Factors That Affect Sustained Profitability In The Textile Industry Of Tshwane

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ABSTRACT

The textile industry of the City of Tshwane has been overwhelmed by cheap imports from countries such as China, India, Pakistan, Bangladesh, Malaysia, South Korea and Vietnam. Although support is provided to black entrepreneurs in the textile industry of Tshwane by institutions such as the South African National Department of Trade and Industry and the South African Small Enterprise Development Agency, local textile businesses are unable to compete favourably with foreign manufacturers, importers and distributors. The textile industry is a key contributor to the South African GDP and employs about 5% of the South African workforce. One of the key priorities of the City of Tshwane is to transform the textile industry of Tshwane so that it provides sustainable livelihood and career opportunities to black indigenous South Africans. A descriptive, cross-sectional study design was used for collecting data from a stratified random sample of size 250 textile businesses operating in the five geographical zones of Tshwane. One of the aims of the study was to assess the veracity of the theory proposed by Bansal and DesJardine (2014) in which the authors have argued that changing global circumstances would compel local industries to adapt to global changes at local level as a means of sustained survival. Data analysis was performed by using Structural Equations Modelling (SEM). The results showed that sustained viability in textile businesses was significantly influenced by the degree of entrepreneurial skills, the ability to secure loan needed for operation, and the ability to order merchandise in bulk on credit from suppliers, in a decreasing order of strength. About 32% of business operators had adequate entrepreneurial skills based on the composite index developed by Ács, Szerb and Autio (2011). A repeat of the same study as a 5-yearlong study is recommended in order to estimate theoretically reliable predictors such as hazard ratios for factors that are known to affect viability in the local textile industry.

Keywords: Tshwane; Textile Industry; Entrepreneurial Skills; Loan; Structural Equations Modelling

INTRODUCTION AND BACKGROUND

*T*he textile industry is an industry that could be used for creating a large number of jobs for moderately skilled black indigenous South Africans (Mahadea, 2012). In comparison with the automotive, construction and power industry, the manufacturing sector requires relatively low level of specialised and technical skills. The National Development Plan of South Africa places emphasis on the acquisition of entrepreneurial skills in all economic sectors including the textile industry. According to Statistics South Africa (2016), about 34% of the productive workforce in South Africa aged between 15 and 64 years of age is unemployed. Over 70% of all unemployed South Africans are the youth. According to Herrington, Kew and Kew (2015), South African university graduates often lack basic entrepreneurial skills that are essential for establishing start-up business enterprises. The study conducted by Marivate (2014) has shown that the South African curriculum does not prepare young graduates adequately for the challenges and rigours of entrepreneurial careers. According to Khale and Worku (2015), the content of the South African undergraduate curriculum lacks practical applications in business and entrepreneurial sciences. Seeletse (2012) has reported that young black indigenous South African university graduates often lack the ability to start-up profitable business ventures due to lack of practical knowledge and understanding of entrepreneurial sciences. Edoho (2015) and Mafunisa (2004) have pointed out that the undergraduate curriculum in most South African tertiary level academic institutions does not equip learners with

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adequate practical entrepreneurial skills. Studies conducted by Khale (2015) and Worku (2016) have shown that the South African undergraduate curriculum does not link theoretical concepts and principles with practical applications in the business world. Young university graduates often fail to identify business opportunities and gaps in the local market. They are often characterised by lack of skills in areas such as developing business plans, inability to perform audits and bookkeeping, inability to make oral presentations, failure to develop business networks, failure to secure loans from commercial banks and microfinance institutions, and inability to take inventory of stocks and merchandise.

Herrington, et al. (2015) and Shree & Urban (2012) have pointed out that the lack of employment opportunities in the formal job market compels young South African university graduates to pursue entrepreneurial careers in a wide variety of economic sectors including the textile industry. About 56% of all South African university graduates face unemployment upon graduation (Statistics South Africa, 2016) due to poor overall economic growth in South Africa, lack of foreign direct investment, lack of demand for commodities in the global market, adverse socioeconomic conditions and lack of entrepreneurial skills. Karlstroom and Finstad (2013) have pointed out that young university graduates possess the highest degree of total entrepreneurial activity in all economies of the world including South Africa. Kovacevic (2012) has reported that high level of formal education is significantly associated with entrepreneurial intentions. The South African National Department of Trade and Industry (2016), (DTI) and the South African Small Enterprise Development Agency (2016, (SEDA) have developed programmes of administrative and financial assistance to start-up business enterprises. According to Marivate (2014), the South African Government has created an economically enabling environment for young entrepreneurs to pursue entrepreneurial activities and business ventures.

Annual reports issued by DTI (2016) and SEDA (2016) clearly indicate the degree of commitment provided by the South African Government for promoting the SMME sector of the economy as a means of creating jobs and alleviating poverty among the unemployed masses in South Africa. The effort made by the South African Government has been undermined by high failure rate among newly established SMMEs. According to Brownson (2014), although the South African Government provides administrative and financial assistance to start-up enterprises, the failure rate in start-up businesses is much higher in South Africa (56%) in comparison with countries such as Germany (3%), the Netherlands (5%), South Korea (6%), Malaysia (9%), Singapore (4%) and Taiwan (7%). The National Development Plan adopted by the South African Government relies on the development of the SMME sector for the creation of employment opportunities and the alleviation of abject poverty among South Africans.

Herrington, et al (2015) have reported that interest in entrepreneurial activities has decreased from 10.6% to 7% among South African youth between 2005 and 2015. According to Statistics South Africa (2016), 48.2% of all unemployed South Africans are youth. Edoho (2015) has reported that the key obstacles in this regard are lack of entrepreneurial and artisan skills, lack of relevance of assistance programmes rolled out by DTI and SEDA to the practical needs of start-up businesses, difficulty in raising loan needed for business operations, inefficient municipal services, red tape and too much bureaucracy.

The key aims of the study were to identify and quantify key barriers to sustained growth and development in the textile industry of Tshwane. Start-up enterprises are creators of employment opportunities for the unemployed youth in Tshwane. The study was aimed at identifying the root causes of the high failure rate among newly established businesses in the textile industry of Tshwane by collecting data from textile businesses that operate in and around Tshwane.

METHODS AND MATERIALS OF STUDY

The design of study was descriptive and cross-sectional. A stratified random sample of size 250 textile businesses was selected for the study from the five geographical zones (central, east, west, north and south) of the City of Tshwane. The Business Register of Statistics South Africa (2016) was used for the identification of eligible textile businesses for the study. Statistical methods of data analyses such as frequency tables, two-by-two cross-tab analyses, factor analysis (Field, 2010) and structural equations modelling (Hair, Black, Babin & Anderson, 2010) were used in the study. The study aimed to test the veracity of the theory proposed by Marivate (2014) in which the author has asserted that viability in small enterprises in the Tshwane region (Y) is significantly influenced by the

degree of entrepreneurial skills (X1), the ability to secure loan needed for business operation (X2), and the ability to order merchandise in bulk on credit (X3). The degree of entrepreneurial skills of business operators was assessed by using the composite index developed by Ács, Szerb and Autio (2011). Table 1 shows estimates obtained from principal components analysis in which the percentage of variance explained by each one of the 3 predictor variables was estimated.

Table 1. Percentage of variance explained by key predictor variables

| Factors that affect viability of textile business	Number of factors retained	Percentage of variance explained
Degree of entrepreneurial skills	3	79.04%
Ability to secure loan needed for business	3	77.69%
Ability to order merchandise in bulk on credit	4	76.12%

Based on a review of the literature conducted as part of the study, and in light of the underlying theory the study was designed to test for veracity, the following three null hypotheses were formulated:

H1: Sustained viability in the textile industry of Tshwane (Y) is significantly associated with the degree of entrepreneurial skills (X1)

H2: Sustained viability in the textile industry of Tshwane (Y) is significantly associated with the ability of textile businesses to secure loan needed for business operation (X2)

H3: Sustained viability in the textile industry of Tshwane (Y) is significantly associated with the ability of textile businesses to order merchandise in bulk on credit (X3)

Figure 1. Conceptual framework of study (Bocken, Short, Rana & Evans, 2014)
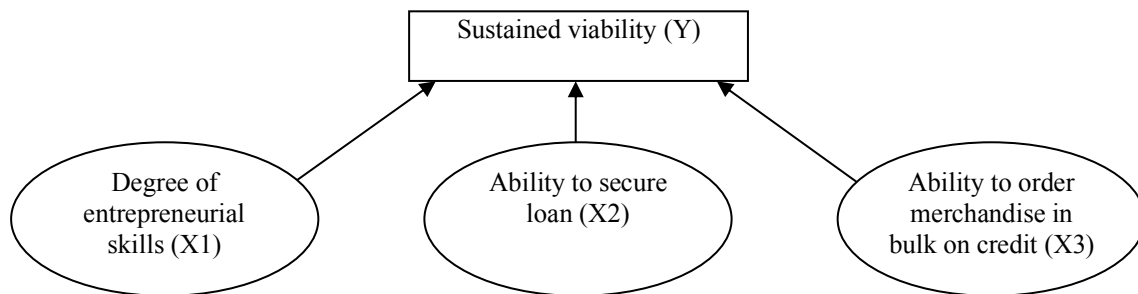
RESULTS OF DATA ANALYSES

Table 2 shows frequency proportions that indicate the general characteristics of the 250 participants of study. It can be seen from the table that about 76% of textile businesses were viable, whereas about 24% of them were not viable. About 32% of business operators had adequate entrepreneurial skills based on the composite index developed by Ács, Szerb and Autio (2011). About 72% of operators were actual owners, whereas about 28% of them were employed managers. About 30% of the 250 operators had ages of 31 to 40 years of age. About 88% of operators were male. About 36% of operators were married. The percentage of operators with low level of education was 16% (matric level or less). The percentage of highly educated operators was equal to 27% (Bachelor's degree or above). About 59% of operators were South African.

Table 2. General characteristics of respondents (n=250)

Variable of study	Percentage
Viability of textile business	Viable: 189 (75.60%) Not viable: 61 (24.40%)
Degree of entrepreneurial skills	Adequate: 79 (31.60%) Inadequate: 171 (68.40%)
Status of operator	Owner: 179 (71.60%) Employed manager: 71 (28.40%)
Age category of respondents	20 or younger: 8 (3.20%) 21 to 30: 44 (17.60%) 31 to 40: 76 (30.40%) 41 to 50: 78 (31.20%) 51 or older: 44 (17.60%)
Gender of operator	Male: 219 (87.60%) Female: 31 (12.40%)
Highest level of education	Matric level or less: 40 (16.00%) Certificate: 42 (16.80%) Diploma: 100 (40.00%) Bachelor's degree: 52 (20.80%) Master's degree or above: 14 (6.40%)
Marital status	Single: 61 (24.40%) Married: 89 (35.60%) Divorced: 55 (22.00%) Widowed: 2 (0.80%) Living together: 43 (17.20%)
Nationality of operator	South African: 147 (58.80%) Foreigner: 103 (41.20%)

Table 3 shows frequency proportions for past experience on loan application and repayment. It can be seen from the table that about 43% of textile businesses were in operation for 11 years or more. About 66% of business operators were educated in South Africa. About 54% of operators employed between 1 and 3 employees in their businesses. About 73% of business operators used textile products imported from outside South Africa in their businesses. About 75% of businesses had borrowed loan at least once for business operation in the past. About 27% of business operators had defaulted on loan repayment in the past. About 26% of business operators had experienced problems in the course of applying for loan from commercial banks in the past. About 29% of business operators had experienced problems in the course of applying for loan from microfinance institutions.

Table 3. Past experience of loan application and repayment (n=250)

Variable of study	Percentage
Duration of operation of textile business	5 years or less: 56 (22.40%) 6 to 10 years: 87 (34.80%) 11 years or more: 107 (42.80%)
Country where education was acquired	In South Africa: 166 (66.40%) Outside South Africa: 84 (33.60%)
Number of employees employed in business	None: 24 (9.60%) 1 to 3: 134 (53.60%) 4 to 6: 74 (29.60%) 7 or more: 18 (7.20%)
Source of textile merchandise	Local producers: 67 (26.80%) Foreign producers: 183 (73.20%)
Experience of taking loan for business operation in the past	Yes: 187 (74.80%) No: 63 (25.20%)
Past experience of defaulting on loan repayment	Yes: 67 (26.80%) No: 183 (73.20%)
Past experience of difficulty in securing loan from commercial banks	Yes: 66 (26.40%) No: 184 (73.60%)
Past experience of difficulty in securing loan from microfinance institutions	Yes: 73 (29.20%) No: 177 (70.80%)

Table 4 shows frequency proportions for the ability of the 250 business operators to order textile merchandise in bulk on credit from suppliers. It can be seen from the table that 74% of textile businesses were capable of ordering textile merchandise in bulk from suppliers on credit. About 35% of business operators had experienced at least one robbery in the past. Thirty eight percent of businesses used private security firms for ensuring safety and security at their businesses. Weekdays were peak sale time for about 85% of businesses. About 57% of businesses experienced peak sale during summer. Seventy four percent of businesses had valid trade licenses. About 22% of business operators owned their business premises.

Table 4. Duration of operation of textile business (n=250)

Variable of study	Percentage
Ability to order textile merchandise in bulk on credit	Yes: 185 (74.00%) No: 65 (26.00%)
Past experience of at least one robbery	Yes: 87 (34.80%) No: 163 (65.20%)
Utilisation of private security services	Yes: 95 (38.00%) No: 155 (62.00%)
Time for more sales	Week days: 213 (85.20%) Weekends: 37 (14.80%)
Season for more sales	Autumn: 16 (6.40%) Spring: 24 (9.60%) Summer: 142 (56.80%) Winter: 68 (27.20%)
Possession of a valid trade license	Yes: 185 (74.00%) No: 65 (26.00%)
Renewal of trade license every year	Yes: 243 (97.20%) No: 7 (2.80%)
Ownership of premises used for business operation	Own: 54 (21.60%) Rent: 196 (78.40%)

Table 5 shows frequency proportions for attributes such as registration for VAT, payment of tax to SARS (South African Receiver of Revenue) on a regular basis, ability to draw up business plans, and ability to perform accounting and audit-related tasks. It can be seen from the table that about 72% of textile businesses were registered for VAT. About 97% of businesses paid up tax to SARS on a regular basis. The percentage of business operators capable to drawing up business plans was about 61%. The percentage of business operators capable to making oral presentations was about 37%.

Table 5. Registration for VAT by textile business (n=250)

Variable of study	Percentage
Registration for VAT	Yes: 179 (71.60%) No: 71 (28.40%)
Payment of tax to SARS on a regular basis	Yes: 243 (97.20%) No: 7 (2.80%)
Ability to draw up business plan	Good: 92 (36.80%) Above average: 31 (12.40%) Average: 29 (11.60%) Below average: 90 (36.00%) Poor: 8 (3.20%)
Ability to make oral presentations	Good: 35 (14.00%) Above average: 31 (12.40%) Average: 28 (11.20%) Below average: 120 (48.00%) Poor: 36 (14.40%)
Ability to network with business rivals and competitors	Good: 94 (37.60%) Above average: 30 (12.00%) Average: 38 (15.20%) Below average: 84 (33.60%) Poor: 4 (1.60%)
Assessment of accounting skills	Good: 76 (30.40%) Above average: 27 (10.80%) Average: 28 (11.20%) Below average: 83 (33.20%) Poor: 36 (14.40%)

Table 6 shows frequency proportions for attributes such as satisfaction with the quality of municipal services provided to textile businesses by the City of Tshwane and awareness about assistance programmes provided to SMMEs by DTI (2016) and SEDA (2016). It can be seen from the table that about 57% of textile businesses were satisfied with the quality of municipal services that were provided to them by the City of Tshwane. About 83% of businesses were aware of assistance programmes provided to SMMEs by DTI (2016) and SEDA (2016). About 83% of businesses were aware of assistance programmes provided to SMMEs by DTI (2016) and SEDA (2016). About 26% of business operators had actually attended at least one training session by DTI (2016) or SEDA (2016). About 30% of businesses were started up with initial capitals of R50, 000 to R100, 000. About 24% of businesses had net monthly profits of R10, 000 to R50, 000.

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Table 6. Assessment of the quality of municipal services (n=250)

Variable of study	Percentage
Degree of satisfaction with municipal services provided to textile businesses	Good: 68 (27.20%) Above average: 24 (9.60%) Average: 50 (20.00%) Below average: 73 (29.20%) Poor: 35 (14.00%)
Awareness about assistance programmes to small businesses by DTI and SEDA	Yes: 207 (82.80%) No: 43 (17.20%)
Attendance of at least one training programme from DTI or SEDA	Yes: 66 (26.40%) No: 184 (73.60%)
Degree of satisfaction with the quality of assistance provided to SMMEs by DTI or SEDA	Good: 19 (7.60%) Above average: 7 (2.80%) Average: 35 (14.00%) Below average: 5 (2.00%) Poor: 0 (0.00%) Question not applicable: 184 (73.60%)
Start-up capital in Rand	R10, 000 or less: 20 (8.00%) R10, 001 to R50, 000: 44 (17.60%) R50, 001 to R100, 000: 76 (30.40%) R100, 001 to R200, 000: 72 (28.80%) More than R200, 000: 38 (15.20%)
Net monthly profit in Rand	R10, 000 or less: 40 (16.19%) R10, 001 to R50, 000: 59 (23.89%) R50, 001 to R100, 000: 56 (22.67%) R100, 001 to R200, 000: 22 (8.91%) More than R200, 000: 13 (5.26%) Question not applicable: 57 (23.08%)

Table 7 shows frequency proportions for attributes such as utilisation of a business partner and the frequency with which stock is ordered by the textile businesses in the study. It can be seen from the table that about 43% of businesses were run in partnership. About 37% of businesses purchased stock once in 6 months. About 33% of businesses purchased stock many times per month.

Table 7. Assessment of the quality of municipal services (n=250)

Variable of study	Percentage
Utilisation of a business partner	Yes: 107 (42.80%) No: 143 (57.20%)
Number of times stock is purchased from suppliers	Many times a month: 82 (32.80%) Once a month: 66 (26.40%) Once in 6 months: 93 (37.20%) Once a year: 9 (3.60%)

Exploratory and confirmatory factor analyses (Field, 2010) were used for determining the number of groups and the number of variables in each of the various groups required for measuring the strengths of associations among pairs of variables by using correlation coefficients as a measure of strength. The hypothesised model is based on a review of the relevant literature (Hair, Black, Babin & Anderson, 2010). In this study, confirmatory factor analysis was used by developing a hypothesis about 3 factors that are known to affect viability in textile businesses in Tshwane. Constraints were imposed on the hypothesised model. If the constraints imposed on the model are inconsistent with the data collected as part of the study, then the hypothesised model is rejected. The degree to which a predictor variable is useful in explaining variability in viability is assessed by examining the magnitude of factor loadings. Influential predictor variables are characterised by factor loadings that are close to -1 or +1. Predictor variables for which factor loading are close to 0 are not influential predictors of viability.

The theoretical reliability of the initial model was assessed by using standard diagnostic procedures. The magnitude of the observed chi-square statistic was used for assessing the degree of reliability of the fitted model. Large values of the observed chi-square statistic indicate that the fitted model is reliable. The Adjusted Goodness of Fit Index (AGFI) statistic was used for assessing the degree to which the fitted model was a true estimate of the hypothesised model. Values of AGFI that are greater than or equal to 0.95 indicate that the fitted model is theoretically reliable. The Tucker Lewis Index (TLI) was used for comparing the degree of similarity between the chi-squared value of the hypothesised model and the chi-squared value of the null model. Values of TLI vary from 0 to 1. Reliable fitted models are characterised by TLI values of 0.95 or greater. The comparative Fit Index (CFI) was used for assessing the degree of similarity between the data collected from the 250 textile businesses and the hypothesised model. Values of CFI vary from 0 to 1. Theoretically reliable fitted models are characterised by CFI values of 0.95 or greater. The Standardized Root Mean Square Error of Approximation (SRMSEA) value of the fitted model was used for assessing the degree of precision in estimating regression coefficients. Theoretically reliable fitted models are characterised by SRMSEA values of 0.05 or less. The Coefficient of Determination (CD) was used for assessing the percentage of overall variation explained by the fitted model. Values of CD greater than or equal to 0.75 indicate that the fitted model explains a fairly good percentage of variability in the viability of textile businesses.

Maximum Likelihood Estimators (MLE) were used for estimating regression coefficients. An MLE estimator uses an Observed Information Matrix (OIM) for quantifying the magnitude of error arising from the estimation of regression coefficients. OIM values of 0.05 or less indicate that the fitted model is theoretically reliable. The Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) were used for assessing the discrepancy between fitted and true models (Aho, Derryberry and Peterson, 2014). Low values of the AIC and BIC statistics indicate that the fitted model is theoretically reliable. The following estimates were obtained for the initial conceptual model.

Table 8. Structural equations estimates for initial conceptual model (n=250)

Predictor variable	Coefficient	Z-Statistic	P-value	OIM Std. Error
Degree of entrepreneurial skills	3.26	6.19	0.0000	0.0159
Ability to secure loan needed for business	2.89	5.76	0.0003	0.0263
Duration of business operation	0.29	0.67	0.1146	0.7059
Constant	2.51	4.58	0.0028	1.4209

Table 9. Diagnostic measures for initial conceptual model (n=250)

Diagnostic test used for assessment	Estimates obtained from data analysis	Interpretation of results
P-value from the likelihood ratio test used for comparing conceptual model with saturated model	P = 0.2408; Observed chi-square value = 0.2455 (P-value is larger than 0.05; the observed chi-square value is small)	The conceptual model differs significantly from the saturated model at the 5% level of significance
P-value from the likelihood ratio test used for comparing baseline model with saturated model	P = 0.2119; Observed chi-square value = 0.2374 (P-value is larger than 0.05; the observed chi-square value is small)	The baseline model differs significantly from the saturated model at the 5% level of significance
AIC	111.327 (Large)	The fitted model differs from the true model
BIC	109.027 (Large)	The fitted model differs from the true model
CFI	0.39 (Small)	The fitted model is not theoretically reliable
TLI	0.38 (Small)	The fitted model is not theoretically reliable
SRMSEA	0.5149 (SRMSEA value is larger than 0.05)	The error of estimation of the fitted model is large
CD	0.5611 = 56.11% (The percentage of explained variation is equal to 56.11%)	The fitted model is poor in explaining variability in the viability of businesses

The diagnostic measures obtained for the initial conceptual model in Table 9 indicate that the conceptual model does not fit the data well. This is because the P-value for the likelihood ratio test is large, the observed chi-square value is small, and the values of AIC, BIC, CFI, TLI and SRMSEA are all large. Also, the value of CD is significantly smaller than 75%.

Regression coefficients, P-values and standard error estimates were obtained for the initial conceptual model as shown in Table 8 above. Diagnostic measures used for the procedure (Table 9) showed that the initial conceptual model did not fit the data well. As such, the initial conceptual model had to be amended by replacing the duration of operation of textile businesses by the ability to order bulk merchandise on credit from suppliers in accordance with findings obtained by Mateut, Mizen and Ziane (2015). New estimates were obtained for the amended conceptual model as shown in Table 10 below. Residual terms did not vary in the process of estimating regression coefficients for the amended conceptual model. Diagnostic measures obtained for the amended conceptual model (Table 11) confirmed that the amended conceptual model was a better fit to the data in the study in comparison with the initial conceptual model. In particular, both the CFI and TLI were equal to 0.98 = 98%, thereby showing that 98% of the covariation in the data could be reproduced by the hypothesised model used in the study.

Table 10. Structural equations estimates for amended conceptual model (n=250)

Predictor variable	Coefficient	Z-Statistic	P-value	OIM Std. Error
Degree of entrepreneurial skills	3.33	6.46	0.0000	0.0108
Ability to secure loan needed for business	2.91	5.94	0.0000	0.0114
Ability to order merchandise in bulk on credit	2.62	4.93	0.0000	0.0259
Constant	2.53	4.61	0.0027	1.1884

Table 11. Diagnostic measures for amended conceptual model (n=250)

Diagnostic test used for assessment	Estimates obtained from data analysis	Interpretation of results
P-value from the likelihood ratio test used for comparing conceptual model with saturated model	P = 0.000; Observed chi-square value = 289.208 (P-value is smaller than 0.05; the observed chi-square value is large)	The conceptual model differs significantly from the saturated model at the 5% level of significance
P-value from the likelihood ratio test used for comparing baseline model with saturated model	P = 0.000; Observed chi-square value = 52.012 (P-value is smaller than 0.05; the observed chi-square value is large)	The baseline model differs significantly from the saturated model at the 5% level of significance
AIC	32.596 (Small)	The fitted model is fairly similar to the true model
BIC	33.884 (Small)	The fitted model is fairly similar to the true model
CFI	0.98 (Large)	The fitted model is theoretically reliable
TLI	0.98 (Large)	The fitted model is theoretically reliable
SRMSEA	0.0108 (SRMSEA value is smaller than 0.05)	The error of estimation of the fitted model is small
CD	0.7849 = 78.49% (The percentage of explained variation is equal to 78.49%)	The fitted model is good in explaining variability in the viability of businesses

Pearson's chi-square tests of associations (Hair, Black, Babin and Anderson, 2010) or two-by-two cross-tab analyses were used for assessing the strength of association between non-viability of businesses and various socioeconomic characteristics of textile businesses. At the 5% level of significance, a two-by-two association is said to be statistically significant if the P-value obtained from the Pearson chi-square test of association is smaller than 0.05. If the P-value is greater than or equal to 0.05, the association is said to be insignificant at the same level of significance. Table 9 shows results obtained from the Pearson chi-square test of association. The table shows observed chi-square values and P-values for 12 significant two-by-two associations between viability and various socioeconomic characteristics of the 250 textile business operators that were selected for the study. At the 0.05 level of significance, significant associations have P-values that are smaller than 0.05.

Table 9. Results obtained from cross-tab analyses (n=250)

List of 12 variables significantly associated with viability of textile businesses	Chi-square value	P-value
Degree of entrepreneurial skills	241.5288	0.000***
Ability to secure loan needed for business	209.0432	0.000***
Ability to order merchandise in bulk on credit	190.7532	0.000***
Access to foreign textile products	182.6696	0.000***
Ability to sustain loan repayment	165.1378	0.000***
Ability to secure loan from commercial banks	143.8000	0.000***
Ability to secure loan from micro lenders	115.5299	0.000***
Lengthy duration of business operation	8.5840	0.014*
Ability to secure valid trade license	7.4678	0.006**
Registration of textile business for VAT	7.3889	0.007**
South African nationality	5.5412	0.019*
Ability to conduct business with partners	9.0498	0.003**

Legend: Significance of association at * $P<0.05$; ** $P<0.01$; *** $P<0.001$

In Table 9, it can be seen that the viability of textile businesses was significantly associated with 12 variables. These 12 variables are: degree of entrepreneurial skills, ability to secure loan needed for business, ability to order merchandise in bulk on credit, access to foreign textile products, ability to sustain loan repayment, ability to secure loan from commercial banks, ability to secure loan from micro lenders, lengthy duration of business operation, ability to secure valid trade license, registration of textile business for VAT, South African nationality, and ability to conduct business with partners, in a decreasing order of strength.

Logit analysis (Hosmer & Lemeshow, 2013) was used in order to identify key predictors of viability in the 250 textile businesses that were selected for the study. The procedure showed that the viability of textile businesses was significantly influenced by 3 predictor variables. These predictor variables were: degree of entrepreneurial skills, ability to secure loan needed for business operation, and ability to order merchandise in bulk on credit, in a decreasing order of strength.

In logistic regression analysis, the measure of effect is the odds ratio. At the 5% level of significance, significant predictor variables are characterised by odds ratios that differ from 1 significantly, P-values that are smaller than 0.05, and 95% confidence intervals that do not contain 1. Table 10 shows odds ratios estimated from logit analysis. It can be seen from the table that all 3 predictor variables were highly significant at the 5% level of significance.

Table 10. Results from logit analysis

Factors that affect viability of textile business	Odds Ratio	P-value	95% C. I.
Entrepreneurial skills	3.59	0.000	(2.21, 6.74)
Ability to secure loan needed for business	3.51	0.000	(2.18, 6.63)
Ability to order merchandise in bulk on credit	2.61	0.000	(1.74, 4.86)

The percentage of overall correct classification for this procedure was equal to 79.11%. The P-value obtained from the Hosmer-Lemeshow goodness-of-fit test was equal to $0.1207 > 0.05$. This indicates that the fitted logistic regression model is fairly well reliable.

Interpretation of Significant Odds Ratios

The odds ratio of the variable "Ability to make profit" is equal to 3.59. This indicates that a business operator who is unable to make profit is 3.59 times as likely to be non-viable in comparison with another business operator who is capable of making profit. The odds ratio of the variable "Ability to secure loan needed for business" is 3.51. This indicates that a business operator who is unable to make profit is 3.51 times as likely to be non-viable in comparison with another business operator who is capable of making profit. The odds ratio of the variable "Ability to order merchandise in bulk on credit" is equal to 2.61. This indicates that a business operator who is unable to

order merchandise in bulk on credit is 2.61 times as likely to be non-viable in comparison with another business operator who is capable of ordering merchandise in bulk on credit.

DISCUSSION OF RESULTS

The study found that 75.60% of textile businesses were viable, whereas 24.40% of them were not viable. About 32% of business operators had adequate entrepreneurial skills based on the composite index developed by Ács, Szerb and Autio (2011). About 98% of businesses paid tax to SARS regularly. About 26% of entrepreneurs had received training from the DTI (2016), or the SEDA (2016), at least once in the past. About 75% of businesses had applied for loans at least once in the past. About 27% of businesses had defaulted on loan repayments in the past. Results obtained from the study show that the viability of textile businesses was significantly influenced by 3 predictor variables. These predictor variables were: degree of entrepreneurial skills, ability to secure loan needed for business operation, and ability to order merchandise in bulk on credit, in a decreasing order of strength. According to Khale (2015), the City of Tshwane can attract a large number of textile businesses into the City by improving the quality of municipal services that are provided to textile businesses. The numerous economic benefits of the SMME sector have been pointed out by Edoho (2015). A few examples are contribution to GDP, the generation of employment opportunities, contribution to innovation, contribution to the effective movement and transaction of goods and services, flexibility and swift adaptation to macroeconomic policy, the retention of artisan and vocational skills in local markets, and the ability to attract foreign direct investment into South Africa. According to Edoho (2015), the textile industry of South Africa is exposed to stiff completion from foreign producers and manufacturers, lack of specialised skills, lack of access to finance, adverse legal and regulatory environment, high cost of labour, inflexible labour laws, shortage of foreign direct investment, too much bureaucracy, red tape, lack of good corporate governance, high tax, low level of artisan skills, lack of access to specialised training programmes, corruption and lack of physical security (Seeletse, 2012).

Women and black indigenous South Africans do not play a major role in the textile industry of Tshwane. The sector is dominated by men and well financed entrepreneurs. Women and disadvantaged black South Africans need to be supported by institutions such as SEDA (2016), and DTI (2016), so that they can improve their current degree of participation in the textile industry of Tshwane. Women and poor black South Africans are seen participating in the informal sector as street vendors in the various parts of the City of Tshwane. The majority of street vendors sell cooked food, fruits, raw meat, green grocer products, vegetables and beverages. Young men usually sell loose cigarettes and sweets, clothing, gadgets, air time, etc. majority of products sold are fake imported goods that do not comply to quality manufacturing standards. Young family members who support their parents are usually forced to sell their products at sports grounds during soccer matches. Young women used to sell cooked food such as pap and meat as well as peanuts, sweet potato and corn. Majority of the interviewees did not have grade 10 qualification. Prior to 1994, though they had no protection from the Police, their spirit of participating in trading activities never stopped.

CONCLUSIONS OF STUDY

The study has found that 75.60% of textile businesses in the City of Tshwane were viable, whereas 24.40% of them were not viable. About 32% of business operators had adequate entrepreneurial skills based on the composite index developed by Ács, Szerb and Autio (2011). The study found that the viability of textile businesses was significantly influenced by the ability of businesses to make profit, to secure loan needed for business operation, and to order merchandise in bulk on credit. Textile business operators conducting business in the various parts of the City of Tshwane expect improved municipal services from the City of Tshwane in order to ensure viability and long-term survival. The majority of textile business operators need assistance from the City of Tshwane with regards to security and business licenses. Operators of the textile industry make a decent contribution to the overall economy of the City of Tshwane and the South African GDP. Adherence to the King Codes of Good Governance (King, 2015) has the potential for improving the plight of underperforming local municipalities that are responsible for providing municipal services to SMMEs operating in South Africa.

The study found that business operators with entrepreneurial skills performed better in comparison with those who did not possess the same skills. The majority of SMMEs were not operated by business men and women with formal

entrepreneurial training. Although the shortage of entrepreneurial skills was most prevalent among black entrepreneurs, the informal sector of the textile industry was dominated by black entrepreneurs. The global nature of the textile industry enabled entrepreneurs to trade foreign textile products at ease in the local market. The study found that local textile products were unable to compete favourably with foreign textile products. Foreign textile products were characterised by cheap cost, poor quality, motivation for avoiding import duty, tax evasion and the loss of demand for local textile products. Personal interviews conducted with four textile entrepreneurs revealed that the demand for foreign textile products was much larger than the demand for local textile products mostly due to cheap selling price.

According to Hulbert and Robert (2012), although the percentage of textile businesses that are operated by black South Africans in the City of Tshwane is much lower in comparison with that of whites, coloureds and Asians, the black population are worthy of support from the DTI (2016) and SEDA (2016) with regards to entrepreneurial skills and access to finance. Henrekson (2014) has shown that it is strategically beneficial and economically prudent for the City of Tshwane to support start-up textile businesses that are operated by emerging black entrepreneurs conducting business in the various parts of the City. Viability in the textile industry of Tshwane depends on various factors including the imposition of tariff and duty on foreign textile products. The local textile industry needs protection from aggressive foreign producers who have monopolized the textile industry of Tshwane. The potential benefits of protecting local textile industries in developing nations such as South Africa have been pointed out by Guimbard, Jean, Mimouni and Pichot (2012). Similar recommendations have been made to the South African National Department of Trade and Industry by South African trade unions such as the Southern African Clothing and Textile Workers Union (SACTWU).

RECOMMENDATIONS OF STUDY

Based on findings obtained from the study, the following recommendations are made to the South African National Department of Trade and Industry (2016), (DTI), the South African Small Business Development Agency (2016), (SEDA), the South African National Department of Higher Education and Training (DHET) and the South African Chamber of Commerce and Industry (2016), (SACCI) with a view to improve viability in small and medium-sized enterprises operating in the textile industry of the City of Tshwane. The recommendations have the potential for improving the plight of struggling SMMEs in the textile industry of the City of Tshwane.

- It is vital to design relevant and tailor-made skills based training programmes on vocational and entrepreneurial activities in which young matric graduates can be equipped with the skills they need to run businesses successfully;
- It is vital 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 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 National Department of Higher Education and Training, the South African National Department of Trade and Industry, and the South African Chamber of Commerce and Industry. 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 vital to monitor and evaluate the viability of newly established small businesses in the textile industry of Tshwane on a quarterly basis. This task falls under the ambit of the South African Department of Trade and Industry. Such an intervention has the potential for minimising the rate at which newly established small businesses fail in and around the City of Tshwane.
- As an interim measure, the local textile industry needs protection from aggressive foreign producers who have monopolized the textile industry of Tshwane by way of imposing tariff on imported merchandise.

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