

Financial Performance Measures of Small Medium Enterprises in the 21st Century

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ABSTRACT Financial performance measures (FPMs) are the most commonly used measures of productivity and efficiency in companies, with less consideration for non-financial performance measures. FPMs are regarded as traditional measures that lead to sustainability of a firm, hence they need to be properly managed and controlled. This paper reports the extent to which SMEs recognize the significance of FPMs in their supply chain management (SCM). The study followed a positivist paradigm, with the use of questionnaires to collect data from owners and managers of SMEs in the manufacturing sector in Cape Town. The major findings indicate that although financial performance measures are highly regarded by these entities, they lack the skills to properly determine their financial measures, and do not know with certainty, which financial performance measures are of relevance to their businesses. Extensive training is one of the recommendations.

INTRODUCTION

Financial performance measures (FPMs) play a paramount role in the productivity and efficiency of small and medium enterprises (SMEs). Notwithstanding, financial measures alone cannot sustain the business without the aid of non-financial performance measures (Gunday et al. 2011: 665). However, the focus of this paper is on financial performance measures. A retrospect of how SMEs have evolved in managing their financial performance since the invention of double entry shows that FPMs have been applied to different kinds of industries and utilized for strategic intents. Performance measures are ways in which the efficiency and effectiveness of actions may be quantified to provide meaning and indication of failure or growth (Neely et al. 2002: 2). They originated with the invention of double entry bookkeeping, founded by Luca Pacioli in 1494 (Morgan 2004: 522; Eccles 1991:131), but the application of 'modern' performance measures were only evident from 1850. Their early use in rail operations (Morgan 2004: 522) was extended in 1870 to steel and chemical production processes, since large-scale problems within these organizations created a high degree of uncertainty and risk (Morgan 2004: 522). Such industries required reliable cost data to determine prices when assessing the results of operations, and to evaluate capital-intensive technological innovations (Morgan 2004: 529).

Initially, performance measurement was used to identify profit and control cash flow in an organization, prior to the early 1900s, when William Durant, founder of *General Motors*, realized that profit was not the ultimate result of an accounting exercise but rather the outcome of a cost stream pool throughout the supply chain (Morgan 2004: 529).

In 1951, the Chief Executive Officer (CEO) of *General Electric*, Ralph Cordiner, organized a task team to identify key corporate measures, which consisted of financial and non-financial measures (Neely 1999: 207, citing Meyer and Gupta 1994; Eccles 1991: 132). These developments inspired many accounting professionals and academics, such as Johnson and Kaplan (1987: 3) to argue that traditional financial performance measures were losing relevance to modern organizations and needed to produce an effective evaluation of products that would meet customer demands and contribute to an efficient production process and distribution within an organization.

During the 1980s many companies realized that their financial records were declining due to unnoticed deterioration in quality and customer satisfaction. As a result many managers began to focus on quality (Eccles 1991: 134) as a strategic weapon and committed their resources to develop measures such as defects rates, response time, and delivery commitment to control, monitor and evaluate performance within

their organizations. During the 1990s customer satisfaction became the focus (Eccles 1991: 134). Using basic methods to manage large corporations dates back to 1910 and *Du Pont Cousins* (Chandler 1977: 417), however, the dilemma remained that organizations did not have effective performance measurement systems in place. As Neely (1999: 205-207) indicates, there were many critics of traditional financial measures in the mid-1980s, but even in the late 1980s and early 1990s the performance measurement system of many companies was irrelevant to their business targeted goals. These challenges led some researchers to suggest measurement frameworks that might be suitable for them (Lynch and Cross 1991: 5; Kaplan and Norton 1992: 71), and during the mid-1990s businesses were concerned as to how balanced performance measurement systems could be developed and deployed (Neely 2005: 1266). However, barriers to implementation were also reported (Bourne et al. 2000: 759). During the early 2000s Balanced Scorecard (BSC) became a popular performance framework that provided empirical findings of mixed results (Neely et al. 2004: 3; Ittner and Lacker 2003: 2). Table 1 summarizes the history of performance measures.

Despite the evolution of performance measures over the years, it is not clear how SMEs have succeeded in their financial performance measures in the 21st century. SMEs are commonly known for their lack of education, skills and resources to successfully manage their businesses (Rahman, et al. 2010: 3997; Burn 2011: 161; Tumaini and Zheng, 2011: 2613; Betchoo 2015: 16; Rakicevic et al. 2016: 31). This reality

may also hinder the implementation of FPMs in their businesses. Hence, the objective of the study is to determine the extent to which SMEs in the manufacturing sector perceive and recognize the significance of financial performance measures in their SCM. The premise of this study lies on the following research questions:

1. How do SMEs in the manufacturing sector perceive the importance of FPMs?

2. To what extent do these SMEs recognize the significance of financial performance measures in their SCM?

The remaining sections of the paper consists of literature review with subsections that encompass theoretical background, importance of small manufacturing enterprise sector, performance measurement of supply chain, financial measures, implementation and use of performance measures, methodology, results and discussion, and conclusions.

Literature Review

Theoretical Framework

This paper derives from two seminal frameworks namely, Transaction Cost Analysis (TCA) and Resource-based View (RBV). The TCA was originally developed by Coase in 1937 (Coase 1998: 72; Grover and Malhotra 2003: 457). TCA stems from the 'make or buy decision' concept of a firm (Halldorsson et al. 20007: 285), which refers to the decision that a firm may conclude on whether it has to manufacture the product or buy a finished product. The decision on whether to produce or to outsource is to ensure elimi-

Table 1: Evolution of performance measurement

1494	"Performance measures" originates from invention of double entry by Luca Pacioli (Eccles 1991:131).
1850	Application of modern performance measures to identify profit and control cash flow (Morgan 2004:522).
1900	William Durrant realised performance from outcomes measures of cost stream pool throughout the SC (Eccles1991:131).
1951	CEO of <i>General Electric</i> , Ralph Cardinar organised a task team to identify key corporate measures, consisting of financial and non-financial measures (Meyer and Gupta, 1994, cited in Neely 1999:207).
1980s	Companies realised the decline in financial records due to unnoticed deterioration in quality and customer satisfaction and then began to focus on quality (Eccles 1991:134).
1990s	Customer satisfaction became the primary focus for many businesses (Eccles 1991:134). During the mid-1990s businesses were concerned about how performance measures could be developed and deployed (Neely 2005:1266)
2000s	BSC became the popular performance framework (Neely et al. 2004:2; Ittner and Lacker 2003:2).

Sources: Reflected in the Table

nation of costs while attaining the desired quality products needed. TCA, since its inception, has as its focus in minimizing the total of products incurred by a firm while ensuring the quality aspired to in meeting the demands of the consumer.

Performance measures are used across the value chain, ranging from suppliers, to ensure smooth material flow at economical cost, reliability and flexibility, to on-time delivery and quality of products to ensure customer satisfaction and retention. When all these measures are controlled and properly evaluated and monitored, unnecessary costs may be reduced, thus helping achieve the quality of goods delivered to the customers. This may also lead to higher returns and help SMEs maintain a competitive advantage, thereby increasing their performance. While researchers advise that TCA be used for 'make or buy decisions' (Halldorsson et al. 2007: 285; Williamson 2008: 5), Ketchen et al. (2007: 575) in turn posit that it should focus not only on transaction cost as a basis for these but also on all total cost engaged in SCM, a view supported in this study. All the total costs engaged in the SCM of SMEs are taken into account to ensure maximum efficiency in the value chain. The costs, ranging from point of raw material, suppliers, production and distribution until the goods reach the final stage of the customers, are deemed necessary to determine the total cost engaged in the entire value chain, thus help measure financial performance of a firm effectively.

RBV looks at how best a firm's assets and capabilities may be utilized for competitive advantage (Barney 1991: 99). SMEs are faced with inadequate skills, lack of resources, human capital and financial constraints (Nichter and Goldmark 2009: 1454), however, they may utilize SCM linkage by maintaining close ties among customer-supplier relationships to assist in achieving smooth flow of material throughout the value chain, and so meet the customers' demands and help improve performance of SMEs in the manufacturing sector (Rungtusanatham et al. 2003: 1084; Halldorsson et al. 2007: 288). For this study, the researchers use RBV from the point of view of SMEs' capabilities, such as building relationships between customers and suppliers. Strong relationships may allow them the opportunity for bargaining powers, low costs and engagement with suppliers in the design of products. Apart from good relationships between

customers and suppliers, cooperative partnership among SMEs may be regarded as a vital tool to enhance the competitive advantage in manufacturing businesses, which may subsequently improve financial performance measures that lead to sustainability of SMEs.

The Significance of the Small Manufacturing Enterprise Sector

The significance of manufacturing businesses cannot be overemphasized as they contribute towards the country's economic growth through job creation, employment and alleviation of poverty (Rogerson 2004: 766). According to the business environment specialist, SBP (2009: 3) an estimate of seventy-three percent of people work for firms with fewer than 50 employees and forty-five percent of all employees work in firms with fewer than 10 people in South Africa. However, one of the major factors impeding the success of SMEs, especially in the manufacturing environment, is lack of access to finance (Beck and Demirguc-Kunt 2006: 2932). This prohibits these firms from expanding their businesses, which may enable greater employment opportunities, thus alleviating poverty, and as Beck and Demirguc-Kunt (2006: 2932, 2935) assert, efforts targeted at the SME sector are usually focused on the basis that SMEs are the 'engine for growth', although market imperfections and institutional weaknesses prohibit them from growth. SMEs are often faced with a segregated level of decision-making, which makes it difficult for these entities to overcome their challenges as a collective. The decision-making level may be effective when every member of the organizational SCM in the manufacturing business is involved, thus enabling effective decisions that aim for a higher satisfaction level (Bhagwat and Sharma 2007: 44).

One may consider manufacturing firms to be the heart of innovation, however SMEs are lagging behind in innovativeness, regarded as key for these entities to sustain themselves in a competitive environment. Innovations may come in various forms, such as capability to produce and introduce new products that suit the market and attain the customer satisfaction level (Margues and Ferreira 2009: 55). Therefore, much attention is required to ensure that the manufacturing sector is well developed and performance measurement systems are in place. Improving

the performance of the supply chain in manufacturing is inevitable when one considers the impact of this sector in the national economy.

Performance Measurement of Supply Chain

According to Neely et al. (2002: 2) and Neely et al. (2005:1229), performance measures play an integral part in the management of control systems. Furthermore, this can be described as a regular measurement of results and efficiency of services and can also be regarded as a parameter used to quantify the efficiency and effectiveness of past actions taken or implemented (Tangen 2004: 727). Neely et al. (2002: 32-71) state that for performance measures to be effective, four fundamental processes should be deployed. These are as follows.

1. *Design of the measures:* The first step requires a cautious mind, encourages one to comprehend what should be measured, and explains how.
2. *Plan and build:* A vital stage in the process and one that calls for communication amongst parties involved in the measurement system, which should access data, be able to explain how to use the measurement data, and how to improve performance (Neely et al. 2002: 32-71). This could also require some development of the applicable technological measurement system.
3. *Implement and operate:* The third process, this involves execution of the plan and employing developed systems in the planning and building stage (Neely et al. 2002: 32-71). It could also mean working with identified and chosen measures in conjunction with well-defined measurement systems.
4. *Refresh:* The fourth stage in the process is when managers redefine measures to ascertain their relevancy and usefulness. It is at this critical stage that obsolete measures can be discarded and new ones implemented, if they are found to be fit for purpose, and it addresses the performance measurement that requires development.

Handfield et al. (2009: 709) posit that performance measures should categorically define a company's strategic goals, improve communication throughout the value chain, and should not drift from the strategic objectives in order to attain the desired results. Researchers aver that it is important to monitor supply chain perfor-

mance persistently by utilizing metrics from the following five categories, namely, cost, time, quality, flexibility and innovativeness, and take action upon performance measurement results in order to stay competitive (Olugu et al. 2010: 875; Shepherd and Gunter 2006: 244-245). It is vital for SMEs to maximize on quality and time during the implementation of performance measurement process, to ensure minimal waste and attainable customer satisfaction at its highest level (Hudson et al. 2001:1105). This could also entail SMEs responding abruptly to changing markets.

Financial Measures

Financial measures are commonly known as short-term measures and purely based on the past. Their significance is in measuring performance from four key areas, including, efficiency, liquidity, profitability and capital structure (Lodewyckx et al. 2007: 456-457). Each financial measure stands for a unique purpose. While profitability informs users of financial statements about the performance of an organization, whether making profits or losses, efficiency informs users on how business resources are utilized and managed. Capital structure advises on whether owners' capital or borrowed capital is being utilized, and liquidity measures how easily assets in the business can be converted into cash within the normal operating cycle. The financial measurements expounded derive from financial statements. There are four components of financial statements which are discussed as follows:

Statement of Profit and Loss and Other Comprehensive Income

The fundamental role of the statement of profit and loss and other comprehensive income is to exhibit the business performance during an accounting cycle. This statement includes income earned and expenditures incurred during the financial year (Sowden- Service 2011: 44).

Statement of Financial Position

Statement of financial position is typically a report of business assets, liabilities well as its equity (net worth) (Sowden-Service 2011: 40). The role of this statement is to categorically present current and non-current assets and cur-

rent and non-current liabilities in the statement of financial position, unless a presentation based on liquidity provides an illustration of information that is more reliable and relevant (Oberholster et al. 2011: 40).

Cash Flow Statement

Cash flow statement encompasses cash flow from financing, investing, and operating activities. Its main purpose is to display useful information on historical changes in cash and cash equivalents (Oberholster et al. 2011: 489). The cash flow from operating activities inform the users about the amount of cash from sales of the company's goods and services, less the amount needed to make or buy and sell those goods and services. Apart from this, cash flow from investing activities reflects the amount of money the company spent on capital expenditure, such as new machinery, equipment, and vehicles. This may include acquisition of other businesses. Lastly, cash flow from financing reflects inflow of cash from outside financing activities, such as bank loans. Payments on bank loans would however indicate the uses of cash flow (Sowden- Service 2011: 52). Performance indicators from these measures are elaborated upon below:

Return on Assets (ROA)

In an SC, assets utilized encompass accounts receivable (debtors), property, plant and equipment and inventories. Owing to increased inflation and deterioration in liquidity it is crucial for firms to elevate the productivity level of their capital and ascertain the effectiveness and efficiency of assets. It is therefore important to determine how costs associated with each asset in conjunction with its turnover impact the 'total cash flow time', which can be measured as the average number of days required to convert cash invested in assets into the cash collected from a customer (Steward 1995, cited in Bhagwat and Sharma 2007: 50; Gunasekaran et al. 2004: 338-339).

Return on Assets (ROA) is defined as:

$$ROA = \frac{\text{Profit before interest expense and taxation}}{\text{Total Assets}}$$

Return on Investment (ROI) is defined as:

$$ROI/ROE = \frac{\text{Profit after taxation and preference dividend}}{\text{Equity}}$$

According to Gunasekaran et al. (2004: 339) and Bhagwat and Sharma (2007: 50), when the

total cash flow time is determined it can be added to the profit, to provide an insight into the rate of return on equity (ROE). This helps top management establish the performance that can be obtained from total capital invested in the business. ROI plays a significant role not only on financial but also on non-financial measures in the supply chain. While its positive impact is acknowledged and recognized on financial growth, this would not be possible without customer satisfaction resulting from quick response, which feeds into customer measures and internal control measures as a result of sales made (Bhagwat and Sharma 2007: 50).

In the manufacturing of products, the cost of goods includes purchases from suppliers, carriage inwards or transport duties where applicable, work in progress and finished goods. This signal to the TCA of a firm, which embraces the flow of costs and poses a need for managers in the SCM to consider all costs engaged in the value chain to make an informed decision toward the growth of SMEs.

The cost of goods enables managers to mark them up in order to arrive at the selling price. All the variable costs incurred are deducted from the sales to establish the contribution margin. When this is realized it indicates a positive light in terms of viability and the fixed costs are deducted to achieve the 'net margin'. The sales feed the financial measurement and impact the ROI as well as customer measures, and internal efficiency measures. The revenues realized inform whether there is a good market for a particular product. Increased revenues maybe a result of happy customers. Innovation and growth may also lead to the company's competitive advantage and a positive impact on the ROI. This is in line with RBV of the firm, where a firm's capabilities and resources are best utilized to enhance the performance and growth of business.

Inventory management is viewed as one of the most important influencers of competitiveness while also seen as a key operational performance measure for SMEs particularly in inventory-intensive industries (Ngubane et al. 2015). Availability of material enables smooth process in the production process, and the cost of inventory is determined and calculated with accuracy to achieve the correctness of cost of goods manufactured. Inventory costs are categorized according to the following statement:

Total Inventory Cost

SC inventories include from raw materials, sub-assemblies and assemblies to finished products as well as stock in transit (Goldsbuy et al. 2006: 72; Bhagwat and Sharma 2007: 50).

Cash Conversion Cycle

Hausman (2002: 11) writes that conversion cycle time measures how long it takes for an entity to pay trade payables (creditors), how long it takes for trade receivables (customers) to pay their debts, and how long the inventory stays before it is converted into cash and can also be measured in days and months. For ease of use, the above mentioned key terms are defined as follows in this study.

Trade payables refer to suppliers of raw material and services to SMEs while *trade receivables* are customers of the SMEs in the manufacturing businesses. *Inventory* refers to the raw material, work in progress, finished goods that are available and stock in transit. The inventory costs associated with production and distribution reflects on TCA of a firm. TCA for the purpose of the study is based on total costs incurred by the SCM.

The cash to cash (C2C) is an important metric measure because it links across incoming material activities through suppliers, and connects with the outgoing sales activities to the customers through manufacturing operations, logistics and distribution (Farris 11 and Hutchison 2002: 292; Azevedo et al. 2013: 215) The C2C cycle time may be improved by delaying payments to creditors while shortening the debts collection period (Farris 11 and Hutchison 2002: 295). This may also be improved by reducing the production cycle so as to shorten inventory days of supply:

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Current assets are those that can be easily converted into cash in a period not exceeding the accounting cycle. This includes items such as inventory, cash at bank and other receivables such as expenses paid in advance and income accrued to SMEs. Income accrued is a result of monetary value owing from services provided during the financial year. Current liabilities in turn refer to debts owed to suppliers of material and services in SMEs, which can be settled dur-

ing the reporting period. Current liabilities include trade payables, accrued expenses and income received in advance, that is money received prior to rendering of services to the clients. The current ratio allows for liquidity to settle the short-term debts as they become due (Lodewyckx et al. 2007: 468). This is calculated in the form of a ratio, whereby the higher ratio indicates a low risk while a smaller ratio exhibits a higher risk regarding the unpaid short-term liabilities:

$$\text{Quick ratio} = \frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}}$$

Quick ratio eliminates inventory from the calculation and only deals with current assets that are easily converted into cash (Flynn et al. 2005: 29). This arises because inventory is not easily converted into cash. This ratio intends to measure cash available to pay short-term liabilities of SMEs in the manufacturing businesses as they become due (Lodewyckx et al. 2007: 468).

SMEs may also realize growth and development if they take into consideration performance measures and formally implement them in their operation. This would assist them in identifying areas of weakness and so take proactive measures towards the development and improvement of systems and methods in place. Chen (2011: 264) presents suggestions for establishing effective performance management in SMEs as follows:

- ♦ *Confirm the enterprise's strategic objective:* The enterprise strategic objective of SMEs must be clear and able to filter the objectives down to the departmental and position levels (Chen 2011: 265).
- ♦ *Set up scientific performance appraisal system:* In order for SMEs to determine performance indicators successfully, employees must be engaged and their views taken into account, and they should be allowed to participate in the process (Chen 2011: 265). Again, performance appraisal should be designed to leverage workforce productivity and take decisions on promotion and increase in salaries, thus serving the enterprise's development.
- ♦ *Choose reasonable and effective incentives:* SMEs needs to expose employees' problems and help them improve in their jobs in the future.
- ♦ *Strengthen training for employees:* SMEs should build a thorough and complete training system for their managers and employ-

ees, invite and encourage managers and employees to receive performance management training in order to equip themselves with knowledge and knowhow, avoid subjective judgments, and enable effectiveness of the performance appraisal system (Chen 2011: 265).

Some of SMEs behavioral patterns that impede them from asserting their contribution towards effectiveness and efficiency in SCM include high *inventory levels*. SMEs, particularly manufacturing businesses, appear to be victims of high inventory levels. They keep large quantities of stock to cater for uncertainties in customer demands, however, this practice leads to higher inventory holding costs, including on storage, insurance, spoilage, obsolescence and capital cost of inventory (Hendricks and Singhal 2005: 17). Again, there is a risk of loss of inventory value when these entities keep excess stock and may lead to additional expenditure, such as rework and storage costs (Hamisi 2011: 1269). On the contrary, Lwika et al. (2013: 77) points that too little inventory hampers the production process, which often leads to poor service delivery. This practice therefore points to TCA, which states that all cost incurred in the business SCM are important and firms need to ensure minimal spending while they ascertain that quality is maintained to meet the demands of the customers.

Supply Chain Activities

It is important that SMEs indicate to all parties involved in the supply chain the necessity to comprehend the extent of activities engaged in if they are to maximize capability and attainment of goals at the expected times. Supply chain encompasses all activities from supplier, manufacturer, processes involved in the production of goods and services, retailers and eventually consumers. A supply chain network, according to Klerverlaan (2008: 10), consists of three types of flows at operational level namely, *material flows*, that is, the physical flow of inventory from suppliers until the material reaches the final stage-the consumers, this encompasses the returns of unsatisfactory products, servicing, and recycling. *Information flows*, which represent placements of orders, tracking the physical flow until the goods arrive at their destination. *Financial flows* that include credit

terms, payment schedules, consignment and title ownership arrangements.

Implementation and Use of Performance Measurement

It may be essential for managers and directors of SMEs to realize the prominence of performance measures in an SCM system (Wouters 2009: 65; Gunasekaran and Kobu 2007: 2820). It is critical to comprehend measures that are implemented and to utilize performance measures effectively to enable smooth operation, review and redesign of new processes and systems should there be a need (Akyuz and Erkan 2010: 5151). The implementation of performance measures should be regarded as a decisive step towards a successful manufacturing business that requires a maximum functioning capacity of automated systems that enables frequent reporting devices (Bourne et al. 2000: 761). In addition, a manual performance measurement system may be used to some degree to examine individual performance. However, individual performance may be automated for easy referral and updates on the development. These measures may also be evaluated at strategic, tactical and operational levels (Gunasekaran et al. 2001: 82; Gunasekaran et al. 2004: 336).

METHODOLOGY

This is a quantitative study that followed a positivistic research paradigm. It focuses primarily on capturing the truth, which already exists (Coetsee 2011: 84; Fox and Bayat 2007: 78). A structured questionnaire was used to collect data from SME manufactures in Cape Town. The data was analyzed by means of descriptive statistics and used to explain and predict the phenomenon being studied (Fox and Bayat 2007: 78; Thomas 2003: 2). In this paper purposive sampling was adopted to identify relevant participants who were in the appropriate position to provide information necessary to answer the research questions of the study (Pascoe 2014: 142-143). The study focused on manufacturing SMEs in Cape Town where, out of 50 questionnaires distributed only 30 questionnaires were completed and deemed suitable for analysis.

Questionnaire

The content of the questionnaire was developed and constructed according to two differ-

ent categories. Section A sought to answer the research sub-investigative question 1, which primarily focused on the implementation level of financial performance measures in SMEs' SCM. The participants were required to indicate whether they agreed to the implementation, ranging from *strongly disagree* to *strongly agree*. The categories encompass the financial performance measures in a SCM. Section B consisted of 12 questions on performance measures, some categorical, others requiring *yes* or *no* answers, while others were 4-point Likert scale type of questions. The section was designed to establish the frequency of financial performance evaluations by small businesses in SCM, the financial statements prepared by this entity as well as the involvement of managers and all members of it towards the achievement of organizational goals. Cronbach's reliability coefficient was also used as a test of construct validity whereby the main purpose was to classify items that belong together with the view that they were answered similarly, and therefore measure the underlying construct (Burns and Burns 2008: 430; Pietersen and Maree 2007: 219).

Data Analysis

Upon completion of data collection, the raw data was captured and coded using Microsoft Excel and eventually exported to the statistical software for social sciences (SPSS) in order to

generate descriptive statistics. Data analysis was done to identify different variables in the questionnaire measuring financial performance measures in SMEs' SCM. Descriptive statistics are presented using frequency distribution tables (Somekh and Lewin 2005: 221).

RESULTS AND DISCUSSION

The objective of the study was to establish *how SMEs perceive the significance of financial performance measures in supply chain management*.

The research questions that led to this objective read as follows:

Which of the following financial measures are implemented in my SCM?

Table 2 illustrates the level at which gross margin is measured as a financial performance measure.

The results indicate that a total of 95.5 percent respondents (38.5% = *agree* and 57.7% = *strongly agree*) measure gross margin while 3.8 percent do not. From an accounting perspective it is difficult to determine the profit or loss made on the sales of goods if the business does not use gross margin. Table 3 explains the level at which net margin is measured by SMEs manufacturers.

Net margin is used or measured by 88.4 percent (26.9% = *agree* and 61.5% = *strongly agree*) of the respondents, while 11.5 percent disagreed

Table 2: Gross margin

		Frequency	Percent	Valid percent	Cumulative %
Valid	Strongly disagree	1	3.3	3.8	3.8
	Agree	10	33.3	38.5	42.3
	Strongly agree	15	50.0	57.7	100.0
	Total	26	86.7	100.0	
Missing	System	4	13.3		
	Total	30	100.0		

Source: Fieldwork

Table 3: Net margin

		Frequency	Percent	Valid percent	Cumulative %
Valid	Disagree	3	10.0	11.5	11.5
	Agree	7	23.3	26.9	38.5
	Strongly Agree	16	53.3	61.5	100.0
	Total	26	86.7	100.0	
Missing	System	4	13.3		
	Total	30	100.0		

Source: Fieldwork

to the implementation of this measure. Likewise, this measure informed the business of its financial performance, that is, whether it realized profits or losses after all expenses were taken into account.

The majority of the respondents measured the gross margin, however net margin received a lower percentage, which is of concern with regards to how these businesses determine the profit or loss made in any given financial period (Sowden-service 2011: 44). Gross margin and net margin are traditional financial measures that signal the sustainability of a firm and so should be considered as important (Kaplan and Norton 1996: 57-63; Gumbus and Lussier 2006: 409; Bhagwat and Sharma 2007: 55). Table 4 determines the rate at which SMEs measured the debtors' collection period in order to monitor their debtors.

Respondents (3.7%) did not measure the debtors' collection period while a total of 96.3 percent (40.7%= *agreed* and 55.6%= *strongly agreed*) of the respondents implemented this measure in their businesses. This could be due to lack of understanding and the knowledge of the significance of monitoring the cash flow in a business. The exception of ten percent non-response was also experienced in this measure. Debtors' collection period is the highest measured metric under financial measures, at 96.3 percent. This is in line with an emphasis made by Farris 11 and Hutchison (2002: 294-295), that the C2C cycle may be enhanced by quick collection from debtors while keeping their payment period prolonged. Although some of the respondents

did not pay much attention to this it may be necessary to consider it in order to keep track of how long it takes them to settle their debts when compared to their customer collection period.

As seen in Table 5, of the 92.5 percent (48.1%= *agree* and 44.4%= *strongly agree*) respondents who measure the creditors' collection period, 7.4 percent did not utilize the measurement. A similarity of ten percent participants who did not respond to this question was the one above in the debtors' collection period.

This inventory on hand established the level at which SMEs controlled their inventory by tracing the number of days it took them to convert their inventory to cash.

It is important to monitor the day's inventory on hand because this determines the cash flow and how long it takes for assets to be converted into cash (Table 6). A total of twenty-three percent participants did not measure their day's inventory on hand, which went together with a non-response rate of 13.3 percent. This is alarming as the day's inventory is at the core of their businesses and as stated by Ngubane et al. (2015), inventory plays a vital role in manufacturing businesses and may be used for competitive advantage. Therefore, failure to control inventory on one hand may lead to loss of inventory value, in cases when excess stock is kept, and additional costs such as rework and storage costs (Hamisi 2011: 1269), while on the other hand, too little inventory may hamper pro-

Table 4: Debtors collection period

		<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative %</i>
<i>Valid</i>	Disagree	1	3.3	3.7	3.7
	Agree	11	36.7	40.7	44.4
	Strongly agree	15	50.0	55.6	100.0
	Total	27	90.0	100.0	
<i>Missing</i>	System	3	10.0		
	Total	30	100.0		

Source: Fieldwork

Table 5: Creditors payment period

		<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative %</i>
<i>Valid</i>	Disagree	2	6.7	7.4	7.4
	Agree	13	43.3	48.1	55.6
	Strongly agree	12	40.0	44.4	100.0
	Total	27	90.0	100.0	
<i>Missing</i>	System	3	10.0		
	Total	30	100.0		

Source: Fieldwork

Table 6: Days inventory on hand

		<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative %</i>
<i>Valid</i>	Strongly disagree	1	3.3	3.8	3.8
	Disagree	5	16.7	19.2	23.1
	Agree	11	36.7	42.3	65.4
	Strongly agree	9	30.0	34.6	100.0
	Total	26	86.7	100.0	
<i>Missing</i>	System	4	13.3		
	Total	30	100.0		

Source: Fieldwork

duction and increases the likelihood of poor customer services due to delayed deliveries (Lwili et al. 2013: 77).

Table 7 highlights the implementation level of inventory turnover to get an overview of whether SME manufacturers take into account the rate at which their assets convert into cash.

Almost twenty percent (7.7% = *strongly disagree* and 11.5% = *disagree*) of the respondents did not measure inventory turnover in their businesses, while 80.8 percent (50% = *agree* and 30.8% = *strongly agree*) of the total respondents measured inventory turnover and 13.3 percent missing values were encountered as a result of non-response to the question. The finding from these results is that, contrary to the literature, SMEs focus more on financial measures (Chia et al. 2009: 617; Thakkar et al. 2009: 712). The researchers are of the view that they do not know with certainty what is crucial for their core businesses and financial measures are not properly measured. A total of forty percent did not measure their fixed assets turnover, which implies lack of understanding of the importance of how much the business can make, or is making, from the fixed assets invested in it.

Objective two of the study was to *determine the extent to which SMEs recognize the significance of financial performance measures in supply chain management*.

This section provides an understanding and information on how frequently SMEs evaluate their financial performance measures, their use of financial statements, and which measures are regarded as critical success factors in their businesses. The respondents were asked the following questions:

- ♦ *How often do you evaluate financial performance measures in your SCM?*
- ♦ *Which financial statements do you use?*
- ♦ *Do you make use of financial ratios?*
- ♦ *Which financial ratios do you make use of to interpret your financial statements?*
- ♦ *Which financial performance indicators are regarded as the critical success factors in SCM?*

The next three questions were in form of a 4-point Likert scale ranging from 1 = *strongly disagree* to 4 = *strongly agree*.

- ♦ *Debts are collected on time from customers.*
- ♦ *Inventory takes longer to be converted into cash.*
- ♦ *All assets of the business are included in the balance sheet.*

Evaluation of Financial Performance Measures

From Table 8, it is perceived that some SMEs recognize the significance of financial measures.

Table 7: Inventory turnover

		<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative %</i>
<i>Valid</i>	Strongly disagree	2	6.7	7.7	7.7
	Disagree	3	10.0	11.5	19.2
	Agree	13	43.3	50.0	69.2
	Strongly agree	8	26.7	30.8	100.0
	Total	26	86.7	100.0	
<i>Missing</i>	System	4	13.3		
	Total	30	100.0		

Source: Fieldwork

Table 8: How often do you evaluate performance on financial measures in your supply chain implemented?

		<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative %</i>
<i>Valid</i>	Weekly	4	13.3	14.3	14.3
	Monthly	18	60.0	64.3	78.6
	Quarterly	2	6.7	7.1	85.7
	Six Monthly	2	6.7	7.1	92.9
	Yearly	2	6.7	7.1	100.0
	Total	28	93.3	100.0	
<i>Missing</i>	System	2	6.7		
	Total	30	100.0		

Source: Fieldwork

For those who measured financial measures, the majority measured on a monthly basis at 64.3 percent, 14.3 percent on a weekly basis, while the remaining 21.3 percent shared equally amongst quarterly, six monthly and yearly. Some SMEs recognize the significance of financial measures, as indicated in the results presented (Chia et al. 2009: 617; Thakkar et al. 2009: 712). However, measuring financial measures on a weekly and monthly basis does not provide a clear indication of the overall performance of these businesses over the accounting period.

In Table 9, responses from the respondents indicate that SMEs in the manufacturing indus-

tries do not know how to account for their books properly. Some respondents did not prepare a statement of financial performance. The major concern was how their profit or loss was calculated. Again, some did not prepare a statement of financial position, which was surprising since all assets and liabilities should be reflected in the balance sheet to provide an overview of the business status at a point in time as well as the entity's net worth. 33.3 percent of the respondents' prepared statement of changes in equity. Seventy percent of the total respondents prepared cash flow statements for their businesses. Lack of financial management education may

Table 9: Which financial statements do you prepare?

<i>Statement of Financial Performance</i>					
		<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative %</i>
<i>Valid</i>	Yes	24	80.0	80.0	80.0
	No	6	20.0	20.0	100.0
	Total	30	100.0	100.0	
<i>Statement of Financial Position</i>					
		<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative %</i>
<i>Valid</i>	Yes	17	56.7	56.7	56.7
	No	13	43.3	43.3	100.0
	Total	30	100.0	100.0	
<i>Statement of Changes in Equity</i>					
		<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative %</i>
<i>Valid</i>	Yes	10	33.3	33.3	33.3
	No	20	66.7	66.7	100.0
	Total	30	100.0	100.0	
<i>Cash Flow Statement</i>					
		<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative %</i>
<i>Valid</i>	Yes	21	70.0	70.0	70.0
	No	9	30.0	30.0	100.0
	Total	30	100.0	100.0	

Source: Fieldwork

have been an impediment (Nitcher and Goldmark 2009: 1454; Rahman et al. 2010; Tumaini and Zheng 2011; Betchoo 2015: 16; Rakicevic et al. 2016: 31) to proper and accurately drawn financial statements that represent a fair presentation of financial statements according to Generally Accepted Acculting Practice (GAAP).

Use of Financial Ratios

Table 10 depicts results on whether SMEs uses financial ratios to interpret their financial statements.

Some of the respondents did not make use of financial ratios to analyze or interpret their financial statements, which may lead to difficulty in determining the growth or deterioration of business performance. However, some SMEs highlighted that their financial statements were prepared from their head offices, mainly situated in Johannesburg while others were in Kwa-Zulu-Natal. Therefore, these subsidiaries might not have had a thorough knowledge of how financial statements were comprehensively prepared. Although 63.3 percent of the respondents agreed that they used financial ratios, of them, 81.25 percent did not use debt ratio and return to shareholders, 85.4 percent did not use a price earnings ratio (P/E), while 77.08 percent did not use debt to equity, which indicates lack of understanding of the emphasis on cash flow, mainly to maximize the return on investment (Kaplan and Norton 1996: 57-63; Niven 2002: 15-17) (Table 11).

Critical Financial Performance Measures

A net margin is a result of income less expenses of the business. It is through the statement of financial performance that the profit or loss is determined in the business. Despite 71.4 percent respondents regarding this measure as significant towards success of the business, it is still a concern that 28.6 percent did not consider this measure as crucial when measuring their profits or losses (Table 12).

A much lower percentage of (57.1%) of the respondents considered gross margin important for their businesses, compared with 71.4 percent on net margin. Gross margin is the total sales made less cost of goods sold. It is also defined as the residual of sales after all variable costs have been deducted. Almost eighteen percent of the respondents considered ROA essential to their business. ROA refers to the reward/return, which the business receives from the total assets invested in a company.

A similar trend from respondents highlighted less consideration of ROE, current ratio and fixed assets turnover of (3.6%), while one hundred percent did not regard the acid test ratio as a critical success factor. The acid test ratio differs slightly from the current ratio with a formula whereby the inventory is deducted from the total current assets. The reason is that inventory takes longer to be converted into cash.

Significantly, 89.3 percent did regard the debtors' collection period as essential. It is wise to monitor and manage debtors of the company to avoid delays in cash flow as well as financing liquidity of the business. A total of fifty percent considered creditors' payment as significant. If the above debtors were managed properly this should feed into the creditors in ensuring that cash is collected earlier from debtors, as it is paid to suppliers in order to finance the liquidity status and improve the cash flow.

Financial measures identified as critical success factors in SCM of these SMEs include debtors' collection period, net margin, gross margin and creditors' payment period. The above results indicate that SMEs value the traditional financial measures (Kaplan and Norton 1996: 57-63), while it is vital to create a balance between these measures by taking into account those that promote cash flow, thus maximizing return on investment (Bhagwhat and Sharma 2007: 55; Kaplan and Norton 1996: 57-63). Most of these businesses collect debts from customers within 30 days, while maintaining a good reputation with their suppliers. This information was ob-

Table 10: Do you make use of financial ratios to analyse data from financial statements?

		Frequency	Percent	Valid percent	Cumulative %
Valid	Yes	19	63.3	63.3	63.3
	No	11	36.7	36.7	100.0
	Total	30	100.0	100.0	

Source: Fieldwork

Table 11: Which financial ratios do you make use of?

		<i>Debt Ratio</i>			
		<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative %</i>
<i>Valid</i>	Yes	9	30.0	30.0	30.0
	No	21	70.0	70.0	100.0
	Total	30	100.0	100.0	
		<i>Debt to Equity</i>			
		<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative %</i>
<i>Valid</i>	Yes	11	36.7	37.9	37.9
	No	18	60.0	62.1	100.0
	Total	29	96.7	100.0	
<i>Missing</i>	System	1	3.3		
	Total	30	100.0		
		<i>Return to Shareholders (RTS)</i>			
		<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative %</i>
<i>Valid</i>	Yes	9	30.0	30.0	30.0
	No	21	70.0	70.0	100.0
	Total	30	100.0	100.0	
		<i>Dividend Yield (DY)</i>			
		<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative %</i>
<i>Valid</i>	Yes	4	13.3	13.3	13.3
	No	26	86.7	86.7	100.0
	Total	30	100.0	100.0	
		<i>Earnings Yield (EY)</i>			
		<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative %</i>
<i>Valid</i>	Yes	8	26.7	26.7	26.7
	No	22	73.3	73.3	100.0
	Total	30	100.0	100.0	
		<i>Price Earnings Ratio(P/E)</i>			
		<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative %</i>
<i>Valid</i>	Yes	7	23.3	23.3	23.3
	No	23	76.7	76.7	100.0
	Total	30	100.0	100.0	

Source: Fieldwork

Table 12: Critical financial measures identified by SMEs in their businesses

	<i>Count</i>	<i>Column N %</i>	<i>Column responses %</i>	<i>Column response % (Base: Count)</i>
Net margin	20	71.4	19.23	71.4
Gross margin	16	57.1	15.38	57.1
Return on assets (ROA)	5	17.9	4.81	17.9
Return on equity (ROE)	1	3.6	0.96	3.6
Current ratio	1	3.6	0.96	3.6
Quick/acid test ratio	0	0.0	0.00	0.0
Debtors collection period	25	89.3	24.04	89.3
Creditors payment period	14	50.0	13.46	50.0
Days inventory on hand	10	35.7	9.62	35.7
Fixed assets turnover	1	3.6	0.96	3.6
Inventory turnover	11	39.3	10.58	39.3

Source: Fieldwork

tained during the data collection period and is in line with Farris 11 and Hutchison (2002: 294-295) and Azevedo (2013: 215), who posit that the C2C cycle might be improved by shortening collection from accounts receivable while delaying payment to creditors.

A total of one hundred percent participants indicated that the quick or acid test ratio is not a critical financial measure. Quick ratio eliminates inventory from total current assets to determine the cash flow available to finance short-term debts, while being described as a real test of liquidity (Flynn et al. 2005: 29). If SMEs do not make use of these measure it may be difficult for them to determine the number of times their current assets (cash) may be able to cover short-term liabilities (Lodewyckx et al. 2007: 468). Apart from the return on equity (ROE), current ratio and fixed assets turnover were the least critical financial measures (3.6%) of the response rate, which compromises the RBV on the ground that certain assets and capabilities of a firm may be utilized and/or lay the premise for competitive advantage (Barney 1991: 99). ROE is a crucial measure in SCM and does not only play a vital role in financial measures but also impacts the non-financial measures, such as internal efficiency and customer measures as a result of sales realized (Bhagwat and Sharma 2007: 50; Gunasekaran et al. 2004: 339). Sales made inform whether the product has a good market and more revenues are likely to flow into the entity if cus-

tomers are pleased with the quality, speed of delivery and economical cost of products sold. Again, innovativeness may feed into more return on investments, leading to competitiveness of a firm and thus fulfilling the RBV.

Customer Collection

The debtors' collection period refers to the time it takes for debts to be collected from customers. It is advisable that a business should have a shorter collection period and a longer payment period to its creditors to finance the cash flow of the business. A total of 77.8 percent (51.9%= *agree* and 25.9%= *strongly agree*) of the respondents agreed that their debts were collected on time from customers while 22.2 percent (18.5%= *disagree* and 3.7%= *strongly disagree*) of the respondents disagreed (Table 13).

Table 14 represents conversion of assets into cash. Just over fifty percent of the respondents (34.5%= *agree* and 17.2%= *strongly agree*) state that their inventory took longer to convert into cash, while below average (37.9%= *disagree* and 10.3%= *strongly disagree*) considered speedy conversion.

Business Assets and Balance Sheet

Some of the respondents did not include all their assets in the balance sheet, which reveals incomplete information on financial position of

Table 13: Debts are collected on time from customers

		Frequency	Percent	Valid percent	Cumulative %
Valid	Strongly disagree	1	3.3	3.7	3.7
	Disagree	5	16.7	18.5	22.2
	Agree	14	46.7	51.9	74.1
	Strongly agree	7	23.3	25.9	100.0
	Total	27	90.0	100.0	
Missing	System	3	10.0		
	Total	30	100.0		

Source: Fieldwork

Table 14: Inventory takes longer to be converted into cash/sold

		Frequency	Percent	Valid percent	Cumulative %
Valid	Strongly disagree	3	10.0	10.3	10.3
	Disagree	11	36.7	37.9	48.3
	Agree	10	33.3	34.5	82.8
	Strongly agree	5	16.7	17.2	100.0
	Total	29	96.7	100.0	
Missing	System	1	3.3		
	Total	30	100.0		

Source: Fieldwork

Table 15: All assets of the business are included in the balance sheet

		<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative %</i>
<i>Valid</i>	Disagree	3	10.0	11.1	11.1
	Agree	17	56.7	63.0	74.1
	Strongly Agree	7	23.3	25.9	100.0
	Total	27	90.0	100.0	
<i>Missing</i>	System	3	10.0		
	Total	30	100.0		

Source: Fieldwork

the business and also fails the neutral characteristic of financial statements for a response of 88.9 percent (63%= *agree* and 25.9%= *strongly agree*) agreed that all their assets will included in the balance sheet. In contrast, 11.1 percent *disagree* that all their assets were included in the balance sheet (Table 15).

CONCLUSION

The aim of the paper was to determine the extent to which SMEs recognize and measure their financial performance in their supply chain. Generally, majority of the respondents did make use of financial measures to a certain extent. The most measured metric was debtors' collection period, followed by gross margin. However, some SMEs did not perceive the significance of inventory days on hand and inventory turnover. The inventory days on hand provides a clear picture of the movement of inventory and how long it takes for the inventory to convert into cash as well as turnover, which indicates the rate at which inventory converts into cash.

Most of the respondents evaluated their financial performance measures on a monthly basis. SMEs did not prepare adequate financial statements. Most of the respondents focused on cash flow statement and statement of financial performance and seemed to neglect other statements such as statement of changes in equity and statement of financial position. Some of the respondents made use of financial ratios although those using financial ratios were not found to be effective in their use. Debtors' collection period was regarded as the critical success factor followed by net margin and gross margin by SMEs. It is wise to monitor debts collection for it helps the business finance liquidity of the business and improve cash flow. Net margin and gross margin were key essentials and determinants of whether the businesses realized

profits or losses in their operations. Interestingly, none of the respondents regarded the acid test ratio as a significant financial measure in their businesses.

RECOMMENDATIONS

It is imperative for SMEs to indulge in training and development for their employees in all facets of management practices. Formal systems should be put in place to ensure proper monitoring and effectiveness of business processes in organizations.

SUGGESTION FOR FURTHER STUDIES

An avenue for further studies from this research maybe a rigorous interrogation utilizing sophisticated data analysis method perhaps to produce inferential statistics. A larger scope maybe used to enable generalization of the results obtained in this study.

REFERENCES

- Akyuz GH, Erkan TE 2010. Supply chain performance measurement: A literature review. *International Journal of Production Research*, 48(17): 5137-5155.
- Argyrous G 2011. *Statistics for Research: With a Guide to SPSS*. Thousand Oaks, CA: Sage.
- Azevedo S, Carvalho H, Cruz-Machado V 2013. Using interpretive structural modeling to identify and rank performance measures: An application in the automotive supply chain. *Baltic Journal of Management*, 8(2): 208-230.
- Barney J 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17(1): 99-120.
- Beck T, Demircug-Kunt A 2006. Small and medium-size enterprises: Access to finance as a growth constraint. *Journal of Banking and Finance*, 30(11): 2931-2943.
- Betchoo NK 2015. The need for accounting training Packages for small scale firms in rural Mauritius. *Advances in Social Sciences Research Journal*, 2(7): 15-26.

- Bhagwat R, Sharma MK 2007. Performance measurement of supply chain management: A Balance Scorecard Approach. *Computers and Industrial Engineering*, 53(1): 43-62.
- Bourne M, Mills J, Wilcox M, Neely A, Platts K 2000. Designing, implementing and updating performance measurement systems. *International Journal of Operations and Production Management*, 20(7): 754-771.
- Burn A 2011. Critical success factors of sigma implementations in Italian companies. *Int J Production Economics*, 131(1): 158-164.
- Burns RB, Burns RA 2008. *Business Research Methods and Statistics Using SPSS*. Thousand Oaks, CA: Sage.
- Chandler AD 1977. *The Visible Hand – Managerial Revolution in American Business*. Boston, MA: Harvard University Press.
- Chen D 2011. Research on performance management of Chinese SME. *International Journal of Business and Management*, 6(4): 263-265.
- Chia A, Goh M, Hum S 2009. Performance measurement in supply chain entities: Balanced scorecard perspective. *An International Journal*, 16(5): 605-620.
- Coase R 1998. The New Institutional Economics. Papers and Proceedings of the Hundred and Tenth Annual Meeting of the American Economic Association. *The American Economic Review*, 88(2): 72-74.
- Coetsee D 2011. A comment on research framework applied in accounting research. *South African Journal of Accounting Research*, 25(1): 81-102.
- Eccles RG 1991. The performance measurement manifesto. *Harvard Business Review*, 131-137.
- Farris II MT, Hutchison PD 2002. Cash-to-cash: The new Supply Chain Management Metric. *International Journal of Physical Distribution and Logistics Management*, 32(4): 288-298.
- Flynn D, Koornhof C, Kleynhans K, Meyer L, Posthumus L 2005. *Fundamental Accounting*. 5th Edition. South Africa: Juta.
- Fox W, Bayat MS 2007. *A Guide to Managing Research*. Cape Town: Juta.
- Grover V, Malhotra MK 2003. Transaction cost framework in operations and supply chain management research: Theory and measurement. *Journal of Operations Management*, 21(1): 457-473.
- Goldsby TJ, Griffis SE, Roath AS 2006. Modeling lean, agile, and leagile supply chain strategies. *Journal of Business Logistics*, 27(1): 57-80.
- Gumbus A, Lussier RN 2006. Entrepreneurs use a balanced scorecard to translate strategy into performance measures. *Journal of Small Business Management*, 44(3): 407-425.
- Gunasekaran A, Kobu B 2007. Performance measures and metrics in logistics and supply chain management: A review of recent literature (1995–2004) for research and applications. *International Journal of Production Research*, 45(12): 2819-2840.
- Gunasekaran A, Patel C, Tirtiroglu E 2001. Performance measures and metrics in a supply chain environment. *International Journal of Operations and Production Management*, 21(1/2): 71-87.
- Gunasekaran C, Patel C, McGaughey RE 2004. A framework for supply chain performance measurement. *International Journal of Production Economics*, 87(3): 333-347.
- Gunday G, Ulosoy G, Kilic K, Alpkan L 2011. Effects of innovation types on firm performance. *Int J Production Economics*, 133(1): 662-676.
- Halldorsson A, Kotzab H, Mikkola JH, Skjøtt-Larsen T 2007. Complementary theories to supply chain management. *Supply Chain Management: An International Journal*, 12(4): 284-296.
- Hamisi S 2011. Challenges and opportunities of Tanzanian SMEs in adapting supply chain management. *African Journal of Business Management*, 5(4): 1266-1276.
- Handfield RB, Monczka RM, Giunipero LC, Patterson JL 2009. *Sourcing and Supply Chain Management*. 4th Edition. South-Western: Cengage.
- Hausman WH 2002. Supply chain performance metrics. In: C Billington, T Harrison, H Lee, J Neale (Eds.): *The Practice of Supply Chain Management*. USA: Stanford University, pp. 1-14.
- Hendricks K, Singhal VR 2005. *The Effect of Supply Chain Distributions on Long Term Shareholder Value, Profitability and Share Price Volatility*. Richard Ivey. School of Business, The University of Western Ontario London, Ontario N6A-3K7, Canada and College of Management, Georgia Institute of Technology, Atlanta, GA 30332, USA.
- Hudson M, Smart A, Bourne M 2001. Theory and practice in SME performance measurement systems. *International Journal of Operations and Production Management*, 21(8): 1096-1115.
- Ittner CD, Larcker DF 2003. Coming up short on non-financial performance measurement. *Harvard Business Review*, 1-10.
- Johnson HT, Kaplan RS 1987. *Relevance Lost – the Rise and Fall of Management Accounting*. Boston, MA: Harvard Business School Press.
- Kaplan RS, Norton DP 1996. Linking the balanced scorecard to strategy. *California Management Review*, 39(1): 53-79.
- Kaplan RS, Norton DP 1992. The balanced scorecard: measures that drive performance. *Harvard Business Review*, 71-79.
- Ketchen Jr DJ, Tomas G, Hult M 2007. Bridging organization theory and supply chain management: The case of best value supply chains. *Journal of Operations Management*, 25(1): 573-580.
- Kleverlaan MP 2008. *Supply Chain Performance*. Master's Degree Dissertation. Faculty of Economics and Business Administration. Nederland: University of Open Universiteit Nederland.
- Lodewyckx E, Lotter W, Rhodes N, Seedat C, Claase L 2007. *Financial Accounting: Fresh Perspectives*. Pinelands, Cape Town: Maskew Miller Longman.
- Lwika T, Ojera P, Mugend N, Wachira V 2013. The impact of inventory management practices on financial performance of sugar manufacturing firms in Kenya. *International Journal of Business, Humanities and Technology*, 3(5): 75-85.
- Lynch RL, Cross KF 1991. *Measure up!* Cambridge, MA: Blackwell Publishers.
- Marques CS, Ferreira J 2009. SME Innovative capacity competitive advantage and performance in traditional industrial region of Portugal. *Journal of Technology, Management and Innovation*, 4(4): 53-68.

- Morgan C 2004. Structure, speed and salience: Performance measurement in the supply chain. *Business Process Management Journal*, 10(5): 522-536.
- Neely A 2005. The evolution of performance measurement research: Developments in the last decade and a research agenda for the next. *International Journal of Operations and Production Management*, 25(12): 1264-1277.
- Neely A, Adams C, Kennerley M 2002. *The Performance Prism: The Scorecard for Measuring and Managing Business Success*. London: Prentice-Hall.
- Neely A, Gregory M, Platts K 2005. Performance measurement system design: A literature review and research agenda. *International Journal of Operations and Production Management*, 25(12): 1228-1263.
- Neely AD, Kennerly M, Martinez V 2004. Does The Balanced Scorecard Work: An Empirical Investigation. *Proceedings of the European Operation Management Association (EurOMA) International Conference Fontainebleau*, June 27-29.
- Neely A 1999. The performance measurement revolution: Why now and what next? *International Journal of Operations and Production Management*, 19(2): 205-228.
- Ngubane N, Mayekiso S, Sikota S, Fitshane S, Matsoso M, Bruwer JP 2015. Inventory management systems used by manufacturing small medium and micro enterprises in Cape Town. *Mediterranean Journal of Social Sciences*, 6(1): 382-390.
- Nichter S, Goldmark L 2009. Small firm growth in developing countries. *World Development*, 37(9): 1453-1464.
- Niven PR 2002. *Balanced Scorecard: Step-By-Step: Maximizing Performance and Maintaining Results*. NY: John Wiley and Sons.
- Oberholster JGI, Koppeschaar ZR, Jansen van Rensburg C, Binnekade CS, Hattingh M, de Klerk M, Rossouw J, Du Toit E 2011. *Introduction to IFRS*. 4th Edition. South Africa: LexisNexis.
- Olugu EU, Wong KY, Shaharoun AM 2010. A comprehensive approach in assessing the performance of an automobile closed-loop supply chain. *Sustainability*, 2(4): 871-889.
- Pascoe G 2014. Sampling. In: F du Plooy- Cilliers, C Davis, R Bezuidenhout (Eds.): *Research Matters*. Lansdowne, Cape Town: Juta, pp. 131-146.
- Pietersen J, Maree K 2007. Standardisation of a questionnaire. In: JW Creswell, L Elbersohn, I Eloff, R Ferreira, NV Ivankova, JD Jansen, J Nieuwenhuis, J Pietersen, VL Plano Clark, C Van der Westhuizen (Eds.): *First Steps in Research*. Hatfield, Pretoria: Van Schaik, pp. 215-223.
- Rahman MNA, Wasilan H, Deros BMJ, Ghani A 2010. Barriers of SCM in SMEs. *Applied Mechanics and Materials*, 44-47: 3997-4001.
- Rakicevic Z, Omerbegovic-Bijelovic J, Lecic-Cvetkoviv D 2016. A model for effective planning of SME support services. *Evaluation and Program Planning*, 54(1): 30-40.
- Rogerson CM 2004. The impact of the South African government's SMME programmes: A ten-year review (1994-2003). *Development Southern Africa*, 21(5): 765-784.
- Rungtusanatham M, Salvador F, Forza C, Choi TY 2003. Supply-chain linkages and operational performance: A resource-based-view perspective. *International Journal of Operations and Production Management*, 23(9): 1084-1099.
- SBP 2009. Small Business Development in South Africa: Time to Re-assess. A SBP Occasional Paper. From <www.sbp.org.za> (Retrieved on 14 October 2011).
- Shepherd C, Gunter H 2006. Measuring supply chain performance: Current research and future directions. *International Journal of Productivity and Performance Management*, 55(3/4): 242-258.
- Somekh B, Lewin C (Eds.) 2005. *Research Methods in the Social Sciences*. Thousand Oaks, CA: Sage.
- Sowden-Service C 2011. *Gripping GAAP*. 12th Edition. Pietermaritzburg: Lexis Nexis.
- Tangen S 2004. Performance measurement: From philosophy to practice. *International Journal of Productivity and Performance Management*, 53(8): 726-737.
- Thakkar J, Kanda A, Deshmukh SG 2009. Supply chain performance measurement framework for small and medium scale enterprises. *An International Journal*, 16(5): 702-723.
- Thomas RM 2003. *Blending Qualitative and Quantitative Research Methods in Theses and Dissertations*. Thousand Oaks, CA: Sage.
- Tumaini MK, Zheng Q 2011. Supply Chain Management (SCM) and Small and Medium-Sized Enterprises (SMEs): Is it a myth? *Applied Mechanics and Materials*, 58-60: 2613-2620.
- Williamson OE 2008. Outsourcing: Transaction cost economics and supply chain management. *Journal of Supply Chain Management*, 44(2): 5-16.
- Wouters M 2009. A developmental approach to performance measures- results from a longitudinal case study. *European Management Journal*, 27(1): 64-78.

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