

SMEs perception related to their trade credit management effectiveness

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Purpose: To determine small and medium-sized enterprises' (SMEs) perception related to their trade credit management effectiveness.

Design/methodology/approach: Quantitative research design with purposive sampling as the sampling method, administrated to 10 450 SMEs within South Africa.

Findings/results: The results indicate SMEs perceive their trade credit management as effective.

Practical implications: The article reveals how SMEs perceive their trade credit management by identifying their effectiveness in managing trade credit.

Originality/value: By raising awareness pertaining to SMEs' perceptions around their trade credit management effectiveness, SMEs can become more observant of their own trade credit management effectiveness and overall finances. Thereby, SMEs' awareness could be improved to become financially viable and, in so doing, empower SMEs to foster economic development within South Africa. Given the results revealing SMEs' perception as effective in managing trade credit, the study adds value by providing insight as to what financial problems, apart from trade credit ineffectiveness, could contribute to their business failure. There is a need therefore to investigate why SMEs continue to fail at such high rates because of financial problems in order to determine the root causes and types of financial problems contributing to SME business failure.

Keywords: trade credit; effectiveness; managing; small and medium-sized enterprises; perception; asymmetric information; financial problems; debtor; creditor.

Introduction

South Africa's surging unemployment is a cause for concern with an official unemployment rate of 33.9% in the second quarter of 2022 (Statistics South Africa, 2022) despite the country's socio-economic objectives to reduce unemployment including other major development challenges namely income inequality and growing levels of poverty (World Bank, 2022a). In addition, 55.5% of South Africa's population is living below the national poverty line as revealed by World Bank indicators for the year 2014 (World Bank, 2022b). Inequality has been a persistent reality for South Africa, as the country's Gini index represents one of the highest inequality rates worldwide increasing from 59.3 in 1993 to 63.0 in 2014 (World Bank, 2022c).

The 2017–2018 Global Entrepreneurship Monitor (GEM) Report provides an established business ownership (EBO) rate, indicating that the African region obtained the highest EBO rate of 11.9% (Singer et al., 2018). However, when comparing the average EBO rate of the African region to that of South Africa, 2.2% with a ranking of 50 out of 54 countries for all GEM-participating economies, the deficit is somewhat unsurprising (Singer et al., 2018). More recently, South Africa's EBO rate increased from 3.5% in 2019 to 5.2% in 2021 by ranking 29th out of 47 countries from all GEM-participating economies in the 2021–2022 GEM Report (Hill et al., 2022). Unique to Africa is the observation that a high total early-stage entrepreneurial activity (TEA) rate translates into a high EBO rate. By comparison, the EBO rate of Africa is lower compared to other regions such as Asia and Oceania (9.7%), Europe and North America (7.0%), as reported in the 2017–2018 GEM Report (Singer et al., 2018). However, extensive variability within African region countries is evident, especially in the case of South Africa given the country's low EBO rate that, compared to the African continent, remains far lower (Hill et al., 2022).

The sustainable development of small and medium-sized enterprises (SMEs) is of pivotal importance and regarded as a viable solution to address these economic developmental challenges in South Africa (Herrington & Kew, 2018; New Partnership for Africa's Development

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[NEPAD], 2008). The critical importance of entrepreneurship in creating future employment, economic development and boosting economic growth is emphasised in African country employment data as observed from the 2017–2018 GEM Report including the 2017–2018 GEM South African Report (Herrington & Kew, 2018). The need for a sustainable SME sector is evident and continuously growing as entrepreneurship is regarded as a vital solution in contributing towards Africa's economic growth and job creation. Globally, SMEs contribute to around 80% of economic growth and locally close to 80% of gross domestic product in South Africa (Baker et al., 2019; Herrington & Kew, 2018). Despite the valuable contribution by SMEs as instrumental in addressing key development challenges, the creation rate of new SMEs in South Africa is one of the lowest in the world and the failure rate of SMEs is as concerning. South Africa's fear of failure rate totalled 53% ranking the country 5th out of 47 countries (Hill et al., 2022). South Africa is thus one of the highest-ranked countries in the 2021–2022 GEM survey. The 2019–2020 GEM Report totalled 49.8% and ranked 9th out of 50 countries (Bosma et al., 2020; Hill et al., 2022). The GEM Report reveals additional entrepreneurial activity data for South Africa in the form of TEA rate. South Africa's TEA rate reveals an increase when comparing the 2019–2020 (10.8%) to the 2021–2022 GEM Report (17.5%). The country is positioned 11th out of 47 participating countries in 2021 (Bosma et al., 2020; Hill et al., 2022). Therefore, South Africa's entrepreneurial activity performance is ordinary in comparison to GEM-participating economies with room for improvement.

Trade credit consists of both the time differential between the delivery of products and payment including the cash discount allowed for earlier payment before due date (McGuinness et al., 2017). Trade credit is important to SMEs as it regularly acts as the best and only available source of external funding for working capital needs as SMEs' access to external debt from financial institutions is limited (Andrieu et al., 2018). This phenomenon is termed the 'finance gap' that forms part of South African SMEs' broader financial problems constraining operational suitability (Bosma et al., 2020; Phaladi & Thwala, 2008; Pretorius & Shaw, 2004), making trade credit an important solution to those experiencing restricted access to credit emphasising the importance of applying effective trade credit-management practices especially for credit-rationed SMEs as postulated by Stiglitz and Weiss (1981). In managing trade creditors, SMEs should be responsible in selecting a reputable credit lender as creditors can opt to siege the supply of products and inflate the trade credit contractual terms in the event of default thereby disrupting operations until the default risk is mitigated (Cunat, 2006). In addition, the importance of trade debtors should also be recognised because trade credit embodies a 'two-way transaction' in nature and, as a result, trade debtors carry an element of default risk and should be carefully assessed when evaluating credit requests (Barad, 2010; Martinez-Sola et al., 2013). However, due to the presence of financial problems, SMEs regularly fall short in evaluating credit applications impairing their effectiveness

in managing trade credit (Javid, 2014; Kosgey & Njiru, 2016). The majority of SMEs often neglect their own credit policies, ultimately leading to the collapse of the enterprise, while banks and credit lenders often reject SMEs' credit applications, due to the associated credit risk. Adding to this, SMEs portray volatile cash flow because of trade credit mismanagement practices showcasing SMEs' ineffectiveness in managing trade credit (Brimah et al., 2021; Poutziouris et al., 2005). Therefore, SMEs are responsible not to neglect their trade credit management in striving towards effective trade credit management as, failure to do so, could result in severe cash flow problems impairing SMEs' ability to develop into sustainable enterprises ultimately contributing to SMEs' failure rates (Padachi et al., 2008).

Financial problems including trade credit mismanagement are among the primary reasons contributing to SME business failure as reflected in the South African 2019–2020 GEM Report data such as the low EBO and high failure rate including the mundane TEA rate (Bosma et al., 2020). Although South Africa is largely reliant on SMEs as a mechanism to foster economic development and uplift social-economic disruptions, the reality remains that SMEs continuously display a low propensity to survive due to financial problems, specifically related to their trade credit management, impairing SMEs' pursuit towards financial viability. Therefore, the need exists to draw insights into SMEs' management effectiveness that could serve as guidelines for SMEs to become more observant pertaining to their trade credit management effectiveness and overall finances, improving SMEs' ability to become financially viable thereby empowering SMEs to foster economic development within South Africa. As far as can be established, no study has determined SMEs' effectiveness in managing trade credit from a South African perspective. Therefore, it deems important to address this unknown research gap. The study aims to shed more light on SMEs' trade credit management by empirically determining SMEs' perception related to their trade credit management effectiveness. There are four secondary objectives:

- Identify SMEs' effectiveness specific to their execution of certain activities of managing trade credit.
- Identify SMEs' effectiveness specific to their application of certain principles of managing trade credit.
- Identify SMEs' effectiveness specific to their management of certain aspects of managing trade credit.
- Identify SMEs' effectiveness specific to their application of credit policy components when granting credit to a debtor.

Literature review

In determining SMEs' perceptions related to their trade credit management effectiveness, the sections to follow will review literature around defining SMEs, trade credit and trade credit use in SMEs followed by a review of asymmetric information as a theory of trade credit that forms the theoretical foundations of this study.

Definition of small and medium-sized enterprises

No universally agreed upon definition of the phrase SMEs exists (Beck et al., 2005), as the vast majority of definitions (including that of South Africa) follow a combined structure of quantitative and qualitative factors in formulating a structured definition. Important to this study is the definition of SMEs from a South African perspective, as explained next. The *National Small Enterprise Act of South Africa of 1996*, as amended in 2003 and 2004 by the *National Small Business Amendment Act No. 26 of 2003* and the *National Small Enterprise Act No. 29 of 2004* and updated to Government Notice No. 399 of Government Gazette 42304, dated 15 March 2019, provides a schedule of size standards for the definition of SMEs. The schedule includes all the sectors of the South African economy for small enterprises or SMEs. A schedule of size standards for the definition of SMEs is provided (*refer to the Definition of South African SMEs, Appendix 1 is available to read after the reference list*).

Trade credit

Trade credit is the funding source extended by creditors to facilitate the transactions of goods and services to debtors (McGuinness et al., 2017). Small and medium-sized enterprises position themselves as financial intermediaries by providing credit to others consisting of both the time differential between the delivery of goods and services and payment including proportional credit discounts allowed in case of payments made by debtors before the due date and bulk payments (McGuinness et al., 2017).

Advantages of trade credit utilisation relate to the degree of financial flexibility attained from its use (Danielson & Scott, 2007), including the ability to overcome financial constraints should access to external credit becomes unavailable as applicable to credit-rationed SMEs (Petersen & Rajan, 1997; Schwartz, 1974). In addition, trade credit becomes a contractual instrument that assists with information asymmetry by acting as a mechanism of display providing information pertaining to trade debtors' default risk (Smith, 1987). Trade credit also offers cost advantages in acting as an effective price-cut mechanism given that trade credit investments could lead to decreased inventory-related costs (Afrifa & Gyapong, 2017; Petersen & Rajan 1997). However, trade credit holds numerous disadvantages related to the cost of financing, as trade credit is an expensive funding source, especially if SMEs do not indorse the early discount facility (Nilsen, 2002; Petersen & Rajan, 1997). Additionally, trade debtors in bankruptcy will almost certainly default on their obligations due, thereby invoking sudden liquidity shortages, and a potential series of liquidity disruptions along a given supply chain thereby impairing the SMEs' solvability and eventual operational viability (Boissay & Gropp, 2007; Jacobson & Von Schedvin, 2015).

Firms act as financial intermediaries, by providing finance to other firms (debtors) comprising both the time differential

between the delivery of goods and services and payment, and the proportional discounts allowed for payment in bulk or prior to the payment due date (McGuinness et al., 2017). Small and medium-sized enterprises are dependent on regular cash inflows to secure enterprise survival and growth, which is key for SMEs to contribute to sustainable developmental goals (SDGs) such as employment creation in becoming instrumental enablers of economic prosperity benefitting modern economies (Andrieu et al., 2018). Although essential to economic growth, SMEs face numerous financial problems affecting their viability and sustainability that include proper management of trade credit (Aregbeyen, 2013; Gorondutse et al., 2017; Otto, 2018; Padachi et al., 2008). In addition, the effects of the coronavirus disease 2019 (COVID-19) pandemic on SMEs' business sustainability remain profound especially for those managing trade credits. Results from Lui's (2020) study revealed a 5% growth in the days beyond term (DBT) value for March 2020, compared to the fourth quarter of 2019, in comparing various SME industries' DBT values starting from the fourth quarter of 2019 to the end of the first quarter of 2020 therefore soon after the COVID-19 outbreak. Given that SMEs find it difficult to access external debt, trade credit is a viable alternative source of funding (Andrieu et al., 2018; Garcia-Teruel & Martinez-Solano, 2010). Creditors offer trade credit with the formation of a delayed payment between the provision of products and/or services and the actual payment itself (Andrieu et al., 2018). Trade credit, as a funding source, has unique elements for both credit supplier and borrower. A standout feature of trade credit as a funding source by willing creditors opting to extend credit is the knowledge obtained pertaining to the credit worthiness of the debtor receiving the supplier's credit (McGuinness et al., 2016). Creditors can obtain this unique feature of trade credit through regular and ongoing monitoring of repayment schedules and sale orders, including the competencies to enforce the repayment of outstanding debtor accounts or to stop future supplies (Love & Zaidi, 2010; McGuinness et al., 2016). In addition, trade credit affords the credit borrower the opportunity to obtain a cash discount from being able to pay earlier. This can result in more favourable credit terms and ultimately reduce the overall financing costs associated with trade credit (McGuinness et al., 2016).

Proper debtor management is important to the financial viability of SMEs, especially because the minority of SMEs are in possession of non-current assets (Richard & Kabala, 2019). This can be attained through improvement to SMEs' effectiveness in managing trade credit that includes the provision of activities for the management of trade credit, the application of trade credit management principles and aspects, and the application of credit policy components when granting credit. Trade credit management activities relate to the execution of specific activities devoted to managing trade debtors in order to mitigate the possibility of irrecoverable debts on a recurring basis to manage debtors' default risk thereby improving the cash flow cycle (Peel & Wilson, 1996). Trade credit management principles entail the

management of overarching debtor and creditor principles associated with both trade credit components that will enable the formation of a long-term relationship between the enterprise and debtor-creditor. Trade credit management aspects relate to the management of key trade credit aspects namely, cash flow management, late payments received and late payments made including general trade credit practices such as credit collection of overdue accounts (Lamminmaki & Guilding, 2008). Lastly, SMEs also should consider their application of various credit policy components when granting credit to a debtor in order to evaluate their execution of these components and the impact thereof on their debtor management effectiveness. These components include, but are not limited to, the offering of a cash discount and credit period (Alsemgeest et al., 2021).

The receipt and supply of trade credit are critical to the life of any business, as debtors and creditors constitute a major component of any enterprise's working capital (Afrifa & Gyapong, 2017). Trade credit can be divided into two basic forms. Firstly, the simpler form is characterised as net terms, and secondly, the more complex form is identified as two-part terms. The simpler form of trade credit, net terms, specifies that full payment is due within a certain period after product delivery or after monthly statements. The more complex form of trade credit, two-part terms, consists of three basic elements, namely the discount percentage, the discount period, and the final payment time. The most common two-part term used by businesses is '2/10 net 30'.

Small and medium-sized enterprises use trade credit as customers and extend trade credit as suppliers, as it is consistent with trade credit identified as a 'two-way transaction' (Peel Wilson & Horworth, 2000). Businesses utilising trade credit are positioned to simultaneously manage operating assets in the form of trade debtors, and liabilities in the form of trade creditors. In fact, businesses are positioned as trade debtors and trade creditors at the same time (Afrifa & Gyapong, 2017; Burkart & Ellingsen, 2004; Hill et al., 2010). Businesses decide to concurrently manage both components of trade credit, as, from the nature of finance, these two credit components influence each other (Caglayan et al., 2012). Therefore, the management thereof is crucial in enhancing performance (Ferrando & Mulier, 2013), highlighting SMEs' responsibility to manage their net trade-credit position effectively (Afrifa & Gyapong, 2017).

Trade credit usage

Globally, as reflected from a US, EU and Asian perspective, SMEs worldwide are dependent on trade credit as a viable source of finance. The total investment in trade credit for the main 2000 US and EU businesses amounted to approximately US\$1.7 trillion by the end of 2013 (Afrifa & Gyapong, 2017). For these businesses, an aggregate surplus in net trade credit amounted to US\$1 billion, given that creditors financed approximately US\$1.6 trillion aggregate debtors (Afrifa & Gyapong, 2017). However, late payments remain a major constraint as, on average, 50% and 45% of all US and EU

business-to-business invoices are paid late, respectively (Atradius, 2020, 2021a). Beck et al. (2013) claim that the unmet demand for trade credit in Asian developing countries could be as high as US\$1.1 trillion. In this context, 50% of total value business-to-business credit sales were affected by late payments, while 40% of all Asian survey respondents observed that their clients' payment practices deteriorated in 2021 (Atradius, 2021b).

From a South African perspective, the overall contribution of trade credit as funding source to current liabilities and total debt was close to 67% and 53%, respectively (Kwenda & Holden, 2014). Trade credit use from a local perspective is further confirmed by Machokoto et al. (2020), documenting an 89% increase in South African corporate debt from 1991 to 2015 observing South African companies' dependency on trade credit. In the case of South African SMEs, cash flow is regarded as the second largest operational constraint as confirmed by 35% of sample respondents (Bailey, 2019). A study by Miller and Wongsaroj (2017) reported that 8% of SME payments are either never made or eventually paid. However, these payments are made at such a late stage that SMEs are left with only one option that of writing off these payments as bad debts as 34% of SMEs admitted to making late payments to creditors because of liquidity constraint as a result of late payments further along the supply chain (Miller & Wongsaroj, 2017). The same study by Miller and Wongsaroj (2017) reveals that 52% of their study respondents agreed to have had experienced negative implications due to late payments. The findings by Poutziouris et al. (2005), Padachi et al. (2008), Javid (2014), Kosgey and Njiru (2016) and Braimah et al. (2021) align with that of Bailey (2019) and Miller and Wongsaroj (2017) in further support of the argument related to SMEs' ineffectiveness in managing trade credit. From a local perspective, SMEs' effectiveness in managing trade credit is identical to that revealed in the study by Bailey (2019), when reporting on the challenge of late payment of small, medium and micro enterprises (SMMEs) with a focus on South Africa.

There are several approaches to the utilisation of trade credit, namely operational, commercial and financial in explaining why SMEs would opt for using trade credit as a funding source (Yazdanfar & Ohman, 2017). These authors indicate that the first operational approach stems from the motivation by users of trade credit to reduce transaction costs associated with cash management and thus improving cost efficiency. The second commercial approach explains that trade credit becomes an important marketing tool to stimulate sales, with the added advantage for credit buyers to inspect product quality before payment is made (Chung & Liao, 2006). Trade credit acts as a substitute for other funding alternatives thereby becoming a third or alternative financing approach; thus, the demand for utilising trade credit is affected by its financing costs, as trade credit is less expensive to use in funding short-term assets compared to other funding sources (Schwartz, 1974). However, trade credit remains an expensive

form of funding. Despite the high associated costs, trade debtors do accept and trade creditors do grant trade credit after factoring implicit costs, which has led to the development of several trade credit theories expected to influence the choice and formulation of credit policy.

The phenomenon known as asymmetric information, directly contributable to SMEs' financial problems, causes agency problems such as adverse selection and moral hazard (Nguyen & Ramachandran, 2006), by affecting SMEs' trade credit management effectiveness. As a result, SMEs become credit rationed, restricting access to finance, and exposed to credit risk associated with trade credit as funding source while profitability dwindles because of ineffective trade credit management resulting in irrecoverable debts (Brahmah et al., 2021). Because of information asymmetry, these financial problems, which include trade credit mismanagement, are prone to develop in the contractual stipulation in credit agreements between SMEs and providers of credit (Fatoki, 2010). Access to finance, unprofitability and financial problems are the highest causes of business failure for South African SMEs observed from the 2015–2016 and 2017–2018 GEM Reports and 2017–2018 and 2021–2022 GEM South African Reports (Bowmaker-Falconer & Meyer, 2022; Herrington & Kew, 2018; Kelly, Singer & Herrington, 2016; Singer et al., 2018). Therefore, given SMEs' low propensity to survive because of asymmetric information impairing SMEs' trade credit management effectiveness, the section below will review asymmetric information theory of trade credit.

Asymmetric information theory

Asymmetric information theory was developed by Smith (1987), which explains the presence of informational asymmetries between creditor and debtors because of uncertainty concerning the debtor's creditworthiness. According to Smith (1987), the acceptance of high trade credit interest rates, defined by generally accepted terms of trade credit, acts as a display mechanism in which information pertaining to the debtor's default risk is held asymmetrically. Such information is valuable to creditors acting as a strategic tool assisting suppliers in protecting their investment or forecasting the possibility of default by debtors. Trade credit is thus a contractual mechanism for alleviating financial problems such as informational asymmetry. The following theories are relevant and are discussed namely, quality guarantee theory, market power theory and credit-rationing theory.

Quality guarantee theory

Due to the mitigation of anxiety related to product quality, trade credit enables debtors the opportunity to inspect product quality diligently before payment (Bhattacharya, 2008), termed the quality guarantee theory based on Smith's (1987) asymmetric information theory. Smith (1987) suggested that the decision rests with the creditor to afford the debtor the opportunity to first access product quality before payment and exists due to the provision of trade credit

by the supplier (Pike et al., 2005). Such a decision includes an element of default risk for the creditor that relates to the supply of asymmetric information to the creditor informing the business of default risks well in advance.

Market power theory

Because trade credit acts as a mechanism to mitigate the risk of product quality, creditors possess market power by offering the debtor an opportunity to first assess product quality before payment. This conveyance of market power increases a debtor's surplus from utilising trade credit thereby reducing asymmetric information problems and increasing customer demand termed the market power theory by Frank and Maksimovic (2003).

Credit rationing theory

Agency problems such as adverse selection and moral hazard, because of asymmetric information, can affect the availability of credit that leads to the phenomenon known as credit rationing as postulated by Stiglitz and Weiss (1981). Adverse selection occurs when the debtor chooses an inferior product based on unobservable private information regarding the product transferred through the supplier (Berndt & Gupta, 2009). Moral hazard relates to individuals altering their behaviour and taking on more risks, leading to credit rationing (Pettinger, 2013).

These theories resemble the importance of effective trade credit management for SMEs as, in doing so, SMEs can benefit from mitigating information asymmetries as a primary financial problem contributing to SMEs' failure (Bosma et al., 2020). These theories further reveal how SMEs can utilise numerous benefits associated with trade credit once the repercussions of information asymmetries in the form of adverse selection and moral hazard are mitigated. As observed from the literature, these benefits include debtor's assessment of product quality thereby exercising a measure of market power. However, in order to mitigate the abovementioned financial problems of trade credit due to asymmetric information and to benefit from the use of trade credit, SMEs must become effective in managing trade credit to avoid insolvency because of cash flow constraints that could result in liquidity disruptions. Although, studies that determine SMEs' effectiveness in managing trade credit is largely unavailable. Therefore, a need exists to address this unanswered knowledge gap by determining SMEs' perception related to their trade credit management effectiveness.

Research method

A quantitative survey research design and purposive sampling technique were applied. The study focused on formal SMEs within South Africa that operate in the following industries namely, distribution, engineering, financial services, government, information and communication technology (ICT), manufacturing, mining, professional services and retail. The study applied a survey research method and collected data through an online questionnaire

via e-mail (*please refer to the Questionnaire that will be available as an online appendix*). The population frame of SMEs was obtained from Interactive Direct through the services of iFeedback Consulting (Pty) Ltd, a private company specialising in data collection who shared expert advice and insights drawn from past similar studies. Using Interactive Direct Business Database with a population of SMEs ($n = 45313$), the researcher purposively selected ($n = 10450$) as the population frame of SMEs. Because SMEs operating in the abovementioned industries deal with trade credit in high volumes, they proved suitable for the study and are, therefore, a good representation of industries dealing with trade credit for SMEs. They represented an appropriate source from which to collect data for ease of sampling, as recommended by iFeedback Consulting (Pty) Ltd. All of the respondents were trade-credit managers (from a trade-credit supply-and-demand side, thus debtors and creditors), acting as either employees or owners of the SME. In an effort to eliminate double counting, all SME names were cross-checked. The margin of error for this study, using the Zikmund sample size calculator, ranges from 3% to 7%, with 5% margin of error and 95% confidence interval as the most commonly accepted range (Zikmund et al., 2010). In applying the Zikmund sample size calculation at 5% margin of error and 95% confidence level, when the parameter in population is assumed to be over 85% or under 15%, the required sample size for SMEs totalled 297, representing the minimum recommended sample size when targeting 10450 SMEs as a representative sample (Zikmund et al., 2010). The sample size for SMEs totalled 450 with 10450 questionnaires distributed to SMEs and 434 questionnaires returned, making the response rate 4.15% of the total population. The number of completed and accepted questionnaires (actual sample size for statistical analysis) totalled $n = 422$ (presenting a questionnaire completion rate between 70.41% and 100%) while the remaining 12 questionnaires were rejected presenting a questionnaire completion rate between 0% and 69.39%. In addition, given the low number of item non-response case, missing values presented a minute challenge before the commencement of data analysis.

Scale items were obtained from a combination of studying the literature for theoretical constructs and empirical conclusions, re-working the questionnaire based on a questionnaire used in a previous study (Otto, 2022) and help from experienced statisticians who set out to peer debrief the questionnaire statements. The measuring instrument was designed to measure the impact of the business environment (internal and external) on SMEs' trade credit management. Three sections were included: a 49-item questionnaire testing SMEs' business environment, 35-items testing SMEs' trade credit management and demographical section. Across all questionnaire sections, five- and six-point Likert scale questions were asked apart from the demographic section.

After collecting the required contact information from the SME sample, a letter was sent out via e-mail to each respondent detailing the research project title, a short introduction of the researcher, the duration for questionnaire

completion, the required ethical practices disclosure including the electronic link directing respondents to the online questionnaire. In attaining a realistic questionnaire completion rate, repeated reminder e-mails (maximum of three per respondent) were sent. Software used in administering the questionnaire was Typeform.com as administered by the services of iFeedback Consulting (Pty) Ltd. After completion, the data for each questionnaire was saved for analysis. The researcher followed and completed the required ethical clearance process stipulated by the respective university and the School of Accountancy Research Ethics Committee awarded ethical clearance (SAREC20180502-02).

Data were analysed using SPSS 26 employing descriptive statistical techniques such as frequency distribution, mean and standard deviation (SD). A p -value of 0.05 is considered significant for statistical tests unless otherwise stated. Tests for validity for SMEs' trade credit management variables before exploratory factor analysis (EFA) were conducted that included the Kaiser-Meyer-Olken (KMO) and Bartlett's tests. As a measure of sampling adequacy, SMEs' trade credit management obtained a KMO value of 0.934 and as a measure of item validity a Bartlett's test value of 595 ($p = 0.000$) was obtained. The validity is thus very high for the questionnaire section testing SMEs' trade credit management.

Outline and discussion of results

The empirical results focus on reporting on SMEs' perception of their trade credit management effectiveness.

Demographical data and small and medium-sized enterprises' business environment

The questionnaire collected demographic data revealing the average age of the respondent to be 52 years, predominantly classified as a white male; close to half of the total respondent group is in possession of a post-graduate qualification, while their average trade credit management experience amounted to 18 years. Most SMEs were based in Gauteng with close to half of the total respondent operating within the manufacturing industry and three quarters of the total group of respondents operating independently as an entity. In addition, over half of the total group employs up to 50 staff members while both SMEs and individuals equally represent the largest percentage allocation as a description to respondents' cliental. The questionnaire also tested SMEs' ratings pertaining to internal and external business environment variable related to SMEs' management of trade credit. For a detailed review of the findings related to data obtained from demographical and SMEs' business environment sections of the questionnaire, refer to Otto (2022).

Small and medium-sized enterprises' effectiveness in managing trade credit

The results of the 35-item components in the questionnaire section testing SMEs' trade credit management are shown in Table 1 to Table 4. The descriptive statistics mean value, SD and frequency distribution are shown for each component.

TABLE 1: Small and medium-sized enterprises' effectiveness in executing credit-management activities as an indication of SMEs' management of trade credit.

| Activities | N | Rank | Mean | Std. deviation | Not at all effective (%) | Slightly effective (%) | Moderately effective (%) | Very effective (%) | Fully effective (%) |
|--|-----|------|------|----------------|--------------------------|------------------------|--------------------------|--------------------|---------------------|
| Administering the sales ledger | 421 | 1st | 4.02 | 1.046 | 2.9 | 5.9 | 18.8 | 31.4 | 41.1 |
| Collecting overdue payments | 421 | 2nd | 4.00 | 0.955 | 1.9 | 4.0 | 21.9 | 36.3 | 35.9 |
| Collecting revenue in line with agreed credit terms, as set out in the credit policy | 419 | 3rd | 3.75 | 1.000 | 1.9 | 9.8 | 24.6 | 38.7 | 25.1 |
| Assessing the debtors' capacity in terms of their willingness to repay | 420 | 3rd | 3.75 | 1.009 | 2.1 | 8.3 | 28.6 | 34.3 | 26.7 |
| Resolving disputed overdue invoices with the debtor(s) | 422 | 4th | 3.72 | 1.008 | 3.6 | 6.4 | 28.4 | 38.2 | 23.5 |
| Assessing the debtors' character in terms of their willingness to repay | 419 | 5th | 3.70 | 1.023 | 2.6 | 9.1 | 28.4 | 35.1 | 24.8 |
| Checking debtor orders against credit limits allowed | 420 | 6th | 3.64 | 1.177 | 6.2 | 10.5 | 24.8 | 30.0 | 28.6 |
| Ensuring details in the credit agreement are covered in the credit policy | 420 | 7th | 3.36 | 1.149 | 7.9 | 12.9 | 32.1 | 29.3 | 17.9 |
| Assessing debtors' financial position as ability for repayment | 421 | 8th | 3.32 | 1.060 | 6.2 | 12.8 | 37.3 | 29.9 | 13.8 |
| Analysing general economic conditions, including the political environment, before granting credit | 420 | 9th | 3.26 | 1.122 | 8.1 | 14.5 | 34.5 | 28.6 | 14.3 |
| Assessing debtors' financial reserves as ability for repayment | 418 | 10th | 3.20 | 1.106 | 8.4 | 15.8 | 34.9 | 28.9 | 12.0 |
| Conducting a formal analysis into reasons for late payment by the debtor(s) | 419 | 11th | 3.10 | 1.185 | 11.5 | 17.7 | 33.4 | 24.1 | 13.4 |
| Ensuring compulsory disclosure of payment practices by the debtor(s) | 419 | 12th | 3.05 | 1.151 | 10.5 | 20.0 | 36.3 | 20.8 | 12.4 |
| Determining the extent to which the debtor's debt is secured | 418 | 13th | 2.89 | 1.203 | 15.8 | 20.1 | 33.5 | 20.1 | 10.5 |
| Determining if the debtor(s) possesses the collateral needed for repayment | 420 | 13th | 2.89 | 1.173 | 13.6 | 24.3 | 32.1 | 20.0 | 10.0 |
| Collecting outstanding debt through the use of legal action | 417 | 14th | 2.77 | 1.299 | 22.8 | 19.2 | 27.1 | 20.1 | 10.8 |
| Collecting outstanding debt through the use of collections agencies | 419 | 15th | 2.56 | 1.351 | 32.0 | 17.9 | 21.5 | 19.6 | 9.1 |
| Having credit insurance for sales | 419 | 16th | 2.49 | 1.445 | 37.9 | 16.0 | 18.1 | 15.0 | 12.9 |
| Imposing statutory interests on late payment | 419 | 17th | 2.46 | 1.361 | 34.6 | 20.0 | 20.0 | 15.3 | 10.0 |
| Using cession contracts with the debtor(s) | 418 | 18th | 2.39 | 1.242 | 33.3 | 20.3 | 27.0 | 13.2 | 6.2 |

Source: SPSS calculations

Small and medium-sized enterprises' execution of trade credit-management activities

Table 1 describes the effectiveness of SMEs in the execution of credit-management activities as an indication of their management of trade credit effectiveness (secondary objective one).

Table 1 illustrates the results in line with SMEs' effectiveness to execute certain credit-management activities. The results suggest that, from an administrative viewpoint, SMEs are most effective as SMEs indicated that they are most effective in *administering the sales ledger* (4.02; SD = 1.046), closely followed by *collecting overdue payments* obtaining the highest mean (4.00; SD = 0.955). It should be observed that two of the top-rated credit-management activities relate to SMEs assessing debtors' creditworthiness namely, *assessing the debtors' character* (mean = 3.70; SD = 1.023) and *assessing the debtors' capacity in terms of their willingness to repay* (mean = 3.75; SD = 1.009). The results illustrate that SMEs do partake in activities related to the management of trade credit, with the aim of selecting debtors that signal a lower risk of default. This displays a measure of competency related to SMEs' own activities regarding the management of trade credit, in order to minimise the risk of outstanding payments due. The results align with the asymmetric theory of trade credit that stipulates SMEs to use trade credit as a signalling mechanism

in obtaining valuable information enabling creditors to forecast the possibility of default by debtors (Smith, 1987). These results apprise SMEs' overall effectiveness in executing credit-management activities thereby mitigating the effect of information asymmetry as a financial problem related to their trade credit management improving overall effectiveness. The results illustrate that *resolving disputed overdue invoices with the debtor(s)* (mean = 3.72; SD = 1.008) and *assessing the debtors' character in terms of their willingness to repay* (mean = 3.70; SD = 1.023) to be the lowest-ranked out of the top five trade credit management activities. Thus, SMEs' managers of trade credit regard themselves between moderately to very effective in executing these trade credit management activities. Small and medium-sized enterprises did identify seven credit management activities, for which they are least effective and which constrain their effective management of trade credit as included next in order of lowest ranking activity first. *Using cession contracts with the debtor(s)*, *imposing statutory interests on late payment*, *having credit insurance for sales*, *collecting outstanding debt through the use of collections agencies*, *collecting outstanding debt through the use of legal action*, *determining the extent to which the debtor's debt is secured* and *determining if the debtor(s) possesses the collateral needed for repayment*. Overall, the results prove to contradict that of Pretorius and Shaw (2004), Phaladi and Thwala (2008) and Bosma et al. (2020) given that SMEs

perceive their execution of trade credit management activities between moderately to very effective as opposed to these authors revealing financial problems as constraint to SMEs' operational sustainability. Likewise, a depth of literature observes SMEs' ineffectiveness in managing trade credit because of trade credit mismanagement practices (Braithwaite et al., 2021; Padachi et al., 2008; Poutziouris et al., 2005), which contradicts this study's results describing SMEs' perception of their effectiveness in the execution of credit-management activities.

Small and medium-sized enterprises' application of trade credit-management principles

Table 2 indicates SMEs' effectiveness in applying the principles of managing credit as an indication of SMEs' management of trade credit (secondary objective two).

The top three credit management principles include, *ensuring effective order and invoice control of all creditor records* obtained the highest mean score of 4.35 (SD = 0.745). Second to that was the activity of *ensuring effective order and invoice control of all debtor records* (mean = 4.33; SD = 0.731). These findings are consistent with the findings from Table 1, as SMEs indicate that they are most effective in executing the credit-management activity of *administering the sales ledger* when managing trade credit for their business. *Managing debtors actively* (mean = 4.31; SD = 0.740) and *managing creditors actively* (mean = 4.31; SD = 0.766) followed in third place. All six principles above display mean scores ranging between 4.25 as the lowest (SD = 0.764) and 4.35 (SD = 0.745) as the highest, indicating that, on average, the respondents who answered this question scored these principles as very effective when managing trade credit for their SMEs. The results indicate that SMEs do regard themselves in the application of the above principles as very effective in the management of their business' trade credit. Yet again, the results are observed to be contradictory when considering studies by Aregbeyen (2013) and Gorondutse et al. (2017), which inform us that, although essential to a country's SDGs, SMEs continue to face financial problems that include proper management of trade credit affecting business sustainability.

Furthermore, in comparing debtor versus creditor principles, the results show that respondents regard themselves to be slightly more effective in applying credit management

principles for their creditors compared to debtors. The results show that *ensuring effective order and invoice control of creditor records* (mean = 4.35; SD = 0.745) and *building a sound and long-term relationship with creditor(s)* (mean = 4.30; SD = 0.780) obtained higher mean scores compared to the debtor-oriented principles (mean = 4.33; SD = 0.731) and (mean = 4.25; SD = 0.764), respectively. Small and medium-sized enterprises are thus ever so slightly more effective in the application of these two credit management principles from a creditor perspective, when compared to a debtor perspective for credit management principles. However, these values do reveal SMEs as very effective in the application of trade credit management principles. In addition to this debtor-creditor comparison viewpoint, when comparing this study's results to the study findings by Lui (2020), the result remains surprising as Lui's study reveals, from a debtor's perspective, a general decline in goods and services due to slow economic growth. From a creditor's perspective, businesses should exercise the needed caution when granting trade credit, due to increased financial risk of bad debt (Lui, 2020). Lui's (2020) study also revealed the devastating impacts of the COVID-19 pandemic on trade credit from a creditor's perspective by reporting on an increase in creditor's financial risk, which is alarming to SMEs' operational viability as majority of SMEs depend on trade credit as funding. Yet, the study results illustrate that SMEs perceive themselves as very effective in applying trade credit management principles, incorporating debtor and creditor principles, as a function of their trade credit management.

Small and medium-sized enterprises' management of trade credit-management aspects

Table 3 indicates the results related to SMEs' effectiveness in managing credit management aspects, as an indication of SMEs' management of trade credit (secondary objective three).

The results show that, on average, the respondents who answered this question rated themselves as very effective in managing the following credit management aspects, namely, management of cash flow (mean = 4.12; SD = 0.898) and managing late payments made to creditors (mean = 4.02; SD = 0.936). In addition, on average, the respondents who answered this question rated themselves as moderately

TABLE 2: Small and medium-sized enterprises' perception of effectiveness in applying the principles of managing credit, as an indication of SMEs' management of trade credit.

| Principles | N | Rank | Mean | Std. deviation | Not at all effective (%) | Slightly effective (%) | Moderately effective (%) | Very effective (%) | Fully effective (%) |
|--|-----|------|------|----------------|--------------------------|------------------------|--------------------------|--------------------|---------------------|
| Ensuring effective order and invoice control of all creditor records | 422 | 1st | 4.35 | 0.745 | 0.5 | 0.5 | 12.1 | 37.9 | 49.1 |
| Ensuring effective order and invoice control of all debtor records | 421 | 2nd | 4.33 | 0.731 | 0.5 | 0.7 | 10.7 | 42.0 | 46.1 |
| Managing creditors actively | 421 | 3rd | 4.31 | 0.766 | 0.7 | 1.4 | 10.0 | 41.6 | 46.3 |
| Managing debtors actively | 422 | 3rd | 4.31 | 0.740 | 0.2 | 1.4 | 10.9 | 41.9 | 45.5 |
| Building a sound and long-term relationship with creditor(s) | 420 | 4th | 4.30 | 0.780 | 0.5 | 2.4 | 9.8 | 41.2 | 46.2 |
| Building a sound and long-term relationship with debtor(s) | 420 | 5th | 4.25 | 0.764 | 0.5 | 1.9 | 11.2 | 45.0 | 41.4 |

Source: SPSS calculations

effective in managing the remaining credit management aspects, namely managing general trade credit practices (mean = 3.92; SD = 0.896) and late payments received from debtors (mean = 3.92; SD = 0.921). Therefore, the majority of SMEs rate themselves as moderate to very effective in managing certain aspects of their business's credit management. In comparing credit management aspects for debtors versus creditors, the trend in results is similar to that obtained from the previous section. The results show that respondents view themselves as slightly more effective in applying credit management aspects for their creditors compared to debtors, given that *managing late payments made to creditors* scored a higher mean than that of *managing late payments received from debtors*. Therefore, although obvious to assume, the results shed value in revealing that SMEs are thus slightly more effective in managing late payments made to creditors than late payments received from debtors given the nature of the function itself. This observation aligns with that of Afrifa and Gyapong (2017) related to SMEs' responsibility to manage their net trade-credit position effectively as supported in the tabulated results. Overall, SMEs are very effective in managing the above credit management aspects. When compared to studies by Bailey (2019), Miller and Wongsaroj (2017) and Otto (2018), the results are surprising given the depth of literature suggesting SMEs' ineffectiveness related to trade credit management as part of the broader working capital management functioning of the enterprise. In addition, the 2019–2020 GEM Report reveals that financial problems, that include trade credit mismanagement, are among the primary reasons contributing to SME business failure as the country had a fear of failure rate of 49.8%, positioning South Africa in the top 10 highest fear of failure rates for all GEM-participating economies (Bosma et al., 2020). More recently, the 2021–2022 GEM Report data observed that South Africa obtained a failure rate of 53%, ranking the country 5th out of 47 countries (Hill et al., 2022). Considering this, the results prove, yet again, surprising when considering SMEs' effectiveness in managing trade credit management aspects, which, from the tabulated results, reveal to be between moderate and very effective.

Small and medium-sized enterprises' application of credit policy components when granting credit to a debtor

Table 4 provides descriptive statistical results showing SMEs' effectiveness in the application of certain credit policy components when granting credit to a debtor (secondary objective four).

The results indicate that the respondents who answered this question applied the credit policy component, *application of a debtor age analysis*, very effectively when granting credit to debtors (mean = 4.05; SD = 1.024). In addition, on average, the respondents apply the remaining credit policy components as moderately effective when granting credit to a debtor. From a perspective of the management of trade credit, with the focus on debtors only, SMEs rank between moderately and very effective in the application of the five credit policy components when granting credit to a debtor. Overall, the results suggest that trade credit managers are close to very effective in applying these credit policy components with the extension of credit to debtors. The latter should have a positive influence on SMEs' management of trade credit resembling minor constraints for SMEs in the form of outstanding payments due from debtors, which should be reflected in a positive net working capital and cash-flow cycle for SMEs. This is a positive result contributing to the overall good trend in results obtained regarding SMEs' management of trade credit. Even so, previous studies show that SMEs regularly neglect evaluating credit applications impairing their trade credit management effectiveness (Javid, 2014; Kosgey & Njiru, 2016); therefore, the study results remain contradicting when considering the available literature around SMEs' trade credit management.

In summarising the result, in terms of trade credit management activities, SMEs regard themselves as moderately to very effective in executing trade credit management activities. So also, SMEs regard themselves as very effective with the application of credit management principles in the management of their business's trade credit. The majority of SMEs rate themselves as moderate to very effective in managing certain aspects of their business' credit management. In

TABLE 3: Small and medium-sized enterprises' effectiveness in managing the credit management aspects as an indication of their management of trade credit.

| Aspects | N | Rank | Mean | Std. deviation | Not at all effective (%) | Slightly effective (%) | Moderately effective (%) | Very effective (%) | Fully effective (%) |
|--|-----|------|------|----------------|--------------------------|------------------------|--------------------------|--------------------|---------------------|
| Managing cash flow | 420 | 1st | 4.12 | 0.898 | 1.0 | 2.9 | 20.5 | 34.3 | 41.4 |
| Managing late payments made to creditors | 422 | 2nd | 4.02 | 0.936 | 1.7 | 3.6 | 22.0 | 36.5 | 36.3 |
| Managing general trade credit practices | 421 | 3rd | 3.92 | 0.896 | 1.0 | 4.3 | 25.9 | 39.7 | 29.2 |
| Managing late payments received from debtors | 421 | 3rd | 3.92 | 0.921 | 0.5 | 7.4 | 21.9 | 40.6 | 29.7 |

Source: SPSS calculations

TABLE 4: Small and medium-sized enterprises' effectiveness in applying the credit policy components when granting credit to a debtor, as an indication of their management of trade credit.

| Credit policy components | N | Rank | Mean | Std. deviation | Not at all effective (%) | Slightly effective (%) | Moderately effective (%) | Very effective (%) | Fully effective (%) |
|--------------------------------------|-----|------|------|----------------|--------------------------|------------------------|--------------------------|--------------------|---------------------|
| Application of a debtor age analysis | 419 | 1st | 4.05 | 1.024 | 2.4 | 6.0 | 17.9 | 32.2 | 41.5 |
| Offering a credit period | 419 | 2nd | 3.70 | 0.992 | 3.3 | 5.7 | 31.3 | 36.8 | 22.9 |
| Application of a collection policy | 420 | 3rd | 3.54 | 1.071 | 4.8 | 11.2 | 28.8 | 36.0 | 19.3 |
| Conducting a credit analysis | 422 | 4th | 3.53 | 1.134 | 6.2 | 11.8 | 26.5 | 34.1 | 21.3 |
| Offering a cash discount | 420 | 5th | 3.17 | 1.289 | 15.0 | 13.3 | 28.3 | 26.0 | 17.4 |

Source: SPSS calculations

relation to SMEs' effectiveness in applying components of the credit policy when granting credit to a debtor, the results reveal SMEs as close to very effective in applying credit policy components with the extension of credit to debtors. Therefore, in attaining the study aim, the article reveals that SMEs perceive their management of trade credit as effective.

Recommendations

For SMEs to be more holistic in their management of trade credit, in executing trade credit management activities, it is recommended that SMEs improve on several activities:

- using cession contracts with the debtor(s)
- imposing statutory interests on late payment
- having credit insurance for sales
- collecting outstanding debt through the use of collections agencies and legal action
- determining the extent to which the debtor's debt is secured
- determining if a debtor or debtors possess the collateral needed for repayment.

Small and medium-sized enterprises should improve their application of credit management principles and their management of credit management aspects, specifically from a debtor perspective, as the results indicate SMEs to be slightly more effective in applying credit management principles and managing credit management aspects from a creditor perspective.

In terms of SMEs' application of credit policy components when granting credit to a debtor, it is recommended that SMEs reevaluate the offering of a cash discount when granting trade credit to a debtor in order to strengthen their application of credit policy components, thereby improving debtors' propensity for prompt repayment, operational liquidity and trade credit management effectiveness.

Conclusion and area for future research

Results indicate that SMEs perceive that they are effective in managing their trade credit. However, the study results seem to be contradictory to the realities of SMEs' propensity to survive when considering the low EBO and/or TEA rates and high fear of failure rates of SMEs. Financial problems, specifically related to their trade credit management, largely contribute to business failure as published by the GEM Reports and supported by numerous authors. Therefore, there is a need to investigate why SMEs continue to fail at such high rates as a result of financial problems, to determine the cause and type of financial problems other than trade credit management that contribute to business failure. This could lead to improvement in SMEs' business sustainability so that they can become valuable drivers of a country's SDGs. The intention of this exploratory study was to focus on SMEs' perceptions related to trade credit management although

future research could focus on determining SMEs' actual effectiveness in managing trade credit.

Limitations

The article focuses on trade credit management alone as a funding source, although an expansive survey to determine SMEs' effectiveness in managing both debt and equity (total capital) could help to confirm the findings of this article. In addition, the opportunity exists to determine to what extent SMEs' utilisation of trade credit benefits their operational effectiveness by investigating the cost versus benefit relationship in deciding to use trade credit as funding with a comparison study to be done for those SMEs not willing to extend or receive trade credit due to financial problems associated with trade credit.

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Competing interests

The author has declared that no competing interest exists.

Authors' contributions

I declare that I am the sole author of this research article.

Ethical considerations

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Data availability

The author confirms that the data supporting the findings of this research project are available within the article.

Disclaimer

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References

- Afrifa, G.A., & Gyapong, E. (2017). Net trade credit: What are the determinates?. *International Journal of Managerial Finance*, 13(3), 246–266. <https://doi.org/10.1108/IJMF-12-2015-0222>
- Alsemgeest, L., Du Toit, E., Ngwenya, S., & Thomas, K. (2021). Working capital management. In G. Els, P.D. Erasmus, & S. Viviers (Eds.), *Corporate finance: A South African perspective* (pp. 452–481). Oxford University Press.
- Andrieu, G., Staglianò, R., & Van der Zwan, P. (2018). Bank debt and trade credit for SMEs in Europe: Firm-, industry-, and country-level determinates. *Small Business Economics*, 51(1), 245–264. <https://doi.org/10.1007/s11187-017-9926-y>

- Aregbeyen, O. (2013). The effects of working capital management on the profitability of Nigerian manufacturing firms. *Journal of Business Economics and Management*, 14(3), 520–534. <https://doi.org/10.3846/16111699.2011.651626>
- Atradius. (2020). *Eastern Europe: Region faces 2021 battered but hopeful. Atradius Payment Practices Barometer*. Retrieved from <https://group.atradius.com/publications/payment-practices-barometer/eastern-europe-2020-businesses-enter-2021-pandemic-battered-but-hopeful.html>
- Atradius. (2021a). *US: Trade credit use on the rise amid economic distress: Atradius Payment Practices Barometer*. Retrieved from <https://group.atradius.com/publications/payment-practices-barometer/us-2021-trade-credit-use-on-the-rise-amid-economic-distress.html>
- Atradius. (2021b). *China: Greater role for B2B trade credit: Atradius Payment Practices Barometer*. Retrieved from <https://group.atradius.com/publications/payment-practices-barometer-china-2020-greater-role-for-B2B-trade-credit.html>
- Bailey, H.A. (2019). The challenge of late payment of SMMEs with a focus on South Africa. In B. Freitag (Ed.), *Universities, Entrepreneurship and Enterprise Development in Africa-Conference Proceedings 2018. Sankt Augustin, Germany, 13–14 September 2018* (pp. 19–36). Hochschule Bonn-Rhein-Sieg.
- Baker, H.K., Kumar, S., & Singh, H.P. (2019). Working capital management: Evidence from Indian SMEs. *Small Enterprise Research*, 26(2), 143–163. <https://doi.org/10.1080/13215906.2019.1624386>
- Barad, M.M. (2010). *A study on liquidity management of Indian steel industry*. Ph.D. thesis, Saurashtra University. Retrieved from <http://etheses.saurashtrauniversity.edu/id/eprint/77>
- Beck, T., Levine, R., & Demircuc-Kunt, A. (2005). SMEs, growth and poverty, cross-country evidence. *Journal of Economic Growth*, 10(1), 197–227. <https://doi.org/10.3386/w11224>
- Beck, S., Zhang, Q., Shinozaki, S., Mangampat, E., & Ferino, M.I. (2013). *Asian Development Bank trade finance survey: Major findings*. ADB Briefs, No. 11, 1–6 March, Asian Development Bank.
- Berndt, A., & Gupta, A. (2009). Moral hazard and adverse selection in the originate-to-distribute model of bank credit. *Journal of Monetary Economics*, 56(5), 725–743. <https://doi.org/10.1016/j.jmoneco.2009.04.002>
- Bhattacharya, H. (2008). *Theories of trade credit: Limitations and applications*. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1286443
- Boissay, F., & Gropp, R. (2007). *Trade credit defaults and liquidity provision by firms*. European Central Bank, Working Paper Series, No.753.
- Bosma, N., Hill, S., Ionescu-Somers, A., Kelley, D., Levie, J., & Tarnawa, A. (2020). *Global entrepreneurship monitor report*. Retrieved from <https://www.gemconsortium.org/file/open?fileid=50443>
- Bowmaker-Falconer, A., & Meyer, N. (2022). *Global Entrepreneurship Monitor South African report*. Retrieved from <https://www.gemconsortium.org/economy-profiles/south-africa>
- Braimah, A., Mu, Y., Quaye, I., & Ibrahim, A.A. (2021). Working Capital Management and SMEs Profitability in Emerging Economies: The Ghanaian Case. *SAGE Open*, 11(1). <https://doi.org/10.1177/2158244021989317>
- Burkart, M., & Ellingsen, T. (2004). In-kind finance. A theory of trade credit. *American Economic Review*, 94(3), 569–590. <https://doi.org/10.1257/0002828041464579>
- Caglayan, M., Maioli, S., & Mateut, S. (2012). Inventories, sales uncertainty, and financial strength. *Journal of Banking & Finance*, 36(9), 2512–2521. <https://doi.org/10.1016/j.jbankfin.2012.05.006>
- Chung, K.J., & Liao, J.J. (2006). The optimal ordering policy in a DCF analysis for deteriorating items when trade credit depends on the order quantity. *International Journal of Production Economics*, 20(2), 861–876.
- Cunat, V. (2006). Trade credit: Suppliers as debt collectors and insurance providers. *The Review of Financial Studies*, 20(2), 491–527. <https://doi.org/10.1093/rfs/hh1015>
- Danielson, M.G., & Scott, J.A. (2007). A note on agency conflicts and the small firm investment decision. *Journal of Small Business Management*, 45(1), 157–175. <https://doi.org/10.1111/j.1540-627X.2007.00205.x>
- Fatoki, O. (2010). *The impact of the South African business environment on the availability of debt finance to new small and medium enterprises in South Africa*. Ph.D. thesis (Business Management), University of the Free State, Bloemfontein.
- Ferrando, A., & Mulier, K. (2013). Do firms use the trade credit channel to manage growth?. *Journal of Banking and Finance*, 37(8), 3035–3046. <https://doi.org/10.1016/j.jbankfin.2013.02.013>
- Frank, M.Z., & Maksimovic, V. (2003). *Trade credit, collateral and adverse selection*. University of Maryland. Working Paper.
- Garcia-Teruel, P.J., & Martinez-Solano, P.M. (2010). Determinants of trade credit: A comparative study of European SMEs. *International Small Business Journal*, 28(3), 215–233. <https://doi.org/10.1177/0266242609360603>
- Gorodutse, A., Ali, R., Abubakar, A., & Naalah, M.N. (2017). The effect of working capital management on SMEs profitability in Malaysia. *Polish Journal of Management Studies*, 16(2), 99–109. <https://doi.org/10.17512/pjms.2017.16.2.09>
- Herrington, M., & Kew, P. (2018). *Global entrepreneurship monitor South African report*. Retrieved from <https://www.gemconsortium.org/economy-profiles/south-africa>
- Hill, M.D., Kelly, G.W., & Highfield, M.J. (2010). Net operating working capital behavior: A first look. *Financial Management*, 39(2), 783–805. <https://doi.org/10.1111/j.1755-053X.2010.01092.x>
- Hill, S., Ionescu-Somers, A., & Coduras, A. (2022). *Global entrepreneurship monitor report opportunity amid disruption*. Retrieved from <https://www.gemconsortium.org/reports/latest-global-report>
- Jacobson, T., & Von Schedvin, E. (2015). Trade credit and the propagation of corporate failure: An empirical analysis. *Econometrica*, 83(4), 1315–1371. <https://doi.org/10.3982/ECTA12148>
- Javid, S. (2014). Effect of working capital management on SME's performance in Pakistan. *European Journal of Business and Management*, 6(12), 206–220.
- Kelly, D., Singer, S., & Herrington, M. (2016). *Global entrepreneurship monitor report*. Retrieved from <http://www.gemconsortium.org/report>
- Kosgey, T., & Njiru, A. (2016). Influence of working capital management on the financial performance of small enterprises; A survey of Nakuru County. *Journal of Business and Management*, 18(4), 41–47.
- Kwenda, F., & Holden, M. (2014). Trade credit in corporate financing in South Africa: Evidence from a dynamic panel data analysis. *Investment Management and Financial Innovations*, 11(4), 268–278.
- Lamminmaki, D., & Guilding, C. (2004). A study of Australian trade credit management outsourcing practices. *Australian Accounting Review*, 14(32), 53–62. <https://doi.org/10.1111/j.1835-2561.2004.tb00283.x>
- Love, I., & Zaidi, R. (2010). Trade credit, bank credit and financial crisis. *International Review of Finance*, 10(1), 125–147. <https://doi.org/10.1111/j.1468-2443.2009.01100.x>
- Lui, A. (2020). *Understanding the shift in trade credit in the COVID-19 pandemic*. S & P Global: Market Intelligence. Retrieved from <https://www.spglobal.com/marketintelligence/en/news-insights/blog/understanding-the-shift-in-trade-credit-in-the-covid-19-pandemic>
- Martinez-Sola, C., Garcia-Teruel, P.J., & Martinez-Solano, P. (2013). Trade credit and SME profitability. *Small Business Economics*, 42(3), 561–577. <https://doi.org/10.1007/s11187-013-9491-y>
- McGuinness, G., Hogan, T., & Powell, R. (2016). Bank credit and trade credit: Evidence from SMEs over the financial crises. *International Small Business Journal*, 34(4), 1–34. <https://doi.org/10.1177/0266242614558314>
- McGuinness, G., Hogan, T., & Powell, R. (2017). European trade credit use and SME survival. *Journal of Corporate Finance*, 49(C), 81–103. <https://doi.org/10.1016/j.jcorpfin.2017.12.005>
- Machokoto, M., Areneke, G., & Ibrahim, B.M. (2020). Rising corporate debt and value relevance of supply-side factors in South Africa. *Journal of Business Research*, 109, 26–37. <https://doi.org/10.1016/j.jbusres.2019.11.039>
- Miller, T., & Wongsaroj, S. (2017). *The Domino effect: The impact of late payments*. Paper completed by Plum consulting on behalf of Sage.
- New Partnership for Africa's Development (NEPAD). (2008). *Market access initiative*. Retrieved from <http://www.unido.org/hleadadmin/import/11340>
- Nguyen, T.D.K., & Ramachandran, N. (2006). Capital structure in small and medium-size enterprises: The case of Vietnam. *ASEAN Economic Bulletin*, 23(2), 192–211. <https://doi.org/10.1355/AE23-2D>
- Nilsen, J.H. (2002). Trade credit and the bank lending channel. *Journal of Money, Credit and Banking*, 34(1), 226–253. <https://doi.org/10.1353/mcb.2002.0032>
- Otto, W.H. (2018). Management of trade credit by small and medium-sized enterprises. *Journal of Economic and Financial Sciences*, 11(1), 1–8. <https://doi.org/10.4102/jef.v11i1.178>
- Otto, W.H. (2022). *The impact of the business environment in South Africa on the management of trade credit in SMEs*. Ph.D. thesis (Finance), University of Johannesburg.
- Padachi, K., Narasimhan, M.S., Durbarray, R., & Howorth, C. (2008). An analysis of working capital structure and financing pattern of Mauritian small manufacturing firms. *Journal of Applied Finance*, 14(7), 41–62.
- Peel, M.J., & Wilson, N. (1996). Working capital and financial management practices in the small firm sector. *International Small Business Journal*, 14(2), 52–68. <https://doi.org/10.1177/0266242696142004>
- Peel, M.J., Wilson, N., & Horworth, C. (2000). Late payment and credit management in the small firm sector: Some empirical evidence. *International Small Business Journal*, 18(2), 17–37. <https://doi.org/10.1177/0266242600182001>
- Petersen, M.A., & Rajan, R.G. (1997). Trade credit: Theories and evidence. *Review of Financial Studies*, 10(4), 661–691. <https://doi.org/10.1093/rfs/10.3.661>
- Pettinger, T. (2013). *Moral hazard*. Retrieved from <http://economicshelp.org>
- Phaladi, M.J., & Thwala, W.D. (2008). Critical success factors for small and medium sized contractors in north-west province, South Africa. In J. Verster & H. Marx (Eds.), *5th Post Graduate Conference on Construction Industry Development. Bloemfontein, South Africa, 16–18 March 2008* (pp. 64–71). Construction Industry Development Board.
- Pike, R., Cheng, N.S., Cravens, K., & Lamminmaki, D. (2005). Trade credit terms: Asymmetric information and price discrimination evidence from three continents. *Journal of Business Finance and Accounting*, 32(5/6), 1197–1236. <https://doi.org/10.1111/j.0306-686X.2005.00627.x>
- Pretorius, M., & Shaw, G. (2004). Business plan in bank-decision making when financing new ventures in South Africa. *South African Journal of Economics and Management Science*, 7(2), 221–242. <https://doi.org/10.4102/sajems.v7i2.1377>
- Putziouris, P., Michaelas, N., & Soufani, K. (2005). *Short-term financial management of working capital in small-medium sized enterprises*. Retrieved from <https://www.coursehero.com/file/7562732/mfc-130/>
- Richard, E., & Kabala, B. (2019). Accounts receivable management practices of SMEs in Tanzania: A qualitative approach. *Business Management Review*, 22(2), 51–66.
- Schwartz, R.A. (1974). An economic model of trade credit. *Journal of Financial and Quantitative Analysis*, 9(4), 643–657. <https://doi.org/10.2307/2329765>
- SEDA. (2018). *SMME Quarterly Update: 1st Quarter 2018*. Retrieved from <http://www.seda.org.za/Publications/Publications/SMME%20Quarterly%202018-Q1.pdf>
- Singer, S., Herrington, M., & Menipaz, E. (2018). *Global entrepreneurship monitor report*. Retrieved from <http://www.gemconsortium.org/report>
- Smith, J.K. (1987). Trade credit and informational asymmetry. *Journal of Finance*, 42(4), 863–872. <https://doi.org/10.1111/j.1540-6261.1987.tb03916.x>

Statistics South Africa. (2022). *Quarterly labour force survey (QLFS), 2nd Quarter 2022*. Retrieved from https://www.statssa.gov.za/?page_id=1854&PPN=P0211&SCH=73290

Stiglitz, J., & Weiss, A. (1981). Credit rationing in markets with imperfect information. *American Economic Review*, 71(3), 393–410.

World Bank. (2022a). *Overview*. Retrieved from <https://www.worldbank.org/en/country/southafrica>

World Bank. (2022b). *GINI index (World Bank estimate)*. Retrieved from <https://data.worldbank.org/indicator/SI.POV.GINI>

World Bank. (2022c). *Poverty headcount ratio at national poverty lines (% of population)*. Retrieved from <https://data.worldbank.org/indicator/SI.POV.NAHC>

Yazdanfar, D., & Ohman, P. (2017). Substitute or complement? The use of trade credit as a financing source among SMEs. *Management Research Review*, 40(1), 20–27. <https://doi.org/10.1108/MRR-06-2015-0153>

Zikmund, W.G., Babin, B.J., Carr, J.C., & Griffin, M. (2010). *Business research methods* (8th ed.). South-Western Cengage Learning.

Appendix 1 starts on the next page→

Appendix 1

Definition of South African SMEs

TABLE 1-A1: Schedule of size standards for the definition of South African SME.

| SIC of SME sectors | Size of business | Total FTE of paid business employees | Total annual business sales (R million) |
|--|------------------|--------------------------------------|---|
| Agriculture | Medium | 51–250 | < 35.0 |
| | Small | 11–50 | < 17.0 |
| | Micro | 0–10 | < 7.0 |
| Mining and quarrying | Medium | 51–250 | < 210.0 |
| | Small | 11–50 | < 50.0 |
| | Micro | 0–10 | < 15.0 |
| Manufacturing | Medium | 51–250 | < 170.0 |
| | Small | 11–50 | < 50.0 |
| | Micro | 0–10 | < 10.0 |
| Electricity | Medium | 51–250 | < 180.0 |
| | Small | 11–50 | < 60.0 |
| | Micro | 0–10 | < 10.0 |
| Construction | Medium | 51–250 | < 170.0 |
| | Small | 11–50 | < 75.0 |
| | Micro | 0–10 | < 10.0 |
| Retail, motor trade and repair services | Medium | 51–250 | < 80.0 |
| | Small | 11–50 | < 25.0 |
| | Micro | 0–10 | < 7.5 |
| Wholesale | Medium | 51–250 | < 220.0 |
| | Small | 11–50 | < 80.0 |
| | Micro | 0–10 | < 20.0 |
| Catering, accommodation, and other trade | Medium | 51–250 | < 40.0 |
| | Small | 11–50 | < 15.0 |
| | Micro | 0–10 | < 5.0 |
| Transport, storage, and communication | Medium | 51–250 | < 140.0 |
| | Small | 11–50 | < 45.0 |
| | Micro | 0–10 | < 7.5 |
| Finance and business services | Medium | 51–250 | < 85.0 |
| | Small | 11–50 | < 35.0 |
| | Micro | 0–10 | < 7.5 |
| Community, social and personal services | Medium | 51–250 | < 70.0 |
| | Small | 11–50 | < 22.0 |
| | Micro | 0–10 | < 5.0 |

Source: National Small Business Amendment Act 2003 (SA) s 7

FTE, Full time equivalent; SIC, Standard industrial classification.