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# Constraints to credit access by new SMEs in South Africa: A supply-side analysis

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**The primary objective of this study is to investigate empirically the constraints to credit access by new SMEs from commercial banks and trade creditors. For this purpose an initial 52-item questionnaire was developed after a thorough review of the literature on the business environment. Exploratory factor analysis identified nine factors which included four internal and five external factors. The internal factors were labelled as managerial competencies, collateral, networking and business information. The external factors were labelled the macro-economy, the legal environment, ethical perception, crime and corruption. The instrument used was the self-administered questionnaire. The statistical analyses included descriptive statistics, frequencies, factor analysis T-test and Pearson's correlation. The findings indicated that there are certain factors in the business environment that constrain credit access to new SMEs.**

**Key words:** New SMEs, commercial banks, trade creditors, business environment.

## INTRODUCTION

Small and medium enterprises are increasingly seen as playing an important role in the economies of many countries. Thus, governments throughout the world focus on the development of the SME sector to promote economic growth Finlayson (2003). In South Africa, SMEs contribute 56% of private sector employment and 36% of the gross domestic product (Ntsika Enterprise Promotion Agency, 2002). South Africa suffers from high unemployment with an official unemployment rate of estimate of 25.6% (Statistics South Africa, 2010). South Africa also experiences high levels of poverty and income and income inequality. One of the best ways to address unemployment and reduce poverty and income inequality in South Africa is to promote small business development (FinMark Trust, 2006).

However, if the contribution of SMEs is to be sustained, new SMEs will have to be created. New SMEs form the

new basis from which an economy can expand and stimulate accelerated socio-economic growth and development and job creation. South Africa risks economic stagnation without a high new SME creation rate and sustenance. Mutezo (2005) points out that about 300,000 new jobs must be created annually in South Africa, if the country is to retain its present unemployment rates, especially taking into consideration the high number of new comers into the labour market. Without the creation of new SMEs, South Africa is likely to stagnate and decline economically. Social problems such as crime and corruption are likely to increase.

According to Maas and Herrington (2006) a new SME can be described as an SME that has being in existence for less than forty two months. In addition, a new SME in South Africa must meet the qualitative and qualitative definitions of an SME as prescribed by the National Small Business Act. The creation of new SMEs is very low and their failure rate very high in South Africa. Herrington, Kew and Kew (2009) point out that according to the Global Entrepreneurship Monitor (GEM) Survey in 2008, South Africa ranked 23rd out of 43 countries, with a Total

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Early-Stage Activity (measure of new firm creation) rate of 7.8%. According to the GEM a country at South Africa's stage of economic development would be expected to have a TEA rate in the order of 13%. The low TEA is an impediment to the sustainability of economic growth necessary to create wealth and reduce poverty and unemployment. In addition, the failure rate of new SMEs in South Africa at 75% is one of the highest in the world. The probability of a new SME surviving beyond 42 months is less likely in South Africa than in any other GEM sampled country. Financial constraint is the primary exit reason for most new SMEs. Other primary sources of failure include too much competition and lack of customers. This implies that the country suffers from two major problems when it comes to new SMEs: Low creation rate and high failure rate (Herrington et al., 2009).

Atieno (2009) observes that access to external finance is needed for new SMEs to start and expand operations, develop new products, invest in new staff or production facilities. The availability of finance for investment in positive net present value projects is vital to the sustainability and viability of new SMEs. A vast majority of new SMEs depend on internal finance (contribution from the owners, family and friends). Internal finance is often inadequate for new SMEs to survive and grow. It is increasingly difficult to keep the costs within the constraints of self-financing. Therefore new SMEs need capital from external sources.

According to Demircug-Kunt, Maksimovic, Beck and Laeven, (2006:933) the two primary sources of external finance for new SMEs are equity and debt. External equity in the form of venture capital or the stock exchange is usually not available for new SMEs. The lack of external equity makes many new SMEs dependent on bank loans and overdrafts and suppliers credit for early-stage financing. Despite the dependence of SMEs on debt finance, paradoxically access to debt finance is very limited for new SMEs, especially in developing countries. Commercial banks and trade creditors hesitate to lend to new SMEs. FinMark Trust (2006) provides evidence that only 2% of new SMEs in South Africa are able to access bank loans and that the use of suppliers' credit by new SMEs is virtually non-existent. In addition, Foxcroft, Wood, Kew, Herrington and Segal (2002) report that 75% of applications for bank credit by new SMEs in South Africa is rejected. Balkenhol and Evans-Klock (2002) put the use of trade credit by new SMEs in South Africa at only 0.2%. According to Smorfitt (2009) new SMEs in South Africa do struggle to raise external finance. The question is why? There has been little, if any, in-depth research into why banks and trade creditors are not lining up to grant credit to new SMEs in South Africa.

### **Objective of the study**

Non-availability of debt finance to finance operations and

expansion is one of the major causes of failure for new SMEs in South Africa. The objective of the study is to investigate empirically the constraints to credit access by new SMEs from the supply side (i.e. from commercial banks and trade creditors).

### **Theoretical framework**

Capital structure is described as the mix of debt and equity that a firm uses to finance its operations. The theoretical principles underlying capital structure can generally be described in terms of the static trade-off theory by Modigliani and Miller (1958, 1963), the agency theory by Jensen and Meckling (1976) and the pecking order theory by Myers (1984). According to Andree and Kallberg (2008) the genesis of modern capital structure theory lies in the work of Modigliani and Miller (1958) in their famous proposition I – often referred to as the “irrelevance theorem”. The theorem suggests that, as an implication of equilibrium in perfect capital markets, the choice of capital structure does not affect a firm's market value. It is the assets of a firm that determine the value of the firm and not the way by which these assets are financed. The initial perfect market assumptions, on which the 1958 theory of Modigliani and Miller was based, were later reviewed in 1963 with the introduction of the tax benefits of debt. This is attributed to the fact that a perfect market does not exist in the real world. Since interest on debt is tax-deductible, thereby creating tax savings for the borrower, it becomes possible for firms to minimize their costs of capital and maximize shareholders' wealth by using debt (Modigliani and Miller, 1963).

According to Stiglitz and Weiss (1981:394) agency problems such as asymmetric information and moral hazards can impact on the availability of credit and hence the capital structure of new SMEs. Stiglitz and Weiss termed this phenomenon credit rationing. In the Stiglitz and Weiss formulation, credit rationing is said to occur if (1) among loan applicants who appear to be identical - some receive credit while others do not; or (2) there are identifiable groups in the population that are unable to obtain credit or can only obtain credit at much higher prices. The core of the argument is that suppliers of finance may choose (due to asymmetric information, adverse credit selection and monitoring problems) to offer an array of interest rates that would leave a significant number of potential borrowers without access to credit. The pecking order theory by Myers (1984) suggests that there is no well-defined optimal capital structure; instead the debt ratio is the result of hierarchical financing over time. Management has a preference to choose internal financing before external financing. When a firm is forced to use external financing sources, managers select the least risky and demanding source first. When it is necessary to issue external sources, debt issuance is preferred to new equity. According to Coleman and Cohn

(2000) commercial banks are a principal source of debt finance for new SMEs. Commercial banks offer new SMEs a wide range of services in their own right or through wholly or partially owned subsidiaries. These services cover every aspect of the financial market such as overdraft facilities, term loans, trade bill financing, factoring, leasing, export and import finance, and even government loan guarantee schemes. Huyghebaert, Van de Gucht and Van de Hulle (2007) point out that trade credit arises when a firm purchases goods and services for which payment is delayed. Trade credit is usually extended for an intermediate period of thirty to sixty days at which point payment is due. If payment is not made on the date, financing charges are applied and trade credit becomes an alternative method of financing business expenses. According to Berger and Udell (2006) recent evidence from developing countries suggests that trade credit provides a signal to the availability of more bank loans to new SMEs. Trade credit in economic environments with weak informational infrastructure and less developed banking systems can play an even more important role in SME financing because of its strength in addressing the information problem.

Following earlier studies by Fatoki and Smit (2010a) and Fatoki and Smit (2010b), this study compared the constraints to credit access from both commercial banks and trade creditors. The similarities and differences in the constraints to credit access from commercial banks and trade creditors will be explored

## LITERATURE REVIEW

The argument of this study is that there are certain variables in the business environment that constrain the availability of debt from commercial banks and trade creditors to new SMEs in South Africa. Smit, Cronje, Brevis and Vrba (2007) define a business environment as all those factors or variables, both inside and outside the organization that may influence the continued and successful existence of the organization. According to Cassar (2004) in the capital structure context, the business environment consists of factors internal and external to the firm which can influence its access to debt and/or external equity. Beck (2007) argues that the availability of finance to new SMEs can be influenced by both borrower-specific (internal factors) and systemic factors (external factors). Barbosa and Moraes (2004) point out that borrower-specific factors include variables largely controllable by a firm such as managerial competencies, quality of business information, availability of collateral and networking etc. Coco (2000) points out that collateral helps to reduce informational asymmetries and moral hazard problems that arise between banks and entrepreneurs. Collateral can be repossessed by the creditor in case of default thus enhancing creditor protection.

Kitindi, Magembe and Sethibe (2007) remark that creditors, banks and other lenders use business information

provided by firms to analyse their present performance and predict future performance. Business information reduces information asymmetry. If an entrepreneur has spent time developing a comprehensive and a priori business plan at an early stage in the project, the risk perception should be reduced and the likelihood of obtaining capital should increase. Studies by Shane and Stuart (2002) and Rudez and Mihalic (2007) positively associate managerial competencies with new venture performance. The higher the level of managerial competency exhibited by the owners of a new firm, the greater the viability and survival of the new SME. Coulthard and Loos (2007) describe networking in a small firm context as an activity in which the entrepreneurially oriented SME owner build and manage personal relationships with particular individuals in their surroundings. Atieno (2009) also points out that by utilizing network relationships as an entrepreneurial strategy, a new SME can obtain access to vital resources, capabilities and information resulting in entrepreneurial opportunity.

Furthermore, the scope for optimization that the lender will have in managing lending costs and risks can also be constrained by external or systemic factors (also known as state variables), such as the contractual and informational frameworks, macro-economic environment, social factors (crime, corruption and ethics), technology, the regulatory environment and other characteristics of the business environment in which both the lender and borrower operate. These state variables are not only outside the reach of lenders' actions, but neither can policy makers change them in the short-run. Beck (2007) adds that the weaker these state variables are, the less the manoeuvring room for credit supply optimization. Given these constraints, there is the possibility that lenders will not maximize their lending opportunities to SMEs. Barbosa and Moraes (2004) point out that macro-economic variables can affect the availability of debt to SMEs. Bad macro-economic conditions such as a recession in the economy make it difficult for firms to use debt positively and this may affect their ability to repay debt. Lepoutre and Heene (2006) find that small firms experience more difficulties than their larger counterparts when engaging in ethically responsible behaviour. The single most unethical practice by small firm professionals is dishonesty in making and keeping contracts.

Hannafey (2003) points out that new SMEs face significant resource pressure. Thus, liability of newness may lead new SMEs towards more individualist ethical postures. Investors risk perception may be influenced by the extent to which they perceive that they can trust the entrepreneur or entrepreneurial team. The Organisation for Economic Co-operation and Development (2006) shows that market imperfections such as those caused by inefficient legal systems can constrain the ability of firms to access external finance. Firms in countries with more efficient legal systems should therefore obtain more external financing than firms in countries with less efficient legal systems. The World Bank (2003) reveals a

relatively inefficient legal system in South Africa compared to developed countries. There is a shortage of judges and magistrates, backlog of cases and lower creditor protection in practice. Crime and corruption in South Africa are high and widely believed to restrain investment. The World Bank (2008) finds that 30% of enterprises in South Africa rate crime as a major or very severe constraint on investment, putting crime amongst the four most frequently mentioned constraints. The rate of corruption in South Africa is relatively high compared to developed countries (Transparency International, 2008). A thorough review of the literature on SME financing shows that no study in South Africa has investigated empirically how the business environment constrains credit access to new SMEs from the supply-side.

## METHODOLOGY

The research methodology employed in this research included a review of the literature on the constructs of entrepreneurial finance to provide the theoretical foundation for the research followed by an empirical study. The empirical research for the study was conducted in two ways; a pilot study and the main survey. Data was collected between January and September 2009. The measuring instrument was designed to measure the business environmental variables that can constrain the availability of debt finance to new SMEs. For this purpose, an initial 52-item questionnaire was designed after a thorough literature review of the business environment and debt finance. The seven-point Likert scale questions ranging from 1 strongly disagree to 7 strongly agree were used in the questionnaire. The questionnaire was administered to 100 respondents from commercial banks and 100 respondents that were trade creditors in a pilot study. Exploratory factor analysis resulted in the reduction of the 52-item questionnaire to a 43-item questionnaire and nine underlying factors for commercial banks and 39-item questionnaire and nine underlying factors for trade creditors. The nine factors identified were made up of four internal factors and five external factors. These were collateral, business information, managerial competencies and networking. The external factors were the macro-economy, the legal system, ethical perception, crime and corruption. For the main survey 376 questionnaires were administered to commercial banks and 172 questionnaires returned. The response rate for commercial banks was 45.8%. For trade creditors, 315 questionnaires were administered and 233 returned. The response rate for trade creditors was 74.0%.

The empirical study concentrated on the branches of the four major banks and their Small Business Units in the Eastern Cape Province. The four major banks included in the study were ABSA, First National Bank, Standard Bank and Nedcor. The four banks are responsible for 82% of all assets and 80% of all liabilities in commercial banking in South Africa (Okeahalam, 2001). The population of the branches of the four big banks in the Eastern Cape Province was obtained from the Branch Locators on the websites of the four banks. The population of commercial banks was two hundred and ninety four. The empirical study also included trade creditors in the manufacturing, wholesale and retail sectors. According to Selima (2007) these three sectors account for most of the trade credit. The population of trade creditors was obtained from the Border Kei Chamber of Commerce, the Port-Elizabeth Regional Chamber of Commerce and the Enterprise Directory.

The population of trade creditors was five hundred and forty one. Data collection and analysis was carried out with the assistance of a firm of professional statisticians. Data collection was done

between January 2009 and September 2009. Data analysis was done using the Statistical Package for Social Sciences (SPSS) version 12.0 for Windows. In addition, statistical analysis included descriptive statistics and T-test and Pearson's correlation. Reliability was tested using the Cronbach's Alpha. Validity was ensured by using a statistician and a panel of experts to evaluate the research instrument for conceptual clarity and by pre-testing the research instrument in a pilot study. There were only three cases of missing values and pairwise deletion method under SPSS was used. The research used the Kolmogorov-Smirnov test to determine the normality of the data. The significance of the Kolmogorov-Smirnov test was greater than 0.05 which implies that the normality of the data can be assumed.

## RESULTS AND DISCUSSION

To ensure the use of factor analysis, the Barlett Test of Sphericity (BTS) and Kaiser-Meyer-Olkin (KMO) test of appropriateness were carried out accordingly. The results of the BTS and KMO support the appropriateness of the factor analysis technique. Tables 1 and 2 depict the rotated factor loadings for commercial banks and trade creditors. Nine factors with Eigenvalues greater than one account for 82.561% of the total variance for commercial banks. Also, nine factors with Eigenvalues greater than one account for 78.566% of the total variance of trade creditors. According to the rules of factor analysis only factors that have Eigenvalues greater than one should be retained. Questionnaire items with factor loading lower than 0.300 were removed as suggested by Leech, Barrett and Morgan (2005).

### Commercial banks

Factor one was labelled as *lack of collateral*. The factor includes four items. This factor is internal to the firm. Factor two was labelled *lack of business information*. The factor includes nine items. The factor is largely internal to the firm. Factor three was labelled *lack of managerial competencies*. The factor consists of seven items. The factor is largely internal to the firm. Factor four was labelled as *bad macro-economy*. The factor consists of three items. The factor is external to a firm. The factor is largely external to the firm. Factor five was labelled as *crime*. The factor consists of three items. Crime is largely an external factor. Factor 6 was labelled *lack of networking*. The factor consists of five items. The factor is internal to a firm. Factor seven was labelled *ethical perception*. Ethical perception implies the perception of commercial banks as to the ethical behaviour of new SME owners. The factor consists of four items. Ethics is largely external to a firm. Factor eight was labelled *inefficiency of the legal system*. The factor consists of five items and is external to a firm. Factor nine was labelled *corruption*. The factor consists of three items and is external to a firm. The Cronbach's alphas for all the factors are greater than 0.700 indicating the reliability of the factors.

**Table 1.** Rotated factor loading, Eigen value and Cronbach's alpha (commercial banks).

<b>Variables</b>	<b>Factor 1</b>	<b>Factor 2</b>	<b>Factor 3</b>	<b>Factor 4</b>	<b>Factor 5</b>	<b>Factor 6</b>	<b>Factor 7</b>	<b>Factor 8</b>	<b>Factor 9</b>
No tangible assets (example; building) as collateral	0.8846								
Low level of equity contribution by founder	0.8711								
No guarantee	0.6539								
No current assets (e.g. inventories) as collateral	0.6217								
The business does not have business plan		0.8918							
Cash flow does not show that credit can be repaid		0.8614							
The business is not financially viable		0.8423							
The business does not have market potential		0.8411							
The business does not have growth potential		0.8407							
The business plan does not do an excellent job in articulating the opportunity		0.8106							
The founder does not have necessary business documentation		0.7978							
The business plan is not thorough in its coverage of key issues									
The founder does not have suitable business premises		0.7623							
The product is new		0.2674							
The business plan is not produced with the assistance of an accountant/consultant		0.2226							
The technology is new		0.1994							
High competition		0.1942							
Bad credit record			0.8995						
Founder is not familiar with the market/industry			0.8827						
Lack of experience relevant to the venture by the founder			0.8429						
Lack of education by the founder			0.7999						
Lack of business skill by the founder			0.7655						
Lack of resources to manage the firm			0.5582						
Founder lacks demonstrated managerial ability			0.5217						
Founders has not received any training related to business			0.1997						
Recession in the economy				0.8996					
Continuous fall in the value of real estate (collateral value)				0.7673					
High interest rate				0.5988					
High inflation rate				0.2351					
High unemployment rate				0.1775					
Low business confidence				0.1651					

**Table 1.** Contd.

The business is located in high crime area	0.7429								
The business is not insured against crime	0.7321								
Collateral is located in high crime area	0.6563								
No prior relationship between the bank and the founder						0.8992			
No verifiable distribution of goods agreement in place						0.7311			
Lack of good reference on integrity and ability of the founder						0.6988			
No verifiable supply of input agreement						0.6147			
Short professional relationship between the bank and founder						0.4231			
The business does not belong to a professional association (e.g. chambers of commerce)						0.1998			
Perception of willingness to divert funds to non-core business activities							0.6559		
Perception of payment default							0.5421		
Perception of dishonesty in keeping promises and commitments							0.4557		
False information and paddling of financial statements							0.4219		
In the situation of legal action against the customer, it is costly to get judgment								0.6322	
In the situation of legal action against the customer, it is takes time to get judgment								0.6229	
Court decisions are not fair and impartial								0.6111	
Court decisions are not enforced								0.5988	
Weak confidence in the legal system to enforce contracts and property rights								0.4547	
In the situation where the credit application is for government contract, the perception that the corruption of government official may delay payment									0.6981
In the situation that legal action is taken against customers to recover loan, the perception that corruption of court official may delay judgment									0.5214
In the situation where the credit application is for firm contact, the perception that the corruption of firm official may delay payment									0.3774
Cronbach's alpha	0.8105	0.8207	0.7918	0.8113	0.7981	0.7217	0.8551	0.7327	0.7108
Eigen value	13.225	6.432	3.740	2.967	2.532	2.356	2.156	1.835	1.322

(Items with factors loading less than 0.300 will be omitted).

**Table 2.** Rotated factor loading, Eigen value Cronbach's alpha (trade creditors).

<b>Variables</b>	<b>Factor 1</b>	<b>Factor 2</b>	<b>Factor 3</b>	<b>Factor 4</b>	<b>Factor 5</b>	<b>Factor 6</b>	<b>Factor 7</b>	<b>Factor 8</b>	<b>Factor 9</b>
Cash flow does not show that the credit can be repaid	0.8841								
The business is not viable	0.8420								
The business does not have a business plan	0.8100								
The business does not have market potential	0.6116								
The business does not have growth potential	0.5711								
The business does not have suitable business premises	0.5342								
The business plan is not through in its coverage of key issues	0.4782								
The business plan does not do an excellent job in articulating opportunity	0.4500								
Business plan not produced by an accountant	0.2116								
High competition	0.1996								
The product is new	0.1179								
The technology is new	0.1110								
No prior relationship		0.7352							
Short prior relationship		0.6975							
Lack of good reference on integrity		0.6662							
No distribution of output agreement		0.5986							
The business does not belong to a professional association		0.6530							
No social relationship		0.1971							
The business is not insured against crime			0.8100						
The business is located in high crime area			0.7654						
Collateral is located in high crime area			0.1775						
Collateral is not insured against crime			0.1003						
Perception of payment default				0.7895					
Perception of dishonesty in keeping commitments				0.6988					
Perception of willingness to divert funds to non-core activities				0.6760					
Perception of false information and paddling of financial statements				0.6531					
Bad credit record					0.7880				
Lack of experience relevant to the venture					0.7651				
The entrepreneur does not have the resources to manage the business					0.6558				
Lack of education					0.6110				
Lack of business skills					0.4331				
Lack of documentations					0.4116				
Founder lacks demonstrated managerial ability					0.2739				
Founder has not received any training related to the business					0.1622				

Table 2. Contd.

In the situation of legal action against the customer, it is costly to get judgment										0.8010
In the situation of legal action against the customer, it takes a long time to get judgment										0.7632
Court are not fair and impartial										0.6783
Court decisions are not enforced										0.5984
In the situation that legal action is taken against customers to recover loan, the perception that corruption of court official may delay judgment										0.4861
Weak confidence in the legal system to enforce contracts and property rights										0.6920
Recession in the economy										0.6543
High interest rate										0.2006
High inflation rate										0.1661
High unemployment rate										0.1224
Low business confidence										0.1004
Continuous fall in the value of real estate										0.6980
Low equity contribution										0.5987
No guarantee										0.4821
No current asset as collateral										0.3885
No fixed asset as collateral										0.7543
In the situation where the credit application is for government contract, the perception that the corruption of government official may delay payment										0.6988
In the situation where the credit application is for private contract, the perception that corruption may delay payment										0.7112
Cronbach's alpha	0.8210	0.7654	0.7865	0.8523	0.7119	0.7432	0.7608	0.8107	0.7112	
Eigen value	10.225	6.441	4.104	3.276	3.015	2.284	2.015	1.846	1.424	

(Items with factors loading less than 0.300 will be omitted).

### Trade creditors

Results show that a lack of tangible collateral and/or owners' equity will almost certainly lead to the decline of a loan application from commercial banks. For trade creditors.

Factor one was labelled as *lack of business information*. This factor consists of eight items and

is internal to the firm. Factor two was labelled *lack of networking*. The factor consists of five items and is internal to the firm. Factor three was labelled *crime*. The factor consists of two items and is largely external to the firm. Factor four was labelled as *ethical perception*. The factor consists of four items and is external to a firm.

Factor five was labelled as *lack of managerial*

*competencies*. The factor consists of six items and is internal to the firm. Factor 6 was *inefficiency of the legal system*. The factor consists of six items and is external to a firm. Factor seven was labelled *bad macro-economy*. The factor consists of two items and is external to the firm. Factor eight was labelled *lack of collateral*. The factor consists of four items and is internal to the

**Table 3.** t-Test for differences in the mean scores of commercial banks and trade creditors.

Factor	Scale means for commercial banks	Scale means for trade creditors	T-test significance (p-value)
Lack of collateral	6.01	2.83	<b>0.01</b>
Lack of business information	5.82	6.03	0.52
Lack of managerial competency	5.56	5.38	0.59
Bad macro-economy	5.48	4.80	0.69
Crime	5.05	5.67	0.75
Lack of networking	4.98	5.97	0.13
Ethical perception	2.92	5.54	<b>0.04</b>
Inefficient legal system	2.81	5.20	<b>0.03</b>
Corruption	2.45	2.76	0.27

**Table 4.** Correlation results for commercial banks and trade creditors.

Factor	Commercial banks		Trade creditors	
	R	P-value	R	P-value
Lack of collateral	0.956	0.01	0.191	0.26
Lack of business information	0.922	0.03	0.938	0.01
Lack of managerial competency	0.745	0.01	0.668	0.01
Bad macro-economy	0.722	0.01	0.622	0.03
Crime	0.664	0.04	0.860	0.02
Lack of networking	0.638	0.01	0.889	0.01
Ethical perception	0.168	0.18	0.732	0.03
Inefficient legal system	0.146	0.25	0.657	0.01
Corruption	0.103	0.22	0.117	0.18

Sig. 0.05 (2-tailed)

is internal to the firm. Factor nine was labelled "Corruption". The factor consists of two items and is external to a firm. The Cronbach's alphas for all the factors are greater than 0.700 indicating the reliability of the factors.

Table 3 depicts the means and the results of the T-test after the main survey. The T-test was used to determine if there are significant differences in the mean scores of commercial banks and trade creditors. Table 4 depicts the results of the Pearson's correlation. Pearson's correlation was used to test for the direction and strength of relationship between the business environmental factors and non-availability of debt from commercial banks and trade creditors. The scale means of lack of collateral for commercial banks and trade creditors are 6.01 and 2.83. The seven-point Likert scale was used and 4 is the midpoint. In addition, the T-test shows a significant difference in the mean scores of the two sets of respondents. The significance of the relationships was tested through the Pearson's correlation ( $r=0.956$ ,  $p\text{-value}=0.01$ ) for commercial banks and ( $r=0.191$ ,  $p\text{-value}=0.26$ ) for trade creditors. The results indicate that there is a significant positive relationship between lack of collateral and non-availability of debt from commercial banks and a

weak insignificant relationship for trade creditors. For commercial banks, lack of collateral is the most important constraint to credit access by new SMEs. The creditors' lack of collateral is not an important constraint. The findings are consistent the findings of Barbosa and Moraes (2004), Blumberg and Letterie (2008). The scale means of lack of business information are 5.82 and 6.03 for commercial banks and trade creditors respectively. The T-test does not show any significant differences in the mean scores of both sets of respondents. The Pearson's correlation results are: Commercial bank ( $r=0.922$ ,  $p\text{-value}=0.02$ ); trade creditors ( $r=0.938$ ,  $p\text{-value}=0.01$ ). The results indicate that lack of business information is an important constraint to credit access from both commercial banks and trade creditors. The results are consistent with the findings of Kitindi et al. (2002), Pretorius and Shaw (2004).

The scale means of lack of managerial competency are 5.56 and 5.38 for commercial banks and trade creditors respectively. The T-test does not show any significant differences in the mean scores of both sets of respondents. The Pearson's correlation results are: Commercial banks ( $r=0.745$ ,  $p\text{-value}=0.01$ ), and trade creditors ( $r=0.668$ ,  $p\text{-value}=0.01$ ). The results indicate that lack of managerial

competency is an important constraint to credit access from both commercial banks and trade creditors. The results suggest that the managerial competency of the owners of new SMEs will positively impact on the availability of debt from commercial banks and trade creditors. Education together with experience in the field of the business increases the chances of loan approval. The results are consistent with the findings of Lefebvre and Lefebvre (2002) and Storey (2004).

The scale means of a bad macro-economy are 5.48 and 4.80 for commercial banks and trade creditors respectively. The T-test does not show any significant differences in the mean scores of both sets of respondents. The Pearson's correlation results are: Commercial banks ( $r=0.722$ ,  $p\text{-value}=0.04$ ), trade creditors ( $r=0.622$ ,  $p\text{-value}=0.02$ ). The results indicate that a bad macro-economic environment is an important constraint to credit access from both commercial banks and trade creditors. Kutsuna and Cowling (2003) find that the availability of bank loan deteriorates under recessionary economic conditions. According to Barbosa and Moraes (2004) a depressed economic condition is a characteristic associated with the likelihood of a firm's failure to repay its debt suggesting a reduction in credit approval. The scale means of crime are 5.05 and 5.67 for commercial banks and trade creditors respectively. The T-test does not show any significant differences in the mean scores of both sets of respondents. The Pearson's correlation results are: Commercial banks ( $r=0.664$ ,  $p\text{-value}=0.04$ ); trade creditors ( $r=0.860$ ,  $p\text{-value}=0.02$ ).

The results indicate that locating an SME in a high crime area is an important constraint to credit access from both commercial banks and trade creditors. Linden and Rockoff (2006) find that crime has a major impact on property values. Collateral located in high crime area is often unacceptable for credit. Furthermore, businesses located in high crime areas have lower access to debt finance than businesses located in low crime areas. The scale means of networking are 4.98 and 5.97 for commercial banks and trade creditors respectively. The T-test does not show any significant differences in the two sets of means. The Pearson's correlation results are: commercial banks ( $r=0.638$ ,  $p\text{-value}=0.01$ ), trade creditors ( $r=0.889$ ,  $p\text{-value}=0.01$ ). The results indicate that lack of networking and relationship is an important constraint to credit access from both commercial banks and trade creditors. The lack of networking affects the legitimacy of the new SME. Ebben and Johnson (2006:854) find that new SMEs get more trade credit from their suppliers when they have long-term business or personal relationships with suppliers, have frequent interactions with suppliers, or are in the same networks with suppliers.

The scale means of ethical perception are 2.92 and 5.54 for commercial banks and trade creditors respectively. The T-test shows that there is a significant difference in the two sets of means. The Pearson's correlation results are: Commercial banks ( $r=0.168$ ,  $p\text{-value}$

$=0.12$ ), trade creditors ( $r=0.732$ ,  $p\text{-value}=0.03$ ). The results indicate the ethical perception of new SMEs is not an important constraint to credit access by commercial banks. For trade creditors, ethical perception is an important constraint. Howorth and Moro (2006:28), De la Torre, Peria and Schumkler (2008) suggest that ethics and trust mitigate adverse selection and moral hazard, reduces screening and monitoring costs. However, banks can use other types of hard information such as credit scoring and financial statements for objective and justifiable decisions. In addition, the possession of collateral by banks reduces the moral hazard and adverse selection of lending to new SMEs reducing the importance of ethics. Shane and Cable (2002:367), ethics is much more important for trade creditors. A large amount of transactions in inter-firm trade is done on trust and ethical perception.

The scale means of the inefficient legal system are 2.81 and 5.20 for commercial banks and trade creditors respectively. The t-test shows that there is a significant difference in the two sets of means. The Pearson's correlation results are: Commercial banks ( $r=0.146$ ,  $p\text{-value}=0.25$ ), trade creditors ( $r=0.657$ ,  $p\text{-value}=0.01$ ). The results indicate that inefficient legal system is not an important constraint to credit access from commercial banks. However, inefficient legal system is an important constraint to the credit access from trade creditors. Beck et al. (2008) suggest that banks adapt to the legal environment in which they operate by offering instruments that allow them to circumvent existing deficiencies in the legal system. De la Torre et al. (2008) find that the pledging of collateral provide greater assurances to banks of repayment, even where contract enforcement processes are relatively imperfect. In this way, banks can compensate for weaknesses in the legal environment. Frank and Maksimovic (2004) however find that the efficiency of the legal environment is critical to the availability of trade credit. The scale means of corruption are 2.45 and 2.76 for commercial banks and trade creditors respectively. The t-test shows that there is no significant difference in the two sets of means. The Pearson's correlation results are: Commercial banks ( $r=0.103$ ,  $p\text{-value}=0.22$ ), trade creditors ( $r=0.117$ ,  $p\text{-value}=0.18$ ). The results indicate that corruption is not an important constraint to credit access from commercial banks and trade creditors. The results are inconsistent with Weill (2009), which finds that a high level of corruption discourages banks from engaging in lending. Commercial banks especially can reduce the hazards of corruption by taking collateral. Comparing internal factors to external factors the results indicate that all the four internal factors (collateral, business information, managerial competencies and networking) are important constraints to credit access from commercial banks while only three (business information, managerial competencies and networking) are important constraints for trade creditors. In addition, the results suggest that external factors are more important constraints to trade creditors than

commercial banks. Four out of the five external factors (crime, macro-economy, ethical perception and legal system) are important constraints for trade creditors, while only two external factors (crime and bad macro-economy) are important constraints for commercial banks.

The t-test (sig. 0.56 for commercial banks) and (sig. 0.37 for trade creditors) does not indicate any significant gender differences with respect to the constraints to credit access. In addition, the Analysis of Variance (ANOVA) (sig. 0.24 for commercial banks) and (sig. 0.29) for trade creditors does not indicate any significant age differences with respect to the constraints to credit access.

## CONCLUSIONS AND MANAGERIAL IMPLICATIONS

Stiglitz and Weiss (1981:393-410) developed the main theoretical contributions about credit rationing and suggested that the problems of information asymmetry, moral hazard and adverse selection have the greatest limitations on productive credit granting. The results indicate there are some factors in the business environment (internal and external environments) of new SMEs that accentuate the problems of moral hazards, information asymmetry and adverse selection. To improve the availability of debt from commercial banks and trade creditors, there is the need for new SME owners to plan and save to have some amount of equity contribution. It is necessary for the owner of a new SME to have either business or personal assets to be used as collateral. Therefore, to get the required funding from commercial banks, it is first about the owner of the new SME getting investment ready. Richard (2006) points out that investors look out for very specific things when they assess requests for funding. Entrepreneurs must be made aware of the needs and concerns of particular types of investor. Training and communication on the requirements of banks and trade creditors can help to make new SME owners to get investment ready and thus improve the availability of debt. Commercial banks can create awareness of their funding requirements especially the importance of collateral through advertisements and communication with trade associations. Government agencies can also assist in making SME owners investment ready through training. It is also incumbent on Government and other stakeholders to ensure that schemes, such as the Small Firm Loan Guarantee, are well publicised and available to new SMEs

There is the need for personal development by the owners of new SMEs especially in the area of business and financial management skills through training. Owners of new SMEs have to take greater responsibility for their own learning. Therefore, they need to create a positive attitude towards entrepreneurship and training. The personal involvement of the entrepreneur in gathering the relevant information and in the writing of the business plan is critical to learn about the industry and to the success of the new venture. The websites of the big four

commercial banks have addressed business plan preparation by new SMEs. However, it is important to provide awareness to new SMEs that such facilities exist. The use of computers and internet is very low amongst SMEs in South Africa. Government agencies such as Small Enterprise Development Agency can subsidize the cost of computers to new SMEs and also offer training on how to use the internet. Similarly, the South African Business Toolkit was launched in 2008 to assist entrepreneurs to assess their investment readiness through the latest information and communication technologies. Awareness need to be created for programmes like this through advertisements in local and national media. Educational institutions should introduce and strengthen entrepreneurial education. Entrepreneurship education should become a mainstream activity in the educational systems. New SMEs should look at using non-executives at an early stage to bring external expertise and guide investment decisions. Networking is particularly important to trade creditors. To improve networking SME owners should always ensure that they maintain good relationships with commercial banks and trade creditors and join trade associations. The high crime rate in South Africa must be reduced. This can be done by improving the efficiency of the legal system. There is the need to create work opportunities for the vast number of the unemployed in South Africa. New SMEs should be encouraged to insure their businesses. Government can assist in subsidizing the cost of insurance.

There is the need for a campaign by the government to change the minds of the people that unethical practices are bad. Business ethics should be introduced as a major module in the universities and colleges in South Africa to prepare likely entrepreneurs about the importance of ethics. SME owners should be trained on the importance of business ethics. Governmental and professional business entities should provide proficiency training that is grounded in sound ethical management. To further improve the efficiency of the legal system and improve the availability of debt, more judges are also needed as there is a shortage of judges and magistrates. In addition, the long procedures, duration and cost it takes to register property, enforce contracts and close business upon bankruptcy must be reduced. South Africa needs to continue to sustain strong economic and financial fundamentals. However, there is the need to also reduce interest rates to enable new SMEs to use debt positively.

## LIMITATIONS AND AREAS FOR FURTHER RESEARCH

The study focused only on the supply side of debt financing. Further study could investigate the constraints perceived by new SMEs to credit access (that is, from the demand side). In addition, further studies could examine the efficiency of government programmes to enhance SME financing.

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