Article

The Impact of Corruption on SMEs' Trade Credit Management Effectiveness

Werner Henk Otto *

Posted Date: 31 October 2024

doi: 10.20944/preprints202410.2437.v1

Keywords: Corruption; trade credit management effectiveness; SMEs

 doi:10.20944/preprints202410.2437.v1

Article

The Impact of Corruption on SMEs' Trade Credit Management Effectiveness

Werner Henk Otto

University of the Free State 1; OttoWH@ufs.ac.za

Abstract: The continued rise in SMEs' corruption-related activities results in uncertainty around their ability to sustainably contribute to economic growth, leaving SMEs financially fragile and exposed to problems associated with trade credit management resulting in business exits. Given that little research has been conducted on how corruption affects smaller businesses while corruption's impact on SMEs' trade credit management effectiveness remains largely unexamined, the study aims to determine the impact of corruption on SMEs' trade credit management effectiveness. By addressing this unanswered research gap, SMEs could be better equipped to understand how corruption affects their trade credit management in support of their overall finances. The study employed a quantitative research design with purposive sampling using a survey by administrating 10 450 online questionnaires tested by a sample of 450 SMEs across South Africa. The result aligns with expectations around corruption being detrimental to SMEs' trade credit management effectiveness while also indicating, unexpectedly, SMEs' willingness to partake in corruption, given that SMEs benefit from increased effectiveness in managing trade credit. The study adds to exisiting literature on corruption and SMEs' trade credit management while also providing anti-corruption recommendations to SMEs that are dependent on trade credit. In so doing, SMEs could be better equipped to understand how corruption affects their trade credit management to support their overall finances contributing to improved SME creation rates and fostering entrepreneurship as a pivotal mechanism for improving South Africa's sustainable development goals.

Keywords: corruption; trade credit management effectiveness; SMEs

1. Introduction

Entrepreneurship stimulates economic growth by bolstering human development and primary economic development goals, including lowering unemployment, decreasing income inequality, and lessening systemic poverty (Gu & Wang, 2022; Meyer & Meyer, 2020). Additionally, entrepreneurship is a noteworthy solution to innovation and technological advancement, wealth creation, economic diversification, foreign investment, public sector revenue accumulation, and counteracting the loss of skilled individuals emigrating to developed countries (Bowmaker-Falconer, Meyer & Samsami, 2023). Small and medium-sized enterprises (SMEs) are widely regarded as transformers of economic growth, thereby contributing to South Africa's attempts to attain its sustainable development goals (SDGs) as set out in the National Development Plan (NDP) by 2030. As outlined in the 2023 SDG Country Report, South Africa has reached the halfway mark in achieving its targets based on its 2030 global development agenda. However, ample developmental challenges constrain the country's attempts to reach these targets. These challenges include unemployment (increasing from 32.9% in the 1st quarter to 33.5% in the 2nd quarter of 2024), poverty[1] (53.2% in 2010 increasing to 55.5% by

[1] Using the Poverty headcount ratio at national poverty lines (% of population) as an indicator, representing the percentage of the population living below the national poverty line(s).

 doi:10.20944/preprints202410.2437.v1

2014), and income inequality[2] (63.4% in 2010 decreasing slightly to 63.0% by 2014) (Statistics South Africa, 2024a, World Bank, 2024a; World Bank, 2024b; Statistics South Africa, 2023). In addition, South Africa has observed a gradual decline in gross domestic product (GDP) growth (4.7% in 2021 decreasing to 1.9 in 2022 and 0.6 in 2023) proving to be significant impairments to the country's attempts to attain its SDGs (World Bank, 2024c). The South African economy has underperformed for a decade with real GDP per capita growth plummeting since 2011 (Statistics South Africa, 2024b). It is observed in the 2023/2024 Global Entrepreneurship Monitor (GEM) South African Report that the country remains one of the most unequal societies globally, despite the creation of its new democracy nearly three decades ago (Bowmaker-Falconer et al., 2023). South Africa's hopes for a prosperous entrepreneurial sector that cultivates high economic growth seem far attached from reality (Hill, Ionescu-Somers, Coduras, Guerrero, Menipaz, Boutaleb, Zbierowski, Sahasranamam & Shay, 2023a). The current negative macroeconomic estimates coupled with the country's inability to holistically attain its SDGs question the belief that entrepreneurship can sustainably contribute to economic development, employment creation, and lowered poverty levels.

The GEM Reports provide entrepreneurial activity indicators used to measure SME creation, such as established business ownership (EBO) and total early-stage entrepreneurial activity (TEA) rates. South Africa obtained an EBO rate of 5.2% in 2021 that decreased to 1.8% in 2022 only to recover to 5.9% in 2023, ranking the country 28th out of 46 countries for all Level C[3] GEM-participating economies (Hill et al., 2023a; Hill, Ionescu-Somers, Coduras Martínez, Guerrero, Menipaz, Boutaleb, Zbierowski, Schøtt, Sahasranamam & Shay, 2023b; Hill, Ionescu-Somers, Coduras, Guerrero, Roomi, Bosma, Sahasranamam & Shay, 2022). In addition, South Africa's TEA rate has fluctuated from 17.5% in 2021 to 8.5% in 2022, increasing to 11.1% in 2023 with the country positioned 24th out of 46 participating countries (Hill et al., 2023a; Hill et al., 2023b; Hill et al., 2022). However, when comparing the country's EBO and TEA rates to other Level C countries its entrepreneurial activity performance is observed as below par with room for improvement (Hill et al., 2023a).

Despite the gloomy entrepreneurial indicators, SMEs' importance in stimulating economic growth and contributing to economic development across all economies is amplified. These enterprises contribute to around 80% of worldwide economic growth, ranging between 50% and 60% for Organisation for Economic Cooperation and Development (OECD) countries and close to 33% for developing countries (Nowakowska-Grunt, Kowalczyk & Wojtaszek, 2018). On local soil, SMEs' contribution to GDP totalled 36% in 2015 (Herrington & Kew, 2018). Considering SMEs' propensity to fail these noteworthy contributions can seem temporary. South African SMEs failure rates remain alarmingly high at 59.4% in 2022 and 59.5% in 2023, the third highest fear of failure ranking for all Level C countries (category average of 44.3% in 2023). South Africa is positioned as the 4th lowest out of the 46 participating countries surveyed in the 2023/2024 GEM Report (Hill et al., 2023a). In terms of business discontinuance rate[4], South Africa increased from 4.9% (2019) to 13.9% (2021), which was 3.3% higher (negative) than the African region's average in 2021. In 2022, the country's business discontinuance rate improved to 4.9% although it remains higher compared to other countries like China (3.40%) and Morocco (4.25%), as well as the overall Level C country average of 3.62% in 2022 (Bowmaker-Falconer et al., 2023). The GEM Reports further observe that, for South Africa during and after the COVID-19 pandemic, the negative reasons (non-COVID-19 related) for business exits

[2] Using the Gini Index as an indicator measures the extent to which the distribution of income or consumption among individuals or households within an economy deviates from a perfectly equal distribution. A Gini index of 0 represents perfect equality and an index of 100 implies perfect inequality.

[3] Economies with a GDP per capita of $25 000 or less as included in the 2023/2024 GEM's Adults Population Survey,

[4] The adult population percentage involved in TEA that discontinued a business in the previous 12 months either due to reasons such as discontinuing their owner/management relationship associated with the business, selling, and/or shutting down.

 doi:10.20944/preprints202410.2437.v1

gradually increased (Hill et al., 2023a; Hill et al., 2023b). The 2022/2023 GEM South African Report listed unprofitability as the primary non-COVID-19 related reason why early-stage South African entrepreneurs exit business (2019: 33.1%, 2021: 23.7%). Despite the decrease, it remains higher compared to Level C countries and the GEM Global averages of 29.3% and 23.5% for 2021, respectively. Apart from unprofitability, SMEs continue to fail because of restricted access to external finances, which was identified as the second greatest cause for business exits from 2019 to 2022 (2022/2023 GEM South African Report). This leaves SMEs poised to use trade credit as a viable alternative to their credit rationed realities all the while SMEs continue to operate in an economy prevalent with corruption (Bowmaker-Falconer et al., 2023; Andrieu, Staglianò & van der Zwan, 2018).

SMEs are motivated to use trade credit funding when making purchases as it can improve profits should trade debtors agree to pay inflated prices for the same products in the future, while benefitting from delayed payment to trade creditors (Yazdanfar & Öhman, 2017). Prior research observes a proportional relationship between granting trade credit and increased profitability, which includes decreasing transaction costs and increasing customer loyalty (Petersen & Rajan, 1997; Smith, 1987). More recently, the impact of the previous global financial crises on corporate profitability was softened for those firms who invested in trade debtors (Kestens, Van Cauwenberge & Bauwhede, 2012). Contrary to this, high investment in trade debtors resulted in operational vulnerabilities, such as the trade-off between increased profitability and risk as profit maximisation can impair operational liquidity (Silva, 2024). Evidence of this trade-off is confirmed by Lefebvre (2023) who observed that SMEs deliberately accept longer payment durations to support growth. This mostly occurs in countries characterised by firms exhibiting strong repayment qualities, including European Union (EU) SMEs.

Overdue debtor payments have remained a critical constraint to SMEs, as late payments affect approximately 80% of EU firms while close to 2% of EU firms forgone annual sales due to bad debts (Intrum, 2019). The European Payment Report (2022) adds to the recurring problem of late payments within SMEs indicating that most European businesses report financial difficulties among debtors as the primary reason for late payments received (Intrum, 2022). The European businesses surveyed revealed that 62% (2018) of EU SMEs concur with the previous reasons as the primary contributor to late payments, 48% of EU SMEs report intentional late payments as a primary reason followed by 45% reporting debtor administrative inadequacies as a primary reason (Intrum, 2022). Therefore, late payments remain a major constraint for businesses attributable to ineffective trade credit management. Approximately 50% of all USA business-to-business (B2B) invoices are paid late, 45% are paid late in Eastern Europe followed by 94% in Western Europe, while 53% of all Asian businesses reported a lengthening in days sales outstanding (DSO) (Atradius, 2021a; Atradius, 2020a; Atradius, 2020b, Atradius, 2020c). More recently, late payments affect approximately 50% (USA), 66% (Central and Eastern Europe), 50% (Western Europe), and 44% (Asia) of all B2B invoices, while bad debts relative to B2B invoices totalled as follows: 8% (USA), 8% (Central and Eastern Europe), 8% (Western Europe), and 5% (Asia) (Atradius, 2024a; Atradius, 2024b; Atradius, 2024c; Atradius, 2023). Added to this, the COVID-19 pandemic exuberated SMEs' late payments given that in 2020, a 5% growth in days beyond term[5] (DBT) was observed, resembling an increase in credit (default) risk from a creditor's perspective (Lui, 2020). The study by Zimon & Dankiewicz (2020) observed that, during the COVID-19 pandemic, SMEs were forced to adapt their trade credit management strategies from moderately to highly conservative to remain financially liquid. SMEs opted for safer trade credit strategies to enhance management effectiveness that included, strictly controlling all trade debtors and restricting credit limits on long-term credit supplies.

Furthermore, most SMEs, unlike their larger counterparts, cannot assess credit risk, which raises the possibility of accepting high risk customers prone to default, resulting in liquidity constraints that often impair operational viability. SMEs are exposed to vulnerabilities synonymous with bad debts primarily due to their dependability on internally generated funding, such as trade credit. Trade credit often generates a high degree of information asymmetry contributing to financial problems and eventual business exits (Cassar, 2004). Therefore, SMEs are constrained by financial challenges that include trade credit mismanagement, with various authors describing it as a substantial

[5] Indicates the number of days payments to creditors are prolonged after the due date.

 doi:10.20944/preprints202410.2437.v1

limitation to enterprise success (Braimah, Mu, Quaye & Ibrahim, 2021). Otto (2018) observes that SME trade credit mismanagement largely contributes to negative net working capital. Limited working capital results in cash flow pressures that could spiral into a continuation of cash flow shortages. These shortages affect not only the individual enterprise but also other SMEs along the supply line, given the interrelatedness of SME sectors. Should SMEs be forced through financial stringency to keep their working capital constant, increased payment delays from debtors must be counteracted with late payments to creditors articulating the destructive 'spill-over' effect between SMEs as the outgoing delay must exceed the incoming delay for SMEs to balance cash flows (Bams, Pisa & Wolff, 2020). These negative spillovers testify to the importance of effective trade credit management because of its associated financial problems that may lead to insolvency (Zimon & Dankiewicz, 2020). Main and Smith (1992) support the importance of an effective credit management process in managing outstanding debts, reflected by assessing customers' default risk and enforcing credit terms. More recently, a study by Peter, Peter, Bamidele, Adeniyi, Adama, Decster, Ogundipe and Adioti (2022) informs that the application of effective trade credit management practices can improve SMEs' financial performance. Numerous other authors concur that effective credit management is essential to business success as the choice to neglect trade credit management could materialise the risk of bad debts, impairing profitability and business growth (Zimon & Dankiewicz, 2020). Therefore, understanding the business environment surrounding SMEs and how it affects their trade credit management is of high importance (Otto, Botha & Els, 2022). One important factor external to SMEs' business environment is corruption, from which their trade credit management cannot be separated.

Bowmaker-Falconer et al. (2023) observed that to remedy the ongoing pessimistic economic realities, the country must orientate to a more employment-intensive and innovation-driven trajectory. However, remnants from the COVID-19 pandemic, electricity disruptions, prevailing crime and corruption, and crippling infrastructure coupled with poor public service delivery hampers entrepreneurial efforts. Although many challenges impair the country's attempts to transform the economy from destitute to prosperous, corruption stands out as a major obstacle to economic growth. Corruption costs the national economy billions with its repercussions lingering well beyond the abuse of public sector monies into the private sector (Bowmaker-Falconer & Meyer, 2022). SME corruption-related activities namely, irregular payments and bribes, have increased rising from 53/91 to 137/138 countries (Herrington & Kew, 2018). The 2023 SDG Country Report identified six challenges and priorities that urgently need to be addressed for the country to stay on course in achieving its SDG targets. Some of these challenges are fighting corruption that encompasses the perceived high levels of corruption and bribery, weakened institutions, and the continued need to increase access to justice in a resource-constrained environment. To eliminate this challenge, two SDG targets were formulated which include (1) substantially reducing corruption and bribery in all its forms and (2) developing effective, accountable, and transparent institutions at all levels (Statistics South Africa, 2023). Despite these idealistic targets, South Africa's Corruption Perception Index (CPI) decreased to its lowest score ever, 43/100 (2022) to 41/100 (2023), ranking the country 83/180 in 2023 (Transparency International, 2023). These negative realities are also observed in the 2023 SDG Country Report as the former mentioned SDG target scored a no progress tracking status[6] indicating that the data are showing a negative trend (increasing from a baseline value of 0.09 in 2016 to 0.31 in 2018), while the latter mentioned SDG target obtained an insufficient score due to no data (Statistics South Africa, 2023). Unfortunately, Changwony and Kyiu (2023) note that for SMEs in developing countries to remain competitive, acts of corruption such as bribery that entails making illegal payments to government officials to obtain public services, are accumulative. According to Piper (2019), many global business leaders (64%) associate acts of bribery and corruption as constraints to SMEs, with estimates increasing to 83% and 84% for Sub-Saharan Africa and Central America, respectively.

[6] The 2023 SDG Country Report does not contain any new data for certain indicators as certain data points have remained unchanged since the 2019 SDG Country Report because of a disruption in the publication schedule of a particular census attributable to the COVID-19 pandemic.

 doi:10.20944/preprints202410.2437.v1

The available stream of literature focuses on corruption as an informal institution and its relatedness to the allocation of resources and social norms (Giannetti, Liao, You & Yu, 2021). All the while, corruption's impact on SMEs' trade credit management remains largely unexamined while little research has been conducted on how corruption affects smaller businesses (Le & Doan, 2020). Therefore, within the context of the referenced research, it is necessary to ask, what is the impact of corruption on SMEs' trade credit management effectiveness? The study intends to fill this unanswered research gap and, in so doing, SMEs could be better equipped to understand how corruption affects their trade credit management practices in support of their overall finances. In this way, the paper can contribute to supporting entrepreneurial activity by broadening SMEs' understanding of how the variables tested apply to current business operations generating improved trade credit management. This can then contribute to improved SME creation rates and economic prosperity. As far as can be established, no study has set out to relate knowledge concerning the stated research question. Therefore, the article's primary objective was to determine the impact of corruption on SMEs' trade credit management effectiveness. The secondary research objectives include, (1) empirically testing the relationship between corruption and SME trade credit management effectiveness and, thereafter, (2) providing recommendations to relevant stakeholders.

The study contributes to the literature in the following ways. Firstly, where previous studies have focussed on corruption from a macroeconomics perspective (Cai, Quan & Tian, 2023; Gründler & Potrafke, 2019), this study aims to investigate how corruption affects SMEs' trade credit management effectiveness. In so doing, the study supports the findings obtained with theories that align with the multidimensional characteristic of the results, altogether expanding the corruption and trade credit management literature. Secondly, because the study enriches the literature on SMEs trade credit management, it adds to various authors' bodies of literature concerning trade credit determinants (Fisman & Love, 2003; Petersen & Rajan, 1997). Thirdly, by contributing to the ongoing debate on the effectiveness of anti-corruption campaigns (Giannetti et al., 2021; Zhang, An & Zhong, 2019), the provided recommendations should be useful to other developing countries burdened by corruption and distorted credit environments, especially for African countries given their extensive corruption realities (Transparency International, 2023).

The paper is structured as follows. Section 2 reviews existing literature on corruption and SMEs, trade credit management, and SMEs while expanding on various theories that inform these variables. Section 3 describes the research methodology employed. Section 4 reports on the empirical results that were conducted to investigate the impact of corruption on SMEs' trade credit management effectiveness and outlines the discussion of these findings. Section 5 provides recommendations. Lastly, Section 6, provides concluding remarks that summarise the main findings and recommendations of the study while also describing the study limitations and areas for future research.

2. Literature Review

Before empirically determining the impact of corruption on SMEs' trade credit management effectiveness, the sections to follow will review the literature on corruption and SMEs, then deduce the opposing theory viewpoint related to the relationship between corruption and entrepreneurship. In addition, trade credit and the usage thereof are discussed, followed by a review of asymmetric information theory as the main theory that informs trade credit.

2.1. Corruption and SMEs

Corruption, although regarded as a multidimensional phenomenon contributing to complexities prevalent across worldwide economies, can be broadly defined as knowingly misusing public resources for private benefit, which includes fraud, bribery, nepotism, and embezzlement (Al Qudah, Al-Qalawi & Alwaked, 2024; Rose-Ackerman, 1999). SMEs are surrounded by business environmental constraints, such as challenges in adapting to institutional environmental fluctuations and being exposed to adaptations to economic policy because of corruption (Rashid & Saeed, 2017). The effect of corruption is more pervasive in SMEs compared to their larger counterparts as explained next. SMEs are more liable to be affected by corruption than large enterprises due to, firstly, SME business structure allows for a closer relationship between staff members and the relatively greater

 doi:10.20944/preprints202410.2437.v1

degree of informality can result in a culture where corruption is more easily tolerated. Secondly, most SME staff focus only on the present or short-term future of the business by narrow-mindedly viewing the short-term benefits of corruption without considering the long-term shortfalls associated with corruption Thirdly, due to external funding constraints and smaller profit margins SMEs cannot always refuse to pay for bribes or other unofficial payments. Lastly, SMEs lack the bargaining power and influence to oppose bribery requests or similar solicitations due to weak network linkages with higher bureaucrats and politicians. This increases SMEs' willingness to partake in corruption as corrupt officials hardly fear any resistance from SMEs due to costs associated with marginalisation payable by those unwilling to partake (Le & Doan, 2020). The section below will distinguish between two popular perspectives, one resembling a positive implication because of business corruption and the other a negative, apprising the relationship between corruption and entrepreneurship

The Relationship Between Corruption and Entrepreneurship

Previous literature distinguishes between the 'greasing the wheels' and 'sanding the wheels' perspectives in describing the relationship between corruption and entrepreneurship in cultivating economic growth (Fradanbeh, Khyareh & Amini, 2024). The first perspective, known as the efficiency hypothesises of corruption, explains that corruption can proliferate economic growth therefore, SMEs knowingly decide to engage in corruption due to problems combining regulatory compliance and bureaucracy (Gaviria, 2002; Kaufmann & Wei, 1999). Corruption is often regarded as a favourable practice for SMEs operating in developing countries constrained by problematic government policy and ill-functioning institutions (Weill, 2011). This holds as SMEs that refuse to provide officials with additional payments, while most of the other SMEs do, will eventually have to face marginalisation. As observed in a study by Wellalage and Thrikawala (2021), 18% of the study sample's total sales were devoted to the payment of bribers and informal payments to public officials. Not partaking in corruption regularly results in SMEs not obtaining the necessary permits and licenses, not receiving public contracts, failing to comply with the inspectors, and ultimately aggravating the company's competitive position in the market (Della Porta &Vannucci, 1999). The costs imposed on SMEs in this respect are quite substantial and might even encourage smaller enterprise units to engage in corruption if they perceive it to be prevalent, as reluctance to do so can significantly impair business operations (Getz & Volkema, 2001). The second perspective, known as the inefficiency hypothesises of corruption, describes corruption as harmful to entrepreneurship for several reasons. Corruption affects the operational capacity of the business because of financing constraints, that could impair SMEs' trade credit management, undermining the practice of good corporate governance, and hindering the possibility of securing funding for high-yielding business projects (Le & Doan, 2020; Reinikka & Svensson 2005). The study by Wellalage, Locke and Samujh (2019) observed that SMEs could operate in business cycles, whereby they are unable to avoid paying bribes or other unofficial payments, as the refusal to partake in corruption endangers the livelihood of the enterprise. However, the decision to engage in corrupt business practices remains costly for SMEs as 68.2% of their study sample were more likely to be credit-constrained compared to their equivalents who do not partake in bribery or related acts of corruption. Wellalage et al. (2019) further observed that corruption yields an increase in SMEs' credit constraint by 7.63%. Le and Doan (2020) state that, especially in developing countries, an increase in corruption correlates positively with corporate financial fragility. South African SMEs are thus both cursed and blessed because deciding not to partake in corruption exposes the enterprise to financial limitations that could impair their trade credit management while SMEs continue to operate in a business environment susceptible to corruption that proliferates their choice to partake in corruption.

2.2. Trade Credit and SMEs

Trade credit can be defined as a form of credit, granted by the creditor to the debtor, allowing the debtor the purchasing opportunity without making an immediate repayment to the creditor (Petersen & Rajan, 1997). Therefore, SMEs act as financial intermediaries, by providing finance to others comprising both the time differential between the delivery of goods and services and payment, including the proportional discounts allowed for payment in bulk or before the payment due date (Andrieu et al., 2018). Trade credit has unique features for both creditor and debtor that include the

 doi:10.20944/preprints202410.2437.v1

knowledge obtained concerning the debtor's creditworthiness (McGuinness, Hogan & Powell, 2016). Creditors can obtain this unique trade credit feature through effective trade credit management that entails monitoring repayment schedules and sale orders, including the competencies to enforce the repayment of outstanding debtor accounts or to stop future supplies (McGuinness et al., 2016). In addition, trade credit allows the debtor the feature of trade discounts from prompt repayment. This can result in more favourable credit terms and ultimately reduce the overall credit financing costs (McGuinness et al., 2016). Trade credit can be divided into two basic forms namely, the simpler form is characterised as net terms, and the more complex form is termed as two-part terms. Firstly, net terms specify that full payment is due within a certain period after product delivery or after monthly statements. Secondly, two-part terms consist of three basic elements namely, the discount percentage, the discount period, and the final payment time. Given their interrelatedness, SMEs act as both debtors and creditors in the trade credit agreement as trade credit is widely recognised as a 'two-way transaction' requiring SMEs to concurrently manage both components as, due to the nature of working capital management, these two credit components influence each other (Petersen & Rajan, 1997). Therefore, the management thereof is crucial in alleviating performance (Ferrando & Mulier, 2013). SMEs are responsible for managing their net trade-credit position successfully to expand business growth (Silva, 2024).

2.2.1. Trade Credit Usage

Previous literature informs that trade credit represents a substantial investment in current assets and liabilities (Petersen & Rajan, 1997). Related to B2B sales funded by trade credit purchases the Atradius Reports observe that 52% for the USA, 50% for Eastern Europe, 55% for Western Europe, and 54% for Asia, despite the risk associated with this funding source (Atradius, 2021a; Atradius, 2020a; Atradius, 2020b, Atradius, 2020c). More recently, in terms of B2B sales funded by trade credit purchases for 2024, these values totalled 46% (USA), 47% (Central and Eastern Europe), 50% (Western Europe), and 49% (China) (Atradius, 2024a; Atradius, 2024b; Atradius, 2024c; Atradius, 2023). South Africa's trade credit usage accords with the excessive use observed by the previous countries mentioned. From an investment perspective, approximately 50% of current and 32% of total assets are trade credit funded. From a financing perspective, trade credit contributes to approximately 67% of current and 53% of total liabilities (Kwenda & Holden, 2014). A study by Machokoto, Areneke, and Ibrahim (2020) documented an 89% increase in South African corporate debt for the period 1991 to 2015.

Given their credit rationed realities, SMEs' primary funding source, apart from net cash flows, is trade credit extended by suppliers, testifying to the importance of effective trade credit management especially in the presence of financial problems such as adverse selection attributable to asymmetric information (Herrington & Kew, 2018; Yazdanfar & Öhman, 2017). The section below will review the asymmetric information theory of trade credit.

2.2.2. Asymmetric Information Theory

Smith (1987) defined asymmetric information as a culmination of financial uncertainties for the creditor concerning the debtor's creditworthiness. The presence of information asymmetries is evident particularly for unestablished SMEs due to their unknown business reputation and limited credit history (Andrieu et al., 2018). The presence of information asymmetries becomes unavoidable for creditors when screening a potential debtor, especially for SMEs, the creditor is less informed about the debtor's repayment qualities than the debtor self (Jensen & Meckling 1976). To reduce information asymmetries creditors should resort to credit management processes such as credit screening before credit extension thereby collecting information about the debtor's liquidity and leverage ratios (Andrieu et al., 2018). The study by Vander Bauwhede, De Meyere and Van Cauwenberge (2015) observed that the improved effectiveness of SMEs' financial reporting, measured by credit management quality, would result in lower asymmetric information between SMEs and suppliers. Creditors who do not follow a rigid credit management process may run the risk of adverse selection due to information asymmetries, stifling SMEs' trade credit management effectiveness (Nguyen & Ramachandran, 2006). Adverse selection resonates in the debtor's actions to accept an inferior product due to unobservable private information regarding the product supplied by the

 doi:10.20944/preprints202410.2437.v1

creditor (Berndt & Gupta, 2009). However, trade credit management can deal with non-payment concerns or the potential risk thereof, due to asymmetric information, as creditors can provide guarantees that reduce the debtors' concern by offering a time duration for approving product quality and making payment to creditors after accessing the product (Ng, Smith & Smith, 1999). Also, the choice of trade credit terms will be influenced by asymmetric information by offering specified credit terms, a debtor can reveal product quality satisfaction through their payment practices. This holds because a debtor's response to credit terms helps identify businesses that have trouble in repayment of accounts, trade credit terms can be designed to provide information on creditworthiness (Ng et al., 1999). Petersen & Rajan (1997) concur that trade credit management empowers SMEs to be in a better position to evaluate their customers' ability to pay, solve incentive problems, and enable the reselling of products in the event of default. Creditors offering trade credit benefit from informational advantages in lending to less creditworthy firms compared to other credit lenders (Berger & Udell, 2006). However, their management effectiveness is of paramount importance given trade credit's associated financial risks. Added to this, corruption can resonate in SMEs because of asymmetric information creating credit lending uncertainty and risk as the information misalignment may entice debtors to engage in corrupt activities without the creditor's knowledge adversely affecting transaction costs (Bardhan, 2017). Cai et al. (2023) added that local corruption may impair the contract environment, making creditors more cautious when formulating their trade credit contracts.

3. Materials and Methods

The study applied the quantitative research method using the survey method by employing an online questionnaire as the primary data-collection instrument (*refer to Appendix A)*.

3.1. Population and Sampling

The study focused on formal SMEs within South Africa that operate in various industries namely, retail and distribution, professional service, mining, manufacturing, information and communication technology, government, financial services, and engineering. SMEs operating in these industries were deemed suitable as they formed a good representation of industries dealing with high volumes of trade credit in South Africa and thus, for ease of sampling, these were suitable for data collection. In addition, all respondents, positions as either employees or SME owners, worked as trade-credit managers (involved in the management of both debtors and creditors).

The population frame of SMEs was obtained from Interactive Direct The researcher made use of the services offered by iFeedback Consulting (Pty) Ltd, a private company specialising in data collection who shared expert advice and insights drawn from past similar studies. In so doing, iFeedback Consulting (Pty) Ltd was able to email the online questionnaire to a population frame of SMEs (n = 45 313) obtained from the Interactive Direct Business Database. To obtain a reasonable response rate the researcher purposively targeted a suitable number of SMEs (n = 10 450) as the population frame while all SME names were crosschecked to eliminate double counting. The margin of error for this study, using the Zikmund sample size calculator, ranges from 3% to 7%, with a 5% margin of error and 95% confidence interval as the most accepted range (Zikmund, Babin, Carr & Griffen, 2010). In applying the Zikmund sample size calculation at a 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, representing the minimum recommended sample size when targeting as population frame of 10 450 SMEs as a representative sample, totalled n = 297 (Zikmund et al., 2010). However, for this study, the actual sample size totalled n = 450 with n = 434 questionnaires returned after 10 450 questionnaires were initially distributed 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 which presents a questionnaire completion rate between 70.41% to 100% while the remaining 12 questionnaires were rejected as these presented a questionnaire completion rate between 0% to 69.39%. It should further be noted that missing values presented a minute challenge before the commencement of data analysis given the low number of item non-response cases.

 doi:10.20944/preprints202410.2437.v1

3.2. Data Collection and Analysis

Concerning questionnaire development, 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 a demographical section. Across all questionnaire sections, five and six-point Likert scale questions were asked apart from the demographic section.

The data collection procedure was conducted through e-mail containing a letter detailing the title of the study, a short introduction of the researcher, the time to complete the questionnaire, the assurance that the completion of the questionnaire is voluntary alongside the necessary ethical practice's disclosure such as assurance that any data obtained from the questionnaire will be used to complete research for the University of Johannesburg. The electronic link to the completion of the online questionnaire was also available in the letter sent by e-mail, as distributed to the sample. Repeated reminder e-mails, restricted to a maximum of three per respondent, were mailed to the sample of respondents to ensure that they completed the questionnaire. The software used in administering the questionnaire was Typeform.com, as administered by the services of iFeedback Consulting (Pty) Ltd.

Excel was used for data capturing which was then uploaded to SPSS (Statistical Package for Social Sciences) 29 for analyses using statistical tests such as frequency distribution, mean, standard deviation, internal consistency, factor analysis, as well as correlation and regression analyses.

3.3. Ethical Considerations

All required ethical clearance processes as stipulated by the University of Johannesburg were adhered to. The School of Accountancy Research Ethics Committee awarded ethical clearance in 2018 (SAREC20180502-02). All participating respondents gave their consent to complete the questionnaire while being properly informed as to the completion of the questionnaire being completely voluntary, while all information supplied by respondents alongside the identity of each respondent was treated as strictly confidential. All respondents were well informed concerning the research process, purpose, and rights so that all participating respondents could make an informed decision.

4. Results and Discussion

The empirical results provided set out to determine the impact of corruption on SMEs' trade credit management effectiveness.

4.1. Demographical Data

The questionnaire collected demographic data revealing the average age of the respondent to be 52 years, predominantly classified as white male, and close to half of the total respondent group has a post-graduate qualification while their average trade credit management experience amounted to 18 years. Most SMEs were based in Gauteng, with nearly half of the respondents operating within the manufacturing industry and three-quarters of the total group operating independently. In addition, over half of the total group of respondents employ up to 50 staff members while both SMEs and individuals equally represent the largest percentage allocation as a description of respondents' clientele.

4.2. Validity and Reliability Statistics for Questionnaire Sections

Table 1. Indicates the relevant validity statistics for the two main sections of the online questionnaire namely SMEs business environment (Section B), which tested for SME corruption, and SMEs trade credit management (Section C), which tested for SME trade credit management effectiveness, before exploratory factor analysis (EFA).

 doi:10.20944/preprints202410.2437.v1

Table 1. Validity statistics of questionnaire sections before EFA.

Questionnaire section before EFA	Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy	Barlett's test for item validity (df)	Barlett's test for item validity (Sig)
SMEs business environment	0.860	1176	0.000
SMEs trade credit management	0.934	595	0.000

Source: SPSS calculations.

Table 2 provides Cronbach's *alpha* for SME corruption and trade credit management factors respectively after EFA.

Table 2. Reliability statistics for SMEs corruption and trade credit management factors after EFA.

SME corruption factors after EFA	Cronbach's *alpha*
DCUL	0.871
CDPP	0.763
CCPP	0.798
SME trade credit management effectiveness factors after EFA	**Cronbach's *alpha***
MTC1	0.914
MTC2	0.766
MTC3	0.907
MTC4	0.837
MTC5	0.781

Source: SPSS calculations.

Table 1 depicts the results obtained after performing the KMO and BTS tests with results from both tests supporting the appropriateness of the factor analysis technique as explained next. For questionnaire Section B: BTS at 1176 (P=0.000) and for questionnaire Section C: BTS at 595 (P=0.000) illustrating that the data were appropriate to perform a factor analysis. The result of the KMO measure of sampling adequacy indicates sufficient items for each factor: 0.860 and 0.934 for questionnaire Sections B and C, respectively, indicating high validity. Reliability results from Table 2 reveal Cronbach's *alpha* values close to 1 for all three SME corruption factors, illustrating very high internal consistency ranging between 0.70 and 0.80. Likewise, Cronbach's *alpha* is very close to 1 for all five SMEs' trade credit management factors, indicating that most of the factors are highly reliable, ranging between 0.80 and 0.90 for three out of the five factors with the remaining two factors ranging between 0.70 to 0.80.

4.3. Factor Analysis for Computed SMEs Corruption and Trade Credit Management Effectiveness Factors

EFA was performed on the final 422 questionnaires returned by SMEs in the main survey to test the homogeneity of the underlying constructs. EFA of the responses allowed for construct validity using Cronbach's alpha to analyse the 49 Section B, testing for SMEs corruption variables, and 35 Section C, testing for SMEs trade credit management effectiveness variables, questionnaire components. The set of three independent SME corruption factors included SME and debtor corruption through approving unviable loans (*DCUL*), corrupt debtor payment practices through forcefully delaying payments due to the SME (*CDPP*), and corrupt SME payment practices through forcefully delaying payments due to creditors of the SME (*CCPP*). The set of five dependent factors that formed SMEs trade credit management effectiveness included SMEs' effectiveness in providing trade credit management activities (*MTC1*), mechanism and insurance to assist with the collection of or protection against the risk of outstanding debt (*MTC2*), SMEs' effectiveness in managing trade credit management principles (*MTC3*), SMEs' effectiveness in managing trade credit management aspects (*MTC4*), and SMEs' effectiveness in applying credit policy components when granting credit (*MTC5*).

 doi:10.20944/preprints202410.2437.v1

Table 3. Rotated factor loading values for SMEs corruption factors after EFA.

Factor	Factor components	1	2	3	4	5	6	7	8	9	10	11	12
DCUL	B8.7 Debtors benefit from the business approving loans that have no potential to be repaid by the debtor	0.021	0.021	0.839	0.099	0.041	-0.010	-0.029	0.079	0.008	-0.063	0.054	-0.073
	B8.6 The business benefits from creditors approving loans that do not adhere to the basic financial criteria	-0.014	-0.007	0.832	-0.011	0.035	0.011	0.065	-0.058	0.001	0.152	-0.018	0.102
	B8.8 The business benefits from creditors approving loans with no potential to be repaid by the business itself	-0.030	-0.027	0.811	0.064	0.011	-0.049	0.025	-0.096	0.000	0.136	-0.007	-0.048
	B8.5 Debtors benefit from the business approving loans that do not adhere to the basic financial criteria	-0.061	0.040	0.774	0.028	-0.048	0.184	0.019	0.132	0.022	-0.046	-0.001	-0.021
CDPP	B8.1 Debtors (corporate and/or government customers) delay payment to the business while having enough funds available for full payment to the business	-0.023	-0.018	-0.009	0.034	-0.084	-0.021	0.035	0.886	0.036	-0.068	0.025	0.085
	B8.3 Debtors (corporate and/or government customers) delay payment while giving preference to another business	-0.033	-0.006	0.041	-0.053	0.086	-0.042	-0.001	0.879	0.040	0.068	0.030	-0.017
CCPP	B8.4 The business avoiding payment to creditors due (corporate and/or government suppliers) while giving preference to other creditors for which payment is not due	0.032	-0.038	0.294	-0.128	-0.041	-0.085	-0.026	0.068	-0.065	0.681	-0.067	0.061
	B8.2 The business avoiding payment to creditors (corporate and/or government suppliers) while having enough funds available for full payment	0.182	-0.118	0.275	-0.125	-0.015	-0.148	-0.004	0.032	-0.079	0.617	0.010	0.117

Source: SPSS calculations.

Table 4. Rotated factor loading values for SMEs trade credit management effectiveness factors after EFA.

Factor	Factor components	1	2	3	4	5	6
MTC1	C1.5 Assessing debtors' financial reserves as ability for repayment	0.824	0.019	0.024	-0.107	-0.286	0.018
	C1.6 Assessing debtors' financial position as ability for repayment	0.821	-0.050	0.086	-0.105	-0.158	-0.005
	C1.4 Assessing debtors' capacity in terms of their willingness to repay	0.765	-0.051	0.102	-0.024	0.213	-0.017
	C1.3 Assessing debtors' character in terms of their willingness to repay	0.763	-0.055	0.093	-0.034	0.259	0.007
	C1.1 Analysing general economic conditions, including the political environment, before granting credit	0.705	0.023	-0.046	-0.110	0.008	0.157

 doi:10.20944/preprints202410.2437.v1

	C1.14 Determining if the debtor(s) possess the collateral needed for repayment	0.549	0.248	0.059	0.084	-0.227	-0.283
	C1.7 Checking debtor orders against credit limits allowed	0.536	0.008	0.018	-0.121	0.210	-0.210
	C1.8 Collecting revenue in line with agreed credit terms, as set out in the credit policy	0.503	-0.039	0.012	-0.186	0.281	-0.227
	C1.2 Administering the sales ledger (*e.g.*, monthly reconciliations of debtor accounts and/or all other administrative duties relating to debtor accounts)	0.480	-0.003	0.167	-0.120	0.420	0.044
MTC2	C1.10 Collecting outstanding debt through the use of collection agencies	-0.026	0.921	-0.072	-0.047	0.083	0.217
	C1.11 Collecting outstanding debt through the use of legal action	-0.001	0.881	-0.004	-0.052	0.195	0.101
	C1.17 Having credit insurance for sales	-0.047	0.539	0.070	0.020	-0.218	-0.281
	C1.18 Imposing statutory interests on late payment	0.036	0.536	0.061	0.011	-0.195	-0.236
MTC3	C2.5 Ensuring effective order and invoice control of all creditor records	-0.027	-0.017	0.900	-0.050	-0.078	0.026
	C2.4 Building a sound and long-term relationship with creditor(s)	-0.077	0.046	0.893	-0.081	-0.172	0.121
	C2.6 Managing creditors actively	-0.046	0.013	0.787	-0.193	-0.134	0.031
	C2.2 Ensuring effective order and invoice control of all debtor records	0.093	-0.029	0.745	-0.003	0.183	-0.061
	C2.3 Managing debtors actively	0.026	-0.006	0.739	-0.035	0.179	-0.072
	C2.1 Building a sound and long-term relationship with debtor(s)	0.072	-0.060	0.732	0.037	0.072	-0.080
MTC4	C3.2 Managing general trade credit practices	0.081	0.039	0.037	-0.773	-0.075	-0.088
	C3.1 Managing cash flow	0.149	-0.065	0.126	-0.757	-0.053	0.049
	C3.4 Managing late payments made to creditors	0.024	0.038	0.211	-0.670	0.016	0.101
	C3.3 Managing late payments received from debtors	0.164	0.041	0.140	-0.511	0.120	-0.154
MTC5	C4.2 Conducting a credit analysis (evaluation of applicants, in order to distinguish between 'good' debtors that will pay and potential 'bad' debtors that will default)	0.135	-0.047	0.075	-0.066	-0.005	-0.745
	C4.1 Offering a credit period (the period of time in which the buyer needs to repay the outstanding account)	0.038	-0.062	0.238	-0.003	0.118	-0.667

Source: SPSS calculations.

4.4. Total Variance Explained for Computed SMEs Corruption and Trade Credit Management Effectiveness Factors

According to the rules of factor analysis only factors that have Eigen values greater than one should be retained. The Initial Eigenvalues for questionnaire Sections B and C cumulative percentages were 70.374% and 65.824% respectively. Firstly, the Eigen values for the 3 SME corruption factors, *DCUL*, *CDPP*, and *CCPP* are shown in Table 5. The total variance explained for the formulated factors totalled 70.374%. Secondly, the Eigen values for the 5 SMEs trade credit management effectiveness factors, *MTC1* to *MTC5*, are shown in Table 6. The total variance explained for the formulated factors totalled 65.824%. These 5 factors, together with the 3 SMEs corruption factors, are further confirmed by the rotation sums of squared loading after Oblimin rotation.

 doi:10.20944/preprints202410.2437.v1

Table 5. Eigenvalues and total variance explained for SMEs corruption factors.

Factor	Eigenvalues total	Cumulative variance explained %
DCUL	3.254	39.487
CDPP	1.635	60.396
CCPP	1.208	65.967
Unlabelled factor[7]	1.095	68.201

Source: SPSS calculations.

Table 6. Eigenvalues and total variance explained for SMEs trade credit management factors.

Factor	Eigenvalues total	Cumulative variance explained %
MTC1	13.660	39.028
MTC2	3.507	49.049
MTC3	2.059	54.931
MTC4	1.550	59.360
Unlabelled factor[8]	1.173	62.711
MTC5	1.090	65.824

Source: SPSS calculations.

4.5. Correlation and Regression Analysis Results

In completing the first secondary objective namely, to empirically test the relationship between corruption and SME trade credit management effectiveness, the findings report on the correlation and regression analysis results between SMEs' corruption factors and SMEs' trade credit management effectiveness factors. The section to follow does so by explaining the empirical models.

4.5.1. Models

Five models are reported, with each model containing the same independent variables but a different dependent variable. Models 1 to 5 used in this study can expressed as follows:

Consider the linear regression model (Equation 1) illustrating the various corruption factors, *DCUL*, *CDPP*, and *CCPP* proposed to impact SMEs' trade credit management effectiveness (refer to *MTC1* in Table 7):

$$Y_1 = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \quad (1)$$

where:

- Y_1 = *MTC1*;
- $\beta_{1,2,3}$ = beta (sample coefficients for internal/external business environmental factors);
- X_1 = *CDUL*;
- X_2 = *CDPP*;
- X_3 = *CCPP*;

Consider the linear regression model (Equation 2) illustrating the various corruption factors that are proposed to impact SMEs' trade credit management effectiveness (refer to *MTC2* in Table 7):

$$Y_2 = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \quad (2)$$

[7] The initial EFA produced twelve factors. The eleventh most important factor was unlabelled and not used because the factor included components with a weak loading and cross loadings.

[8] The initial EFA produced six factors. The fifth most important factor was unlabelled and not used because the factor included components with a weak loading and cross loadings.

 doi:10.20944/preprints202410.2437.v1

where:

- Y_2 = *MTC2*;
- $\beta_{1,2,3}$ = beta (sample coefficients for internal/external business environmental factors);
- $X_{1,2,3}$ = corruption factors (see Equation 1).

Model three is as follows:

$$Y_3 = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \quad (3)$$

where:

- Y_3 = *MTC3*;
- $\beta_{1,2,3}$ = beta (sample coefficients for internal/external business environmental factors);
- $X_{1,2,3}$ = corruption factors (see Equation 1).

Consider the fourth linear regression model below provided by Equation 4:

$$Y_4 = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \quad (4)$$

where:

- Y_4 = *MTC4*;
- $\beta_{1,2,3}$ = beta (sample coefficients for internal/external business environmental factors);
- $X_{1,2,3}$ = corruption factors (see Equation 1).

For the final linear regression model, refer to Equation 5, illustrating the three corruption factors proposed to impact SMEs' trade credit management effectiveness (refer to *MTC5* in Table 7):

$$Y_5 = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \quad (5)$$

where:

- Y_5 = *MTC5*;
- $\beta_{1,2,3}$ = beta (sample coefficients for internal/external business environmental factors);
- $X_{1,2,3}$ = corruption factors (see Equation 1).

4.5.2. Reporting of Correlation and Regression Results

This section reports on the results obtained from the correlation and regression analysis.

Table 7. Correlation and regression analysis results between SMEs corruption and SMEs trade credit management effectiveness factors.

Correlation results										
Dependent variables	*MTC1*		*MTC2*		*MTC3*		*MTC4*		*MTC5*	
Impendent variables	**r**	**Sig.**	**r**	**Sig.**	**r**	**Sig.**	**r**	**Sig.**	**r**	**Sig.**
DCUL	0.128***	0.01	0.272***	0.01	0.023	0.05	0.011	0.05	0.099**	0.05
CDPP	0.215***	0.01	0.127***	0.01	0.133***	0.01	0.119**	0.05	0.164***	0.01
CCPP	0.224***	0.01	0.112**	0.05	0.121**	0.05	0.153***	0.01	0.139***	0.01
Regression results										
	Model 1:		Model 2:		Model 3:		Model 4:		Model 5:	

 doi:10.20944/preprints202410.2437.v1

Dependent variables	*MTC1*		*MTC2*		*MTC3*		*MTC4*		*MTC5*	
Impendent variables	**Std. Beta**	**Sig.**	**Std. Beta**	**Sig.**	**Std. Beta**	**Sig.**	**Std. Beta**	**Sig.**	**Std. Beta**	**Sig.**
DCUL[9]	-0.100**	0.019	0.144***	0.005		-	-	-	-	-
CDPP	0.025	0.530	-0.020	0.677	0.022	0.635	0.039	0.374	0.044	0.354
CCPP	0.142***	0.001	-0.001	0.988	0.016	0.722	0.013	0.767	0.021	0.651
R^2	0.507		0.265		0.294		0.362		0.274	
Adjusted R squared	0.493		0.244		0.278		0.348		0.258	
F	35.964**		12.786**		18.320**		24.868**		16.478**	
N	397		403		405		404		402	

Source: SPSS calculations ***, **, *Indicates significance on a 99%, 95% and 90% confidence level respectively. .

For the correlation analysis results tabulated in Table 7, the Pearson correlation was used to test for the direction and strength of the relationship between corruption factors and SMEs trade credit management effectiveness factors. The *p* -value for each factor was compared against a significance level of 0.05. If the *p* -value is < 0.05, a significant relationship exists between the corruption factor and SMEs trade credit management effectiveness factor. As observed from Table 7, The following corruption factors reveal a weak correlation ($r < 0.40$) with *MTC1*, *DCUL* ($r = 0.128$; $p < 0.01$), *CDPP* ($r = 0.215$; $p < 0.01$), *CCPP* ($r = 0.224$; $p < 0.01$). The following corruption factors reveal a weak correlation ($r < 0.40$) with *MTC2*, *DCUL* ($r = 0.272$; $p < 0.01$), *CDPP* ($r = 0.127$; $p < 0.01$), *CCPP* ($r = 0.112$; $p < 0.05$). *DCUL* displays an insignificant correlation with factor *MTC3* ($r = 0.023$; $p > 0.05$). The following corruption factors reveal a weak correlation ($r < 0.40$) with *MTC3*, *CDPP* ($r = 0.133$; $p < 0.01$), and *CCPP* ($r = 0.121$; $p < 0.05$). *DCUL* displays an insignificant correlation with factor *MTC4* ($r = 0.011$; $p > 0.05$). The following corruption factors reveal a weak correlation ($r < 0.40$) with *MTC4*, *CDPP* ($r = 0.119$; $p < 0.05$), and *CCPP* ($r = 0.153$; $p < 0.01$). The following corruption factors reveal a weak correlation ($r < 0.40$) with *MTC5*, *DCUL* ($r = 0.099$; $p < 0.05$), *CDPP* ($r = 0.164$ $p < 0.01$), and *CCPP* ($r = 0.139$; $p < 0.01$). Concerning the regression analysis results (refer to Table 7), model one reveals that *DCUL* obtained a significant negative relationship ($\beta = -0.100$; $p < 0.05$) with *MTC1*. This is in line with expectations given that a corruption-related SME business environmental factor is expected to be detrimental to their trade credit management effectiveness. In continuing, two unexpected results were observed as unexpected: *CCPP* obtained a significant positive relationship ($\beta = 0.142$; $p < 0.01$) with *MTC1* while model two reveals that *DCUL* obtained a significant positive relationship ($\beta = 0.144$; $p < 0.05$) with *MTC2*. Both outcomes are somewhat surprising, given the expectation that corruption should impair SMEs' effectiveness in managing trade credit. However, when considering the reality of corruption being prevalent and affecting entrepreneurship, the trend in results becomes less unexpected from a South African SME perspective.

9. The regression results between the independent variable, DCUL, and MTC3, MTC4 and MTC5 were excluded due to lack of correlation with the dependent variables mentioned.

 doi:10.20944/preprints202410.2437.v1

4.6. Discussion of Results

The study's primary objective was to determine the impact of corruption on SMEs' trade credit management effectiveness. The sections below intend to do so through a discussion of the provided results.

The results show that SMEs and SME debtors do decide to participate in corruption-related activities, by approving unviable loans and forcefully delaying payments due to creditors. Therefore, SMEs are more effective in managing trade credit, with specific reference to *MTC1* and *MTC2*, which aligns with the 'greasing the wheels' perspective on corruption (Kaufmann & Wei, 1999). First, *DCUL* has a statistically significant positive impact on *MTC2*, which implies the intent of SMEs and SME debtors to partake in corruption-related activity to improve their management of trade credit. Second, *CCPP* has a statistically significant positive impact on *MTC1*. Because of this, it can be argued that SMEs do operate in a business environment implicated by corruption in that SMEs are avoiding their obligations payable to creditors while giving preference to other creditors for which payment is not due or simply postponing payment to creditors while having enough funds to make payment. Moreover, in the case of *DCUL* positively impacting *MTC2*, results explain that these acts of corruption enable both SME and SME debtor to improve their trade credit management effectiveness, as both parties are involved in acts of corruption through approving unviable loans, that could be an indication of a joint alliance of mutual benefit for both SME and debtor justifying for them their willingness to partake in acts of corruption. In the case of *CCPP*, SMEs decide to purposefully delay payments due to creditors, while positioned to complete the payment, instead decide to allocate payment to another creditor for whom payment is not due. This corresponds with the previous observation made that SMEs are willing to partake in corruption as they benefit from a joint alliance of mutual benefit favouring their trade credit management effectiveness. The findings by Wellalage and Thrikawala (2021), Wellalage et al. (2019), and Weill (2011) support the results. Also aligned with the trend in study results observed, several GEM South African Reports show an increase in SME corruption-related activities while recent corruption indicators testify to the seriousness of corruption (Statistics South Africa, 2023; Transparency International, 2023; Herrington & Kew, 2018). In addition, because SMEs largely use trade credit as a 'two-way transaction', the reality of a negative 'spill-over' effect on SMEs' cash-flow cycle can become unavoidable as these spillovers negatively affect SMEs' cash-flow cycle due to SMEs' constraints with the management of trade credit. Therefore, apart from those SMEs who choose to partake in corruption to increase their trade credit management effectiveness, as observed from the study findings, for those SMEs not partaking in corruption the choice to do so should have devastating repercussions, which should orientate the enterprise not to get involved in corruption as observed from the results that show a more expected outcome discussed next. *DCUL* reveals a statistically significant negative relationship with *MTC1* that aligns with the 'sanding the wheels' perspective on corruption (Le & Doan, 2020; Reinikka & Svensson 2005). Therefore, an increase in SME and debtor corruption related to approving unviable loans will result in a decrease in SMEs' trade credit management effectiveness specific to *MTC1* and vice versa. Previous studies support this by identifying corruption as the main obstacle to SME development, given that corruption could influence SMEs' repayment capacity once credit is granted (Wellalage & Thrikawala, 2021).

5. Recommendations

The following recommendations (secondary objective two) are provided after the completion of the first secondary objective. Despite the multidimensional trend observed in the results, the study argues in favour of the implementation of successful anti-corruption programmes to produce a more equitable business environment for SMEs, which must be maintained and expanded by several anti-corruption organisations. Therefore, the following recommendations are provided. Firstly, prominent forms of corruption-related activities be analysed on a broad scale to such an extent as to provide useful policy implementation. Secondly, it is recommended that non-profit and public sector organisations such as Corruption Watch and Action Society, including Small Enterprise Development Agency (SEDA) and Small Enterprise Finance Agency (SEFA), join hands with private sector stakeholders such as SME South Africa and the Small Business Institute (SBI), by ensuring that SMEs firmly understand the seriousness of corruption from a legal perspective and are fully informed as

 doi:10.20944/preprints202410.2437.v1

how to report corruption. Thirdly, non-profit organisations, specifically Corruption Watch and Action Society, should lead by example by strategically and deliberately directing awareness to SMEs on a national level using radio and television broadcasting, including social media and local platforms. Lastly, all anti-corruption organisations uphold their mandate to eradicate public and private sector corruption, by broadening existing policies to specifically include the investigation of SME and SME debtor corruption relating to improving effectiveness in managing trade credit.

6. Conclusions

This study set out to determine the impact of corruption on SMEs' trade credit management effectiveness, this was attained. Apart from the study results that align with expectations observed from previous literature, some results are somewhat unexpected, yet still align with several theories. Expectedly, the results align with conventional wisdom around corruption's impact on business operations as the results show that the mitigation of corruption (*DCUL*) is associated with effective SMEs' trade credit management (*MTC1*). Somewhat unexpectedly and contrary to conventional wisdom, the results also show that an increase in corruption (*CCPP* & *DCUL*) is associated with effective SMEs' trade credit management (*MTC1* & *MTC2*). Because of this, the results are indicative of SMEs' willingness to partake in corruption, given that SMEs benefit from increased effectiveness in managing trade credit, showing that the roots of corruption are prevalent among SMEs, as confirmed by numerous other studies. The practical value of the article includes, firstly, by determining the impact of the significant independent factors on the formulated dependent factors, the article broadens the understanding of the association between corruption and SMEs trade credit management effectiveness that is useful to SMEs operating in a business environment prevalent of corruption. Secondly, the article provides valuable recommendations to SMEs and relevant stakeholders exposed to corruption while operating in distorted credit environments given their dependency on trade credit.

As for study limitations, although the study's primary objective was attained the results reveal the willingness of SMEs to partake in corruption to increase trade credit management effectiveness, which leaves a void in understanding the reasons for this phenomenon. Therefore, future research can expand on the existing study in the form of an exploratory study for a more detailed understanding of why SMEs would pursue such avenues to improve their trade credit management effectiveness.

Author Contributions: Conceptualization, W.H.O.; methodology, W.H.O.; software, W.H.O.; validation, W.H.O.; formal analysis, W.H.O.; investigation, W.H.O.; resources, W.H.O.; data curation, W.H.O.; writing—original draft preparation, W.H.O.; writing—review and editing, W.H.O.; visualization, W.H.O.; supervision, W.H.O.; project administration, W.H.O.; funding acquisition, None.

Funding: This research received no external funding.

Data Availability Statement: Due to ethical reasons data will be supplied upon request.

Conflicts of Interest: The author declares no conflicts of interest.

Appendix A: Questionnaire

Dear participant

My name is Werner Henk Otto and I am a Lecturer at the School of Accounting (Department Commercial Accounting) at the University of Johannesburg's College of Business and Economics. I am currently completing my Ph.D. Finance degree under the supervision of Prof. Ilse Botha. I am inviting you to participate in my research in the form of a questionnaire.

My Ph.D. study is entitled "The impact of the business environment in South Africa on the management of trade credit in SMEs".

With the questionnaire, I hope to be able to determine the impact of the business environment in South Africa on the management of trade credit in SMEs. The questionnaire should take approximately 15 minutes to complete. The information supplied by participants will be treated as strictly confidential. Completion of the questionnaire is voluntary. If you would like to obtain a summary of the results of this research, I would be happy to send you a copy.

 doi:10.20944/preprints202410.2437.v1

Please feel free to contact me at wernero@UJ.ac.za with regard to any queries you may have, or my supervisor at ilseb@UJ.ac.za.

Thank you very much for your time and support.

Regards

Werner Henk Otto

Appendix A: Demographic information					
A1: Age classification					
A2: Gender classification					
Female					
Male					
A3: Population group classification					
African					
Coloured					
Indian					
White					
A4: Educational qualification obtained					
Matriculation	Diploma	Degree	Postgraduate degree		
A5: Please provide the highest qualification title					
A6: How many years' experience do you have managing trade credit?					
A7: Identification of province in which the SME operates					
Western Cape					
Northern Cape					
Eastern Cape					
KwaZulu-Natal					
Free State					
North-West					
Gauteng					
Mpumalanga					
Limpopo					
A8: Type of industry in which the SME operates					
Manufacturing					
Retail					
Wholesalers					
A9: Is your SME independent or is it a member of a group of SMEs?					

 doi:10.20944/preprints202410.2437.v1

Group					
Independent					
A10: Number of SME employees					
0-50	51-100	101-150	151-200	201 and above	
A11: Who are the clients of the SME? (Mark all applicable)					
SMEs					
Government					
Individuals					
Other					
Appendix A: SMEs' business environment					
Business-related variables	Very poor	Poor	Average	Good	Excellent
	1	2	3	4	5
B1: Managerial competencies					
Use the scale provided to rate the business' management of credit based on the following:					
Business skills					
Communication skills					
Education					
Experience					
Problem-solving skills					
B2: Collateral					
Use the scale provided to rate the business on the following:					
Debtors of the business, availability of non-current assets to serve as collateral for the business (*e.g.*, buildings to serve as collateral)					
Business' availability of non-current assets to serve as collateral for creditors (*e.g.*, buildings to serve as collateral)					
Debtors of the business, availability of current assets to serve as collateral for the business (*e.g.*, inventories to serve as collateral)					

 doi:10.20944/preprints202410.2437.v1

Business' availability of current assets to serve as collateral for creditors (*e.g.*, inventories to serve as collateral)					
The frequency with which business' debtors guarantee collateral					
The frequency with which the business guarantees collateral to a creditor					
B3: Financial and business information					
Use the scale provided to rate the business on the following:					
Business' access to transparent cash-flow statement from its debtors					
Creditors' access to a transparent cash-flow statement from the business itself					
Debtors' cash-flow statement, indicating a viable repayment of credit ability for the business					
Business' cash-flow statement, indicating the business' viable credit repayment ability to its creditors					
Debtors' financial information, displaying financial viability for the business					
Business' financial information, displaying financial viability for its creditors					
Debtors' provision of transparent business information, disclosing their trade credit practices to the business					
Business' provision of transparent business information, disclosing the business' trade credit practices for its creditors					
B4: Networking					
Use the scale provided to rate the business on the following:					
The quality of networking and/or business relationships between the business and its debtors					
The quality of networking and/or business relationships between the business and its creditors					
The number of networks and/or business relationships the business has with debtors					

 doi:10.20944/preprints202410.2437.v1

The number of networks and/or business relationships the business has with creditors					
The extent to which the business belongs to a similar professional association as its debtors					
The extent to which the business belongs to a similar professional association as its creditors					
B5: Legal system					
Use the scale provided to rate the legal system based on the following:					
Being fair and impartial in dealing with the business' insolvent estate					
Obtaining judgement when legal action is pursued against a debtor(s)					
Obtaining judgement when legal action is pursued against a creditor(s)					
Providing a reasonable waiting period for the business to obtain judgement when legal action is pursued against a debtor(s)					
Length of time the business has to wait upon judgement when legal action is pursued against the business					
Enforcing court decisions					
B6: Ethical					
Use the scale provided to rate either the business' debtors or the business itself based on the following:					
Business' debtors for non-default to payments payable to the business itself					
The business itself on non-default to payments payable to its creditors					
Business debtors being honest in keeping to commitments payable to the business itself					
The business itself on being honest in keeping to commitments payable to its creditors					
Business' debtors providing accurate and truthful financial and business information to the business					

 doi:10.20944/preprints202410.2437.v1

The business itself on providing accurate and truthful financial and business information to its creditors					
B7: Macro-economy					
Use the scale provided to rate the following macro-economic variables of South Africa:					
The current economic status					
The current interest rate					
The current inflation rate					
The current unemployment rate					
Business-related variables	No extent	Small extent	Moderate extent	Large extent	Very large extent
	1	2	3	4	5
B8: Corruption					
Use the scale provided to indicate the extent to which the following occur:					
Debtors (corporate and/or government customers) delay payment to the business, while having enough funds available for full payment to the business					
The business avoiding payment to creditors (corporate and/or government suppliers), while having enough funds available for full payment					
Debtors (corporate and/or government customers) delay payment, while giving preference to another business					
The business avoiding payment to creditors (corporate and/or government suppliers) due, while giving preference to other creditors for which payment is not due					
Debtors benefit from the business approving loans that do not adhere to the basic financial criteria					
The business benefits from creditors approving loans that do not adhere to the basic financial criteria					
Debtors benefit from the business approving loans that have no potential to be repaid by the debtor					

 doi:10.20944/preprints202410.2437.v1

The business benefits from creditors approving loans with no potential to be repaid by the business itself					

Appendix A: SMEs' management of trade credit						
C1: Use the scale provided to indicate how effective the business is in performing each of the following activities/measures:	Not at all effective	Slightly effective	Moderately effective	Very effective	Fully effective	N/A
	1	2	3	4	5	6
Analysing general economic conditions, including the political environment, before granting credit						
Administering the sales ledger (e.g., monthly reconciliations of debtor accounts and/or all other administrative duties relating to debtor accounts)						
Assessing the debtors' character in terms of their willingness to repay						
Assessing the debtors' capacity in terms of their willingness to repay						
Assessing debtors' financial reserves as ability for repayment						
Assessing debtors' financial position as ability for repayment						
Checking debtor orders against credit limits allowed						
Collecting revenue in line with agreed credit terms, as set out in the credit policy						
Collecting overdue payments (by making use of methods such as telephone calls, sending out statements via post or e-mail, and personal visits, etc.)						
Collecting outstanding debt through the use of collections agencies						
Collecting outstanding debt through the use of legal action						
Conducting a formal analysis into reasons for late payment by the debtor(s)						
Determining the extent to which the debtor's debt is secured						
Determining if the debtor(s) possess the collateral needed for repayment						
Ensuring details in the credit agreement are covered in the credit policy						
Ensuring compulsory disclosure of payment practices by the debtor(s)						
Having credit insurance for sales						
Imposing statutory interests on late payment						
Resolving disputed overdue invoices with the debtor(s)						
Using cession contracts with the debtor(s)						
C2: Please indicate the effectiveness of the following principles when managing trade credit for your business:	Not at all effective	Slightly effective	Moderately effective	Very effective	Fully effective	
	1	2	3	4	5	

 doi:10.20944/preprints202410.2437.v1

Building a sound and long-term relationship with debtor(s)						
Ensuring effective order and invoice control of all debtor records						
Managing debtors actively						
Building a sound and long-term relationship with creditor(s)						
Ensuring effective order and invoice control of all creditor records						
Managing creditors actively						
C3: Please indicate how effective the business is in managing the following trade credit aspects:	Not at all effective	Slightly effective	Moderately effective	Very effective	Fully effective	
	1	2	3	4	5	
Managing cash flow						
Managing general trade credit practices						
Managing late payments received from debtors						
Managing late payments made to creditors						
C4: How effective is your business in achieving the following credit policy components when granting credit to a debtor:	Not at all effective	Slightly effective	Moderately effective	Very effective	Fully effective	N/A
	1	2	3	4	5	6
Offering a credit period (the period of time in which the buyer needs to repay the outstanding account)						
Conducting a credit analysis (evaluation of applicants in order to distinguish between 'good' debtors that will pay and potential 'bad' debtors that will default)						
Offering a cash discount (represents a percentage deducted from the purchase price for which the buyer can receive discount when paying within a specified time, as set out in the terms agreed upon in the credit policy)						
Application of a collection policy (methods and procedures that a business can follow for the collection of accounts receivable)						
Application of a debtor age analysis (analysis that determines the percentage of debtor days, from current to 120 days and older, outstanding relative to total sales)						
Thank you for your cooperation and participation						

References

Al Qudah, A., Al-Qalawi, U. & Alwaked, A. 2024. Deciphering the shadows: an empirical exploration of corruption's impact on SMEs credit costs in OECD countries. *Journal of Financial Crime*.

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.

Atradius. 2020a. Western Europe: 2021 offers hope to COVID-hit makers*: Atradius Payment Practices Barometer*. November 2020. Available at: https://group.atradius.com/publications/payment-practices-barometer/western-europe-2020-2021-hope-prevails-for-COVID-hit-markets.html [Accessed: 23 August 2024].

Atradius. 2020b. Eastern Europe: Region faces 2021 battered but hopeful*: Atradius Payment Practices Barometer*. November 2020. Available at: https://group.atradius.com/publications/payment-practices-barometer/eastern-europe-2020-businesses-enter-2021-pandemic-battered-but-hopeful.html [Accessed: 23 November 2021].

Atradius. 2020c. Asia: Business tighten credit management in the face of economic turbulence*: Atradius Payment Practices Barometer*. 2020. Available at: (file:///C:/Users/ottowh/Downloads/ppb_asia_2020_regional_en%20(1).pdf) [Accessed: 23 November 2021].

Atradius. 2021a. US: Trade credit use on the rise amid economic distress*: Atradius Payment Practices Barometer*. July 2021. Available at: https://group.atradius.com/publications/payment-practices-barometer/us-2021-trade-credit-use-on-the-rise-amid-economic-distress.html [Accessed: 22 August 2024].

Atradius. 2024a. USA: B2B payments practices trends in the United States*: Atradius Payment Practices Barometer*. 2024. Available at: (file:///C:/Users/ottowh/Downloads/payment-practices-barometer-north-america-us-en.pdf) [Accessed: 4 October 2024].

Atradius. 2024b. Central and Eastern Europe: B2B payments practices trends*: Atradius Payment Practices Barometer*. 2024. Available at: (file:///C:/Users/ottowh/Downloads/payment-practices-barometer-central-and-eastern-europe-2024-en.pdf) [Accessed: 4 October 2024].

Atradius. 2024c. Western Europe: B2B payments practices trends*: Atradius Payment Practices Barometer*. 2024. Available at: (file:///C:/Users/ottowh/Downloads/payment-practices-barometer-western-europe-2024-en.pdf) [Accessed: 4 October 2024].

Atradius. 2023. Asia: Key trends for B2B payments and cash flow*: Atradius Payment Practices Barometer*. 2023. Available at: (file:///C:/Users/ottowh/Downloads/payment-practices-barometer-asia_2023-en.pdf) [Accessed: 4 October 2024].

Bams, D., Pisa, M. & Wolff, C.C.P. 2020. Spillovers to small business credit risk. *Small Business Economics*, 57(1): 323-352.

Bardhan, P. 2017. Corruption and development: a review of issues. *Political corruption*, 321-338.

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.

Bowmaker-Falconer A., Meyer, N. & Samsami, M. 2023. *Global Entrepreneurship Monitor 2023/2024* South African Report Entrepreneurial Resilience during Economic Turbulence, Stellenbosch University: Stellenbosch, South Africa. Available at: https://www.gemconsortium.org/report [Accessed: 13 August 2024].

Bowmaker-Falconer A. & Meyer, N. 2022. *Global Entrepreneurship Monitor 2021/2022* South Africa Report Fostering entrepreneurial ecosystem vitality, Stellenbosch University: Stellenbosch, South Africa. Available at: https://www.gemconsortium.org/economy-profiles/south-africa [Accessed: 20 February 2023].

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).

Cai, W., Quan, X. & Tian, G.G. 2023. Local corruption and trade credit: Evidence from an emerging market. *Journal of business ethics*, 185(3): 563-594.

Cassar, G. (2004). The financing of business start-ups. *Journal of Business Venturing*, 19(2): 261-283.

Changwony, F.K. & Kyiu, A. 2023. Business strategies and corruption in SMEs: The impact of business group affiliation, external auditing and international standardisation certification. *Business Strategy and the Environment*. Available at: https://doi.org/10.1002/bse.3333 [Accessed: 21 August 2024].

Della Porta, D. & Vannucci, A. 1999. *Corrupt exchanges: actors, resources, and mechanisms of political corruption*. New York: De Gruyter.

Ferrando, A. & Mulier, K. 2013. Do firms use the trade credit channel to manage growth?. *Journal of Banking & Finance*, 37(8): 3035-3046.

Fisman, R. & Love, I., 2003. Trade credit, financial intermediary development, and industry growth. *The Journal of finance*, 58(1): 353-374.

Fradanbeh, M.R., Khyareh, M.M. & Amini, H. 2024. Does corruption affect the impact of financial development on entrepreneurship? Evidence from emerging economies. *Ekonomski vjesnik/Econviews-Review of Contemporary Business, Entrepreneurship and Economic Issues*, 37(1): 109-126.

Gaviria, A. 2002. Assessing the effects of corruption, crime and firm performance: Evidence from Latin America. *Emerging Markets Review,* 3(3): 248-268.

Getz, K.A. & Volkema, R.J. 2001, Culture, Perceived Corruption, and Economics: A Model of Predictors and Outcomes, *Business & Society*, 40(1): 7–30.

Giannetti, M., Liao, G.M., You, J.X. & Yu, X.Y. 2021. The externalities of corruption: Evidence from entrepreneurial firms in China. *Review of Finance*, 25(3): 629-667.

Gründler, K. & Potrafke, N. 2019. Corruption and economic growth: New empirical evidence. *European Journal of Political Economy*, 60: 101810.

Gu, W. & Wang, J. 2022. Research on index construction of sustainable entrepreneurship and its impact on economic growth. *Journal of Business Research*, 142, 266-276.

Hill, S., Ionescu-Somers, A., Coduras, A., Guerrero, M., Roomi, M, Bosma, M.A., Sahasranamam, N. & Shay, J. 2022. *Global Entrepreneurship Monitor Report* 2021/2022 Opportunity amid disruption. [Online]. Available at: https://www.gemconsortium.org/reports/latest-global-report [Accessed: 28 May 2022].

Hill, S., Ionescu-Somers, A., Coduras, A., Guerrero, M., Menipaz, E., Boutaleb, F., Zbierowski, P.,

Sahasranamam, S. & Shay, J. 2023a. *Global Entrepreneurship Monitor* 2023/2024 Global Report: 25 Years of Growing. London: Global Entrepreneurship Research Association, London Business School. Available at: https://www.gemconsortium.org/report [Accessed: 24 May 2024].

Hill, S., Ionescu-Somers, A., Coduras Martínez, A., Guerrero, M., Menipaz, E., Boutaleb, F., Zbierowski, P., Schøtt, T., Sahasranamam, S. & Shay, J. 2023b. *Global Entrepreneurship Monitor* 2022/2023 Adapting to a" New Normal". Available at: https://gemconsortium.org/reports/latest-global-report [Accessed: 25 January 2024].

Herrington, M. & Kew, P. 2018. *Global Entrepreneurship Monitor* South Africa 2017/2018

Report. Available at: https://www.gemconsortium.org/report [Accessed: 10 July 2020].

Intrum, 2019. *European Payment Report 2019* [Online]. Available at: https://www.intrum.com/media/5755/intrum-epr-2019.pdf [Accessed: 29 August 2024].

Intrum, 2022. *European Payment Report 2022* [Online]. Available at: https://www.intrum.co.uk/business-solutions/reports-insights/reports/european-payment-report-2022/ [Accessed 30 August 2024].

Jensen, M.C. & Meckling, W.H. 1976. Theory of the firm: Managerial behaviour, agency cost and ownership structure. *Journal of Financial Economics*, 3(4): 305-360.

Kaufmann, D. & Wei, S.J. 1999. Does "grease money" speed up the wheels of commerce? *Small Business Economics*, 2(1): 35-49.

Kestens, K., Van Cauwenberge, P. & Bauwhede, H.V. 2012. Trade credit and company performance during the 2008 financial crisis. *Accounting & Finance*, 52(4): 1125-1151.

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.

Le, A. & Doan, A. 2020. Corruption and financial fragility of small and medium enterprises: International evidence. *Journal of Multinational Financial Management,* 57-58: 1-22.

Lefebvre, V. 2023. Trade credit, payment duration, and SMEs' growth in the European Union. *International entrepreneurship and management journal*, 19(3): 1313-1340.

Lui, A. 2020. Understanding the shift in trade credit in the COVID-19 pandemic. *S & P Global: Market Intelligence*. Available at: https://www.spglobal.com/marketintelligence/en/news-insights/blog/understanding-the-shift-in-trade-credit-in-the-covid-19-pandemic [Accessed on: 6 May 2024].

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.

Main, S.L. & Smith, C.W. 1992. Account receivable management policy: Theory and evidence. *The Journal of Finance*, 47(1): 169-200.

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.

Meyer, N & Meyer, D.F. 2020. Entrepreneurship as a predictive factor for employment and investment: the case of selected European countries. *Euroeconomica*, 39(2): 165-180.

Ng, C.K., Smith, J.K. & Smith, R.L. 1999. Evidence on the determinants of credit terms used in interfirm trade. *Journal of Finance*, 54(3): 1109-1129.

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.

Nowakowska-Grunt, J., Kowalczyk, A. & Wojtaszek, H. 2018. Prospects for development of the SME sector in Poland in the, field of government's policy towards small and medium-sized enterprises. *World Scientific News*, 103: 223-233.

Otto, W.H. 2018. Management of trade credit by small and medium-sized enterprises. *Journal of Economic and Financial Sciences*, 11(1): 1-8.

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.

Otto, W.H., Botha, I. & Els, G. 2022. The impact of the South African business environment on SMEs trade credit management effectiveness. *Southern African Journal of Entrepreneurship and Small Business Management*, 14(1): 1-11.

Peter, F.O., Peter, A.O., Bamidele, R., Adeniyi, M.M., Adama, I., Decster, L.H., Ogundipe, E. & Adioti, B.S. 2022. Trade credit management and SMEs sustainability: A study of selected SMEs in Lagos, Nigeria. *International Journal of System Assurance Engineering and Management*, *13*(4), pp.1834-1844.

Petersen, M.A. & Rajan, R. G. 1997. Trade credit: Theories and evidence. *Review of Financial Studies*, 10(3), 661-691.

Piper, J. 2019. *Helping SMEs handle the risk of bribery and corruption*. International Federation of Accountants. Available at: https://www.ifac.org/knowledge-gateway/discussion/helping-smes-handle-risks-bribery-and-corruption [Accessed: 21 August 2024].

Rashid, A. & Saeed, M. 2017. Firms' investment decisions – Explaining the role of uncertainty. *Journal of Economic Studies*, 44(5): 833-860.

 doi:10.20944/preprints202410.2437.v1

Reinikka, R. & Svensson, J. 2005. Fighting corruption to improve schooling: Evidence from a newspaper campaign in Uganda. *Journal of the European Economic Association*, 3(2-3): 259-267.

Rose-Ackerman, S. 1999. Political corruption and democracy. *Conn. J. Int'l L.*, 14: 363.

Silva, S. 2024. Trade credit and corporate profitability: Evidence from EU-based SMEs. *Journal of Corporate Accounting & Finance*, 1-12.

Smith, J.K. 1987. Trade credit and informational asymmetry. *Journal of Finance*, 42(4): 863-872.

Statistics South Africa. 2023. *Sustainable Development Goals. Country Report 2023. South Africa*. Pretoria: Statistics South Africa. Available at: https://www.statssa.gov.za/?page_id=739&id=5 [Accessed: 15 August 2024].

Statistics South Africa. 2024a. Quarterly labour force survey (QLFS), 2nd Quarter 2024. Available at: (chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.statssa.gov.za/publications/P0211/P02112nd Quarter2024.pdf) [Accessed: 15 June 2024].

Statistics South Africa. 2024b. Gross domestic product (GDP), 1st Quarter 2024. Available at: (chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.statssa.gov.za/publications/P0441/P04411st Quarter2024.pdf) [Accessed: 18 August 2024].

Transparency International Global Corruption Report. 2023. Available at: https://www.transparency.org/en/cpi/2023/index/zaf [Accessed: 24 May 2024].

Vander Bauwhede, H., De Meyere, M. & Van Cauwenberge, P. 2015. Financial reporting quality and the cost of debt of SMEs. *Small Business Economics*, 45(1): 149-164.

Weill, L. 2011. How corruption affects bank lending in Russia. *Economic Systems*, 35(2): 230-243.

Wellalage, N.H., Locke, S. & Samujh, H. 2019. Corruption, gender and credit constraints: Evidence from South Asian SMEs. *Journal of Business Ethics*, 159(1): 267-280.

Wellalage, N. & Thrikawala, S. 2021. Does bribery sand or grease the wheels of firm level innovation? Evidence from Latin American countries. *Journal of Evolutionary Economics*, 31: 891-929.

World Bank. 2024a. Poverty headcount ratio at national poverty lines (% of population). Available at: https://databank.worldbank.org/source/world-development-indicators# [Accessed: 12 August 2024].

World Bank. 2024b. GINI index (World Bank estimate). Available at: https://databank.worldbank.org/source/world-development-indicators# [Accessed: 16 August 2024].

World Bank. 2024c. Overview. Available at: https://www.worldbank.org/en/country/southafrica [Accessed: 18 August 2024].

Yazdanfar, D. & Öhman, P. 2017. Substitute or complement? The use of trade credit as a financing source among SMEs. *Management Research Review*, 40(1): 10-27.

Zhang, H., An, R. & Zhong, Q. 2019. Anti-corruption, government subsidies, and investment efficiency. *China Journal of Accounting Research*, 12(1): 113-133.

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

Zimon, G. & Dankiewicz, R. 2020. Trade credit management strategies in SMEs and the COVID-19 pandemic – A case of Poland. *Sustainability*, 12(5): 6114.