, it becomes unable to diversify or grow the business. Having done the analysis, it emerged that the small businesses in the City of Tshwane experience a decrease in the overall operational

costs ( $\beta=-0.325$ ) and an increase in market constraints ( $\beta=0.326$ ), as the number of years increased. This is an indication that the small businesses in the City of Tshwane are in the growth stage, as explained by the theory of small business life cycle development (Churchill & Lewis, 1983; Dodge & Robbins, 1992; Kuratko, 2009; Katz & Green, 2011; Spinelli & Adams, 2012).

According to our findings, Theft (4.01) was cited to be a major constraint faced by small businesses in the City of Tshwane. During our factor analysis (Table 4), theft was classified as a market constraint faced by small businesses in the City of Tshwane. According to the literature (Churchill & Lewis, 1983; Dodge & Robbins, 1992; Kuratko, 2009; Katz & Green, 2011; Spinelli & Adams, 2012), marketing constraints fall within the growth stage of the life cycle of small business development. Theft as a constraint faced by small businesses in their life cycle, has not been cited in the literature and therefore indicates a gap; making this our contribution to the body of knowledge.

## CONCLUSION

Constraints impair the performance and survival of small businesses in the City of Tshwane, South Africa, and therefore the objective of this article was to establish whether there is a correlation between the number of years that a business is in operation, and the constraints faced by small businesses in the City of Tshwane. It is worth noting that theft did not emerge as such a major constraint, but it formed part of the market constraints for small businesses in the City of Tshwane. As previously discussed, market constraints are associated with the growth phase of the small business life cycle. Small businesses are expected to overcome constraints as they move along in their business life cycles; however, this is not evident regarding the market constraints of small businesses in the City of Tshwane. In contrast, the same businesses managed to overcome operational constraints over time. Our data analysis reflected that a lack of financial support was the main constraint faced by small businesses in the City of Tshwane, followed by high transport and high input costs. Our study concluded that most of the constraints faced by small businesses in the City of Tshwane do not differ from those presented in the literature.

To address the constraints faced by small businesses, training is generally, considered first. Training is necessary, but we recommend that training should be customized and focused to suit the individual needs of the small business owner/manager, as opposed to a one-size-fits-all approach. Training removes or reduces shortfalls and gives the small business a set of skills that it can productively use. Although the South African government has implemented several programs to assist small businesses, these businesses are unaware of the programs. We recommend that the government embark on additional initiatives to improve access to business information; and these initiatives are to be inclusive of governmental policies and programs. Further research should be conducted to analyze the constraints faced by small businesses at each stage of the business life cycle.

It is important that constraints faced by small business owners/managers in the City of Tshwane are minimized; as they can result in limited profitability and growth, the possible closure of businesses, financial distress and/or the subsequent failure of the business. The government is already on track in providing training to small businesses, and we would like to emphasize that training needs to be more focused on individual businesses' needs.

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