

INTRODUCTION

The adequacy and effectiveness of internal control systems have a direct influence on the overall sustainability of any business entity (Zhou et al., 2016; Rendon & Rendon, 2016). Essentially an adequate and effective internal control system should provide reasonable assurance to management on the attainment of relevant business objectives in the foreseeable future (Spira & Page, 2003; McNally, 2013), by placing emphasis on: 1) the effectiveness, efficiency and economy of business operations, 2) a business entity's compliance with applicable legislation, rules, policies and procedures, 3) the safeguarding of a business entity's assets, and 4) the integrity of financial and non-financial information of a business entity (Adeniyi & Aramide, 2014). Across the globe, internal control systems are usually implemented in business entities based on at least one formal internal control framework¹. One of these internal control frameworks is that of the COSO Integrated Internal Control Framework of 1992, as revised in 2013 (Baker Tilly, 2014). This particular internal control framework is regarded as the most popular and reliable as it is used by an array of business entities worldwide, including that of small businesses (Dickins et al., 2011; Akoka & Wattiau, 2010). The COSO framework comprises five elements, namely that of *control environment* (holistic attitude of management towards internal control), *risk management* (identification, evaluation and treatment of risks), *internal control activities* (preventive and/or detective actions to mitigate risks), *information and communication* (sharing of information to empower stakeholders to help attain business objectives), and *monitoring* (evaluating the adequacy and/or effectiveness of the entire internal control system) (COSO, 2012; Martin et al., 2014).

In a South African dispensation, approximately 90% of all business entities are regarded as SMMEs (Mouloungui, 2012); responsible for adding substantial socio-economic value² to the country. Albeit the aforementioned, South African SMMEs have one of the worst sustainability rates³ in the world as approximately 70% of these business entities fail after being in existence for only four years (Cant & Ligthelm, 2002; Mutezo, 2013; Wiese, 2014; SAICA, 2015; Van Der Walt et al., 2016). A probable reason for the latter dispensation is that most of these business entities make use of customised internal control systems which only partially relate to the COSO Integrated Internal Control Framework. Unsurprisingly, these customised internal control systems have been found to be inadequate and/or ineffective in relation to the mitigation of risks (Siwangaza, 2013; Bruwer, 2016). This view is supported by previous studies (Byington & Christensen, 2005; Christ et al., 2012) where it was found that although customised internal control systems can add value to business entities from a corporate governance point of view at most, it does not necessarily add as much value in relation to the mitigation of risks.

¹ Other internal control frameworks include, *inter alia*, the CoCo Framework (1995) and the CoBIT Framework (1996, 2005, and 2012).

² These business entities contribute at least 50% to the South African Gross Domestic Product, while providing employment opportunities to at least 60% of the national workforce (Naidoo & Urban, 2010; Swart, 2011; Koens & Thomas, 2015).

³ Since the overall existence of South African SMMEs are largely dependent on their achievement of financial objectives (Jeon et al., 2010), for this study, the SMME sustainability is synonymous with their "financial sustainability".

A major part of any system of internal control is that of internal control activities⁴ (Heise et al., 2013). These activities can be manual and/or automatic in nature, and should assist management with the prevention and/or detection of risks, with the main intent to provide reasonable assurance surrounding the attainment of a business entity's objectives in the foreseeable future (Agebejule & Jokipii, 2009). Notwithstanding the aforementioned, a recent study (Bruwer, 2016) found that internal control activities had only an average presence in South African SMMEs. Two probable reasons for this phenomenon include, *inter alia*, that these business entities have limited financial resources at their disposal to implement sound internal control activities (Janse Van Vuuren, 2011; Jere et al., 2015), and management often views internal control activities as too much effort to implement and/or enhance due to non-guaranteed returns on such investments (Campbell & Hartcher, 2003).

One of the five categories of internal control activities which can be used to economically mitigate risks is that of independent checks – used mostly for quality control purposes (Messier & Austen, 2000; O'Leary et al., 2006; Jorion, 2012). Independent checks pertain to autonomous scrutiny of applicable phenomena (e.g. employees, goods and/or services, cash, accounts receivable, accounts payable, etc.) which need to adhere to a set standard(s), as they may directly influence the attainment of a business entity's strategic objectives, operational objectives, reporting objectives and/or compliance objectives (Kamaruddin & Ramli, 2015). Albeit the latter, previous studies (Siwangaza, 2013; Bruwer, 2016) found that internal control activities have a below average presence in South African SMMEs, of which independent checks (a component of the latter) only has an average presence. Probable reasons for this include that SMME management do not only have to wear many hats⁵, but should also take on array of managerial responsibilities and non-managerial responsibilities at any given time (Luiz & Gaspari, 2007; Katsioloudes & Jabeen, 2013).

Using the above as basis, it becomes apparent that customised internal control systems in South African SMMEs may not necessarily have a positive influence on their overall sustainability. This is especially the case since internal control activities have only an average presence in South African SMMEs, while their adequacy and/or effectiveness to manage risks are questionable. Notwithstanding the aforementioned, it is highly probable that the independent checks that are implemented in South African SMMEs may have a positive influence over their overall sustainability, especially since these control activities are the most economical to implement and/or maintain. Therefore, this research study focused on testing the relationship which existed between implemented independent checks and the perceived financial sustainability of South African SMMEs. The study aimed to provide insight to SMME management and policymakers surrounding the potential and/or actual value which independent checks have in relation to the financial sustainability of South African SMMEs.

For the remainder of this paper, relevant discussion takes place under the following headings: 1) conceptual frameworks and development of hypothesis, 2) research design,

⁴ Internal control activities can be demarcated into five categories, namely: 1) adequate source document usage and design, 2) proper authorisation activities, 3) safeguarding of assets, 4) segregation of duties, and 5) independent checks (COSO, 2012; McNally, 2013).

⁵ South African SMME management has a customised managerial conduct (Bruwer & Coetzee, 2016).

methodology and methods, 3) results and discussion, 4) conclusion, and 5) avenues for further research.

CONCEPTUAL FRAMEWORKS AND DEVELOPMENT OF HYPOTHESIS

In this research study, emphasis was placed on one dependent variable, namely “financial sustainability”, and 12 independent variables relating to “independent checks”. For the remainder of this section, these variables are first conceptualised and then discussed separately.

Financial sustainability

In a business dispensation, the attainment of financial objectives (financial sustainability) pertains to a business entity’s achievement of a favourable financial performance⁶ and/or favourable financial position⁷ which, in turn, should allow for it to remain in existence (operation) for the foreseeable future (Lebacqz et al., 2013). Without the attainment of financial sustainability, it is impossible for any business entity to remain in operation for the foreseeable future.

Globally, the financial sustainability of SMMEs tends to be better in developed countries than in developing countries, particularly since developed countries’ economic landscapes⁸ are more conducive for these business entities to operate in (Monk, 2000). For example, in Australia 23% of SMMEs fail after being in existence for five years, in Canada 48% of SMMEs fail after being in existence for five years, while in Brazil 43% of SMMEs fail after being in existence for three years (Ahmad & Seet, 2009; Oduyoye et al., 2013; Rao & Omnamasivayya, 2013). When focus is shifted to South African SMMEs however, 70% fail after being in existence for only four years (Tustin, 2015).

Notwithstanding the fact that South African SMMEs have one of the worst sustainability rates in the world (Houghton, 2016) the South African economic landscape is often described as “toxic” (Hlahla, 2013). Otherwise stated, the South African economic landscape is unconducive for these business entities to operate in and/or to become sustainable in as it serves as a breeding ground for risks to cultivate in (Adam et al., 2005; Kabiawu, 2013; SAICA, 2015). For this reason, the mitigation of risks in these business entities is of paramount importance.

Independent checks

Due to the rapid advancement in technology, many business entities around the globe have been reported to mitigate risks reactively as opposed to proactively, mainly as more business transactions are taking place via technology (Sahd & Rudman, 2016). One manner in which this can be done is through the implementation of internal control activities – those activities which exist across all hierarchical levels in a business entity, which either prevent or detect risks, with the main intent to provide reasonable assurance regarding the

⁶ Financial performance has to do with a business entity’s ability to make an income, in the shortest amount of time to, in turn, make a profit (Sowden-Service, 2006).

⁷ Financial position has to do with a business entity’s ability to have more assets when compared to its liabilities which, in turn, can generate income which is greater than expenses (Sowden-Service, 2006).

⁸ The economic landscape refers to the overall well-being of an economy (Guilhoto et al., 2002).

attainment of business objectives in the foreseeable future (Frazer, 2012; Halonen, 2014). Regardless of the aforementioned, not all control activities are proactive in nature. Internal control activities are generally demarcated into five categories (see Footnote 4). For this study however, emphasis was placed on the category of *independent checks*.

Independent checks have to do with the meticulous inspection of assets (inventory, cash, trade receivables), employees and liabilities (overdrafts, trade payables) in the sense that they conform to relevant compliance procedures which, in turn, should assist a business entity to achieve its relevant objectives in the foreseeable future (Chorafas, 2001; Kamaruddin & Ramli, 2015). According to previous research studies (Kubitscheck, 2000; Marrow et al., 2003; Jorion, 2012), independent checks are more robust, more adaptable (less static) and more cost effective to deploy than other internal control activity. This is specifically the case since most independent checks are physically performed by human beings who, in turn, should be adaptable to change (Van der Schaaf & Kanse, 2007).

Therefore, the inference can be made that independent checks, if correctly performed, should have a positive influence on the overall sustainability of a business entity, leading to the formulation of the following hypothesis:

H₁: There exists a positive statistically significant relationship between implemented independent checks and the perceived financial sustainability of South African SMMEs.

RESEARCH DESIGN

For the remainder of this section, discussion takes place under the following sub-headings: 1) data and participants, and 2) model specifications.

Data and participants

Survey research was conducted and primary quantitative data were collected from 119 members of management in South African SMMEs (owners and/or managers) through the deployment of a questionnaire. The questionnaire comprised mostly of 5-point Likert scale questions (1 = “strongly disagree”, 2 = “disagree”, 3 = “neither agree nor disagree”, 4 = “agree”, 5 = “strongly agree”), with some questions taking on the form of multiple choice questions and ratio questions. The targeted population was 150 members of management who had to have decision making power in their respective SMMEs. The sample was chosen based on applicable delineation criteria, namely that all SMMEs had to be non-franchised, fast moving consumer goods⁹ (FMCG) SMMEs, which employed less than 50 full-time employees, while also operating in the Cape Metropole.

Stemming from the descriptive statistics, the following demographical characteristics were evident for respondents:

⁹ Fast moving consumer goods industry is characterised by high levels of competition, which forms part of the wholesale and retail industry, where necessity and/or non-necessity products are sold, on which marginal mark-ups are placed (Housgard et al., 2010; Ashraf, 2014; South African Reserve Bank, 2011).

- Position in SMMEs: 40.34% were owners; 32.77% were managers; 26.89% were owner-managers.
- Nationality: 96.64% were South African; 3.36% were non-South African.
- Managerial experience: 48.74% had less than 6 years' managerial experience; 51.26% had at least 6 years' managerial experience.
- Highest qualification: 18.49% had a qualification below Grade 12; 48.74% had a Grade 12 qualification; 32.77% had a tertiary qualification.

In relation to the sampled SMMEs which respondents were responsible for managing, the following demographical characteristics were evident based on descriptive statistics:

- Non-franchised: 100% were non-franchised.
- Type of business: 77.30% were sole traders; 9.2% were partnerships; 10.1% were close corporations; 3.4% were private companies.
- Modus operandi: 80.67% operated on a "cash only" basis; 19.33% operated on a "cash and credit" basis.
- Number of outlets: 83.19% had one outlet; 16.81% had more than one outlet.
- FMCG type: 43.70% were retailers/wholesalers; 21.85% were restaurants/caterers; 31.93% were convenience stores/cafés; 2.52% were pharmacies.
- Employees employed: 87.40% employed 10 or less full-time employees; 12.6% employed between 11 and 50 full-time employees.
- Existence: 24.37% existed for less than four years; 75.63% existed for at least four years.

The questionnaire measured both the dependent variable and independent variable through a total of 15 items. In order to reduce the number of items for measurement, principle axis factoring was used.

For the dependent variable, a total of four items were reduced to one factor, namely "financial sustainability". The tested reliability of this factor was calculated at a Cronbach's Alpha of 0.722¹⁰ with a KMO test score of 0.749. In turn, for the independent variables, a total of 11 items were used to ascertain the independent checks which SMMEs made use of. Through means of principle axis factoring, these 11 items were reduced to three factors and two items. A summary of the reliability tests, along with relevant KMO test scores are provided in Table 1.

Table 1: Summary of reliability tests on items measuring internal control activities

Factor tested	No of items tested	Cronbach's Alpha	KMO test score
Independent checks on staff *	3	0.628	0.596 ^a
Independent checks on inventory	2	0.453	0.500
Independent checks on cash*	3	0.758	0.678
Reconciliations*	3	0.806	0.700

*Suitable for factoring

¹⁰ A Cronbach's Alpha score of 0.600 or higher is regarded as appropriate; a calculated KMO test score of 0.600 or higher is regarded as appropriate to factor items (Field, 2009; Cohen & Sayag, 2010; Hair et al., 2010).

^a the KMO test score for the tested factor was rounded to 0.600

Since the two items for *independent checks on inventory* had a weak Cronbach's Alpha and KMO test score, it was decided to keep these two items separately (see Table 2). Hence for this study, four factors and two items were identified for all variables. For all four factors, relevant average-scores were calculated for their respective items which, in turn, were used for linear regression analyses.

Model specification

Stemming from the factor analysis conducted on collected data, a linear regression model was developed in order to analyse the relationship which exist between the internal control activities evident in sampled SMMEs and their perceived financial sustainability. The following model¹¹ was used:

$$FINSUS = \alpha + \beta_1 INDEPSTAFF + \beta_2 QUALCINV + \beta_3 INVCT + \beta_4 INDEPCASH + \beta_5 RECON + \epsilon.$$

All variables that were applied in the model above, including their measurements are described in Table 2.

Table 2: Description and measurement of variables

Variable	Description	Measurement
<i>Dependent</i>		
FINSUS	Financial sustainability (factor)	It measures the perceived financial performance and financial position of SMMEs. It assumes a value between 1 and 5, where 1 indicates "strongly disagree" and 5 indicates "strongly agree".
<i>Independent</i>		
INDEPSTAFF	Independent checks are performed on staff (factor)	It shows whether employees were independently checked by management. It assumes a value between 1 and 5, where 1 indicates "strongly disagree" and 5 indicates "strongly agree".
QUALCINV	Quality checks are performed on inventory received (item)	It shows whether quality checks were performed by management on inventory received. It assumes a value between 1 and 5, where 1 indicates "strongly disagree" and 5 indicates "strongly agree".
INVCT	Inventory is periodically counted (item)	It shows whether inventory was counted periodically by management. It assumes a value between 1 and 5, where 1 indicates "strongly disagree" and 5 indicates "strongly agree".

¹¹ The symbols "α" and "ε" represent the constant(s) and error(s) in each model.

Variable	Description	Measurement
INDEPCASH	Independent checks are performed on cash (factor)	It shows whether independent checks were performed by management on cash. It assumes a value between 1 and 5, where 1 indicates “strongly disagree” and 5 indicates “strongly agree”.
RECON	Periodic reconciliations (factor)	It shows whether relevant reconciliations (bank, accounts receivable and/or accounts payable) were performed by management on a periodic basis. It assumes a value between 1 and 5, where 1 indicates “strongly disagree” and 5 indicates “strongly agree”.

RESULTS AND DISCUSSION

In order to determine statistically significant relationships between the dependent variable and independent variables, relevant linear analyses were performed. A summary of the results are shown in Table 4, followed by a brief interpretation thereof.

Table 4: Summary of linear regression analyses

		FINSUS
Independent variables	R ²	0.050
	F	1.188
	Sig.	0.319
INDEPSTAFF	Std β	0.060
	Sig.	0.544
QUALCGO	Std β	-0.092
	Sig.	0.356
INVCNT	Std β	0.033
	Sig.	0.739
INDEPCASH	Std β	0.199
	Sig.	0.319
RECON	Std β	0.106
	Sig.	0.357

The R² was calculated at 5% which serves as an indication of a very weak explanation of the variances among relevant variables. This translates to the fact that there existed very few, if any, statistically significant relationships where independent variables could predict the dependent variable. Though this phenomena is concerning, it does however shed light on the true value of independent checks on the financial sustainability of sampled South African SMMEs.

When placing emphasis on the results in Table 4, of the five tested relationships, one tested negative while the remaining four tested positive. Albeit the latter, and as previously stated, all five tested relationships were not statistically significant at the 1% level, 5% level or the 10% level (as supported by a very weak R²). In layperson’s terms, although four out of the five relationships were positive, none of them were statistically significant – meaning that no

statistically significant predictions could be made in relation to the latter phenomena. These results allow for the rejection of H_1 .

Notwithstanding the above, clear tangent planes emerge that the independent checks may have been implemented by sampled South African SMMEs were mostly implemented as “nice to haves” as opposed to “must haves”. This observation is supported by Bruwer (2016) where it was found that South African SMMEs make use of internal controls activities not necessarily because it help provides reasonable assurance surrounding the attainment of business objectives in the foreseeable future, but rather because it is regarded as popular.

CONCLUSION

Previous studies show that South African SMMEs face an array of risks which are predominantly attributable to the economic environment in which they operate. These risks can be mitigated through the implementation of sound system of internal control however popular literature suggests that these business entities make use of customised internal control systems which are not adequate and/or effective in providing reasonable assurance surrounding the attainment of business objectives in the foreseeable future. Although a system of internal control comprises five elements, this study placed focus on understanding relationship which exists between independent checks (as a component of internal control activities) and the financial sustainability of South African SMMEs.

Stemming from the research conducted the results show that although there were mostly positive associations between the independent checks implemented by South African SMMEs, none of the tested relationships were statistically significant in nature. The latter means that the independent checks in South African SMMEs do not add significant value to the attainment of these business entities’ financial sustainability, despite the fact that these control initiatives are more robust, more adaptable and more cost effective to deploy than other internal control activity.

The above is quite concerning when taking into account that these business entities predominantly make use of independent checks in order to mitigate risks to achieve financial sustainability however these independent checks may probably only be deployed due to their popularity.

AVENUES FOR FURTHER RESEARCH

Using the results of the study as basis, the following avenues for further research are suggested, among other:

- What is the relationship between *adequate document usage and design* and the financial sustainability of South African SMMEs?
- What is the relationship between *proper authorisation activities* and the financial sustainability of South African SMMEs?
- What is the relationship between *safeguarding of assets* and the financial sustainability of South African SMMEs?
- What is the relationship between *segregation of duties* and the financial sustainability of South African SMMEs?

- What is the relationship between the *control environment* and the financial sustainability of South African SMMEs?
- What is the relationship between *risk management* and the financial sustainability of South African SMMEs?
- What is the relationship between *information and communication* and the financial sustainability of South African SMMEs?
- What is the relationship between *monitoring* and the financial sustainability of South African SMMEs?

The studies above should help clarify whether the (customised) internal control systems deployed in South African SMMEs do in fact add empirical value in their attainment of financial sustainability.

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