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Financial Performance Measurement of Manufacturing Small and Medium Enterprises in Pretoria, South Africa: A Multiple Exploratory Case Study

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Abstract- **This article focuses on the financial performance measures used by manufacturing small and medium enterprises (SMEs) in Pretoria, South Africa. The objectives were to identify the financial tools that are used by SMEs to measure their financial performance, and recommend improvements (if any) and training interventions that would possibly be needed to measure financial performance successfully. Semi-structured interviews were conducted with SME owners. Most of the respondents use financial ratios when measuring their financial performance, although to a limited extent. None of the respondents use bankruptcy prediction models. SMEs could benefit from using ratios that have been proven to be the best financial measures as well as the ratios that have worked well for most of the participants. Bankruptcy prediction models known to many of the participants as well as financial software packages should also be considered as they might enhance the success rate of SMEs.**

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I. Introduction

The lack of managerial skills (including financial performance measurement skills) and training is one of the most widespread causes of general business failure among small and medium enterprises (SMEs) in South Africa (Arasti, 2011, Christian, 2008 & Mbonyane, 2006). Christian (2008) found that 90% of a sample of 1000 entrepreneurs "believe that small businesses fail due to the lack of managerial skills". The problem may become more acute when it comes to the specific financial performance management used in the SME sector, and to the question of whether SMEs are using the available tools (financial ratio analyses and bankruptcy prediction models) for the purposes of performance management. The characteristics common to unsuccessful enterprises are directly related to personal decision-based characteristics of the owner, such as inflexibility and lack of insight; managerial deficiencies, such as lack of management skills and appropriate managerial training; and financial shortcomings, such as no accounting background, cash flow analysis and financial records (Arasti, 2011).

The contribution of SMEs around the globe is undeniable, especially in developing countries, and the SME sector serves as an engine of job creation and economic growth. Creating opportunities for SMEs can advance development and reduce poverty (Ebrahim, Ahmed & Taha, 2010; International Finance Corporation, 2011). Precisely because of the importance of the contribution of SMEs to economies throughout the world and in South Africa in particular, many studies have been conducted on financing these SMEs, or on the obstacles that they face in obtaining finance. It appears, however, that very few studies have been undertaken on how SMEs manage their finances and especially how they measure their financial performance. Even top South African companies do not use the full arsenal of financial tools available to measure their financial performance (Mosalakae, 2007). Financial performance management forms an important part of the business management field, and financial measurement is also crucial for the survival of businesses. It must be noted though, that financial measures alone are not enough to measure companies' performance, since a number of non-financial performance measures also play an important role in their overall performance. However, this article will focus on financial measures only.

The present article has the potential to benefit managers and owners of SMEs by encouraging them to reconsider their current financial performance measurement tools (if any) and consider training on how to use these tools, especially if their businesses are not doing well. It may serve to preserve many of these SMEs from failure. It could help them to foresee failure and change their course of action in time to prevent it. This article could contribute by raising awareness of the importance of studying financial management (as a whole) in the SME context and also persuade researchers to shift the emphasis away from obstacles to accessing finance to financial performance measurement or financial management as a whole.

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Finally, this article may help fill the gap in the literature pertaining to financial performance measurement. The researchers investigated the financial performance measures used by manufacturing SMEs in Pretoria, which, as one of the country's three capital cities, serves as the executive and de facto national capital of South Africa.

II. Literature Background

a) The importance of successful SMEs

SMEs are defined differently across regions or countries. In South Africa, manufacturing SMEs are defined by the National Small Business Act No 102 of 1996, as amended in 2003, as those businesses employing a maximum of 200 full-time employees, with a turnover of a maximum of 51 million rand and a maximum total asset value of 19 million rand (Olawale, Olumuyiwa & George, 2010). As SMEs play an important role in global economies, governments focus on the development of SMEs to promote economic growth. South African SMEs contribute 56% of private sector employment and 36% of the gross domestic product (Olawale & Garwe, 2010). The importance of SMEs in the economy naturally raises the question of their success and failure. According to Statistics South Africa (2012), the number of insolvencies in South Africa ranged from around 120 in 2008 to 700 in 2009, and dropped again to just over 100 in 2012. The number of liquidations was in the region of 150 in 2008, rising to just under 500 in 2009 and dropping again to 200 in 2012. Before they are able to contribute to the economy, SMEs must sustain themselves and grow. This sustainability and growth is generally measured by their financial performance, hence the importance of SME financial performance measurement. Financial performance management forms an important part of business management, and it is also crucial for the survival of businesses. The question in this regard is whether manufacturing SMEs in Pretoria are using the appropriate tools (financial ratio analysis and bankruptcy prediction models), which have been available for many years.

b) Financial management and performance measurement

Financial management focuses on the decision regarding the quantities and types of assets to acquire, how to raise the capital needed and how to run the firm so as to maximise its value (Brigham & Houston, 2012). Jacobs (2001) notes that this is an area that requires knowledge, skills and experience and whose goals include maximising profits and sales, capturing a particular market share, minimising staff turnover and internal conflicts, survival of the firm, and maximising wealth.

According to Codjia (2010), a statement of financial performance is an accounting summary that details a business's revenues, expenses and net income. He goes on to say that "a statement of financial performance is also referred to as statement of profit and loss or statement of income; and a corporation may prepare a statement of financial performance on a monthly, quarterly or annual basis". As part of business management (*Business Dictionary*, 2010), financial performance measurement can be one of the biggest challenges faced by businesses in the SME sector, especially with regard to their survival if management is not trained in how to manage finance and measure performance. Performance measures are the lifeblood of organisations, since without them no decisions can be made (Mosalakae, 2007).

Performance measurement can be split into financial and non-financial measures. Financial performance measurement generally looks at firms' financial ratios (derived from their financial statements) such as liquidity ratios, activity ratios, profitability ratios, and debt ratios. Non-financial performance measurement is more subjective and may involve customer service, employee satisfaction, perceived growth in market share, perceived change in cash flow, and sales growth (Haber & Reichel, 2005).

A business needs to assess whether or not it has performed well over a certain period. From its profit and loss account, analysts can observe the profit it has generated. It is also necessary to know whether a business is in a good short-term financial position, and whether it is in a good financial position for long-term growth. One of the most common means of analysing accounts is the use of financial ratios. According to Jacobs (2001), a ratio is the simplest mathematical expression of two magnitudes which are meaningfully related, and which are expressed in relation to each other (as a quotient). Ratio analysis and interpretation can be used by many different stakeholders, especially those outside the organisation who want to invest. Ratios can also be used to compare an enterprise's current position with its past. Roberts (2012) identifies the four basic types of financial ratios as liquidity ratios, activity ratios, profitability ratios and leverage ratios.

c) Financial ratio analysis

Financial ratio analysis is defined by Lasher (2010) as a general technique based on some relatively standard methods used to analyse information, and developed by people who make judgements about businesses by reading their financial statement. Enterprises measure their financial performance differently, but financial ratio analysis is the traditional approach to analysing and interpreting the financial position of an enterprise (Jacobs, 2001). Ratios are derived from the financial statements of an enterprise and enable analysts to develop a picture of the financial position of an enterprise.

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As early as 1970 Edmister (1970) cited the following ratios as significant predictors of business failure:

1. Current ratio (current assets to current liabilities);
2. Net working capital to total assets;
3. Debt to total assets;
4. Total assets turnover (sales to total assets);
5. Net sales to net working capital;
6. Net operating margin (net working capital to total assets);
7. Earnings after tax to total assets;
8. Market value of equity to book value of total debt;
9. Cash flow to total debt;
10. Trend breaks of net quick assets to inventory;
11. Net quick assets to inventory; and
12. Rate of return to common shareholders.

Of the twelve ratios, Edmister notes that five (iii, ix, x, xi, xii) are generally the best indicators of failure. Daya (1977) in his study also mentions three of these five. Three of the five ratios used by Altman (2000) in the Z-score are also included in the twelve variables mentioned by Edmister. Other popular ratios mentioned in the literature as failure predictors are:

- Retained earnings to total assets;
- Profit after tax (PAT) to total assets;
- Shareholders' funds to total assets;
- Turnover to total assets;
- Operating profit to operating assets;
- Inventory to sales;
- Quick assets to current liabilities;
- Receivables to inventory; and
- Equity/total capital.

Vallely (2008) states that with regard to liquidity difficulties, the most important indicators include liquidity/solvency ratios, particularly the current and quick ratios. A consideration of how these ratios change over time and how they relate to the recommended averages may indicate whether or not a liquidity problem and potential corporate collapse are looming. Over the years, to overcome the shortcomings of financial ratio analysis, some authors (Altman, 1968 and Edmister, 1970) have suggested the grouping of similar ratios to develop meaningful bankruptcy prediction models.

d) Bankruptcy prediction models

Mosalakae (2007) defines a bankruptcy prediction model as a tool that can be used to assess whether or not a firm will be able to continue its operations. These models feature among the tools available for measuring financial performance. A number of researchers have tried to predict company failure based on the company's financial ratios, and ratios have been used to develop bankruptcy prediction models for this purpose. Examples of bankruptcy prediction models are Altman's Z-score and the ZETA credit models. The reason for singling these two out is that the Z-score is widely used and the ZETA credit risk model has a high prediction accuracy up to five years prior to failure. Daya (1977) reports that Altman discusses three generic terms which are often used to describe "corporate problems", these being failure, insolvency, and bankruptcy. He describes failure as represented by the situation where the realised rate of return on invested capital, with allowances for risk considerations, is significantly and continually lower than prevailing rates on similar investments. The state of insolvency exists when a firm cannot meet its current obligations, signifying a lack of liquidity. Bankruptcy can be of two types: the state of insolvency, and the declaration of bankruptcy in court accompanied by a petition to either liquidate the entity's assets or attempt a recovery programme.

i. *Altman's Z-score model*

Professor Altman developed the Z-score more than 40 years ago, and it is still widely used today. He researched 66 companies in the United States that experienced corporate failure between 1946 and 1965 to determine whether or not their failure could have been predicted. The model is used by investors and analysts to assess the financial risk associated with potential investments. In developing his models, Altman chose multiple discriminant analysis (MDA). This technique has been utilised in a variety of disciplines since its first application in the 1930s. During those earlier years, MDA was used mainly in the biological and behavioural sciences. In recent years, this technique has become increasingly popular in the practical business world and in the academic environment. MDA is a statistical technique used to classify an observation into one of several a priori groupings on the basis of the individual characteristics of the observation. It is used primarily to classify and/or make predictions in problems where the dependent variable appears in qualitative form, for example, male or female, bankrupt or non-bankrupt.

ii. *The ZETA credit model (1977)*

In 1977, a second-generation model with several enhancements to the original Z-score approach was constructed. The purpose was to "construct, analyze and test a new bankruptcy classification model which considers explicitly recent developments with respect to business failures" (Altman, 2000). The new study also incorporated refinements in the utilisation of discriminant statistical techniques. The new ZETA model for bankruptcy classification appears to be quite accurate for up to five years prior to failure, with successful classification of well over 90% of the sample one year prior to failure and 70% accuracy up to five years prior to failure. It is also observed that the inclusion of retailing firms in the same model as manufacturers does not seem to affect the results negatively. This is probably due to the adjustments to the data based on recent and anticipated financial

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reporting changes. The ZETA model has been found to outperform alternative bankruptcy classification strategies in terms of expected cost criteria utilising prior probabilities and explicit cost of error estimates (Altman, 2000). Altman (2000) states that in other studies a number of financial ratios and other measures have been found to be helpful in providing statistical evidence of impending failures. The analysis covered 27 variables based on their use in credit analysis. After a careful process of reducing the number of variables, a seven-variable model was selected which not only classifies the test sample accurately, but also proves the most reliable in various validation procedures. That is, adding more variables could not significantly improve on the results, and no model with fewer variables performed as well (Altman, 2000). The seven variables for the ZETA model are: return on assets, stability of earnings, debt service, cumulative profitability, liquidity, capitalisation and size.

These models are used as a basis for ratio analysis and interpretation. They use a combination of similar ratios to give a single score that can be interpreted to efficiently predict business failure. The ZETA credit model has a much higher accuracy than the MDA model more than two years prior to bankruptcy, but the former is a proprietary model, available only to subscribers to ZETA Services Inc.

III. Objectives and Research Design

The main objective of the study reported on in this article was to investigate the financial performance measures used by manufacturing SMEs in Pretoria, South Africa.

The secondary objectives of the research were to:

- identify financial tools currently used by manufacturing SMEs in measuring their financial performance;
- recommend necessary improvements to financial performance measures used by manufacturing SMEs; and
- recommend necessary training interventions for manufacturing SMEs that would be needed to successfully measure financial performance.

This article is based on an exploratory case study approach and qualitative research. However, a mixed qualitative-quantitative method was used in the data analysis. The units of analysis were the members or elements of the population, in this case manufacturing SMEs in Pretoria, South Africa. The units of observation were the people interviewed, namely the managers or owners of the manufacturing SMEs. Taking into account that there is no complete list of SMEs in South Africa, judgement (purposive) sampling (a non-probability form of sampling) was used to select a sample. Ten owners or managers of the selected SMEs were interviewed. There is no ideal sample size for qualitative studies, but the number of participants in this case is in keeping with the guidelines set for both case studies and interviews. Eisenhardt (1989) proposes between four and ten, and Creswell (2002) three to five. Guest, Bunce and Johnson (2006) suggest that between six and twelve interviews should suffice. The small sample is also congruent with the interpretivist research philosophy as proposed by Saunders, Lewis and Thornhill (2009), as is the data collection technique of interviewing. Guest et al. (2006) maintain that saturation, the point at which no new information or themes are added, especially at a meta-theme level, can occur as early as six interviews. The unit of analysis was the individual Generation X participant interviews at the theme level (Babbie, 2007; Perry, 2001). Semi-structured interviews were used to collect data at the premises of the participant SMEs, using an interviewer-administered questionnaire. Information from the interviewed SMEs was gathered, analysed and interpreted. Given the information sought, thematic content analysis appeared to be the most appropriate analysis technique. Qualitative content analysis goes beyond merely counting words or extracting objective content from texts to examine meanings, themes and patterns that may be manifest or latent in a particular text. Qualitative content analysis is mainly inductive, grounding the examination of topics and themes, as well as the inferences drawn from them, in the data. In some cases, qualitative content analysis attempts to generate theory (Zhang & Wildemuth, 2011).

IV. Results

a) *Characteristics of SMEs*

The SMEs studied were from various sectors of manufacturing, classified in terms of the products manufactured; these included steel components and hand tools, automotive parts, industrial ovens, corrugated boxes, rubber, exhaust systems and accessories. Table 1 summarises the profile of the participant SMEs

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Table 1: Characteristics of the participant SMEs

Characteristics of firms	1	2	3	4	5	6	7	8	9	10
Number of employees	40	120	20	26	21	83	16	130	48	15
Years of existence	12	55	20	13	43	13	2	14	53	7
Products manufactured	Industrial ovens	Corrugated boxes	Rock drill, blasting and automotive parts	Steel components	Hand tools	Aluminium and fibre technology heat shields	Manganese metal	Rubber	Exhaust systems and accessories	Steel products
Interval of financial performance measurement	Weekly and yearly	Daily and yearly	Monthly and every 3 months	Monthly	Monthly	Monthly	Weekly	Monthly	Monthly and weekly update	Six months
Current financial performance is satisfying	Yes	Yes	No	No	Yes	Yes	Difficult to say	To be improved	To be improved	Yes
Importance of measuring financial performance	Very important	Very important	Very important	Essential	Very important	Very important	Very	Very	No 1 priority	Very
Use of external or internal financial officer	Both	Both	Both	both	Both	both	Internal	Internal	Internal	Internal
Person interviewed	Financial controller	Financial controller	Owner	Co-owner	Director: Financial and administration	Financial controller	Managing Director	Financial director	Project Manager	Owner

From Table 1, it may be observed that of the 10 SMEs studied, according to their sizes, 7 were small businesses and 3 were medium businesses. Four of the participant SMEs had been operating for over 10 years, one for 20 years, one for over 40 years, two for over 50 years, one for 7 years, and one for 2 years. The fact that these companies had been in business for such a long time means that the information obtained from them can be accepted as meaningful, since the age of the companies could be seen to indicate that they were doing fairly well financially, and could suggest that information gleaned would therefore be helpful to the research objectives. A large majority of the participant businesses reported that they measured their financial performance on a monthly basis on their own, and then discussed the issue with auditors yearly. Two companies reported that measurement was done weekly, one reported that measurement was done daily, and one reported six monthly measurements. The majority of participants reported that they had an internal financial officer and had auditors come in once a year. However, the three medium companies reported that they had auditors in monthly. Half of the participants indicated that their current financial performance was satisfying for the following reasons:

- The business was still profitable, with room for improvement.
- Re-facility margins were improved.
- One of the interviewees explained that the auditors' report was considered an indicator of the business's financial performance, but that it was discussed with top management only. According to the financial controller (interviewee) this was satisfactory, since the company took orders only after performing calculations and ensuring that a particular order would result in an acceptable profit for the business. This strategy had always maintained their finances at a very good level.
- Another owner reported growth of approximately 50% over the previous 18 months, with a net performance of about 15% before tax.
- Four participants indicated that their financial performance was unsatisfactory for the following reasons:
- Two participants said they believed that there was always room for improvement.
- The severe drop in the economy.

One interviewee reported that the business experienced recession during 2009 and 2010 and that because of lower turnover and increased costs, in order to survive in the economy, it had been forced to lay off employees.

Six of the interviewees were financial controllers or financial directors, three were owners or co-owners and one was the person in charge of the financial performance monitoring.

b) Financial performance measurement

Eight of the ten participants indicated that they used financial ratios (they used software packages such as PASTEL and PRO ACC 5). The remaining two stated

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that they did not use them, and that they did not use any of the measures given to them as other options either. All the participant SMEs, irrespective of whether they used financial ratios or not, were familiar with many of the ratios mentioned in the literature and regularly used, such as current ratio, net operating margin and cash flow to total debt. Although familiar with a large number of ratios, those SMEs that used financial ratios made use of just a few of them. Table 2 shows the ratios used by the participants.

Table 2: Financial ratios used by participants

Financial ratios	Number of respondents using them
Cash flow to total debt	6
Current ratio (current assets to current liabilities)	5
Cash flow to total current liabilities	5
Gross profit margin ratio (gross profit to net sales)	4
Inventory turnover (inventory to sales)	4
Operating profit to operating assets	3
Net working capital to total assets	2
Earnings after tax (PAT) to total assets	2
Return on equity (ROE)	1
Net profit ratio	1
Inventory, debtors, creditors' days	1
Times interest earned (income before interest and taxes [EBIT] to interest expense)	1
Net working capital (NWC)	1
Total assets turnover (sales to total assets)	1
Debt ratio (total debt to total assets)	1

In addition to the traditional ratios, one of the SMEs used a further ratio that it had found very useful in maintaining its financial performance, and computed as (sale costs – throughput)/sales where throughput = sale costs – (materials + direct costs). For the business not to be in financial trouble, this ratio should be 50% or more. The business also carefully monitored what it called gross turnover (sales – cost of sales) tendency. If this ratio was constant or showed an increase, management was happy. On the other hand, if it decreased, the business had to consider other alternatives to improve its financial performance by broadening the product range and market segment. The business examined financial ratios once a year with auditors as well to see how to improve its financial performance.

Another participant SME also used other ratios, such as the solvency ratio (total assets to total debt), the supplier days' ratio [(accounts payable*30*period/cost of sales)] and the customer days' ratio [(accounts receivable *30*period/sales)].

In one of the participant SMEs, PASTEL software was used as a financial measuring tool. The owner was very confident about its use and efficiency, and indicated that everything was done with the software. In another participant SME, a complete computer software package called PRO ACC 5 was used to manage the business's assets and financials results. The software uses most of the ratios used by the respondents and provides all the information needed, such as sales, materials required, customer base and orders and inventory holding.

Two of the participant SMEs did not use any of the tools given to them as options to choose from, and used specific tools for measuring their financial performance. One interviewee said that financial ratios were briefly discussed by auditors and top management every month. However, no recommendation was given, suggesting that certain ratios were favoured, but not in fact used to measure the business's financial performance. Only the rand per ton (RPT) method was used by this SME to make sure that the business's financial performance remained satisfactory. In terms of this method, an order from a client is considered, but before being accepted, the rand per ton value of the material to be used to make the product is calculated. Knowing from its database that a ton of material can produce a certain number of boxes of the specified dimensions, the SME is able to determine whether the order is profitable or not. The order is then either accepted or rejected. By following this method, the business makes sure that its cash flow is always good and its financial performance is maintained daily. Thus the business never worries about ratios, bankruptcy prediction models or any other tool. The interviewee went on to explain that auditors gave the business a monthly breakdown of all ratios, the following in particular: total asset turnover (sales to total assets), cash flow to total debt, cash flow to total current liabilities, debt to equity ratio (total liabilities/

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stockholders' equity), profit after tax (PAT) to total assets (return on investment (ROI)) and gross profit margin ratio (gross profit to net sales). There is no recommendation that particular attention should be paid to these ratios, and the business did not use them for measuring its financial performance. As a tool, the RPT method was implemented daily with very good results, as demonstrated by the fact that it was used by the business that had been in existence for 55 years.

One firm used a cash flow system for financial performance measurement. The cash flow was done over a year, but was updated weekly. When any change was made, the system showed whether there would be enough money to implement this change, for instance for the next two months. If the business ever received less than its monthly expenses budget and the system showed that there would not be enough money in the immediate future, management would have to act fast and look for other sources of income so as to maintain the financial performance. The cash flow system was monitored regularly and instant measures were taken whenever the system predicted possible money shortage; in this way, the business kept running.

Table 3 shows the ratios that were found to be most useful by the participants.

Table 3: Ratios found most useful by the participants

Ratios	Number of respondents that found them more useful
Cash flow to total debt	3
Cash flow to total current liabilities	2
Current ratio	2
Net working capital to total assets	2
Net operating margin	1
Income before interest and taxes [EBIT]	1
Operating profit to operating assets	1
Inventory turnover	1
Debt ratio	1
Customer days ratio	1
Acid test ratio	1
Profit after tax (PAT) to total assets	1

c) Reflection of ratio analysis results in actual operations

It is important to realise that the results from financial ratios reflect in the actual operations of SMEs. Otherwise, what would high cash flow ratios mean, for example, if the money were not reflected in the business's account? The responses of the participant SMEs that used ratios were fairly similar.

- One stated that they did reflect in the business;
- Two stated that they were 100% and 80% reflective of the actual operations respectively;
- One indicated that they were very accurate; and
- Two others stated that they provided an accurate reflection of the actual operations and were very good for current business operations.

The question of how helpful the results from the ratios were to the financial performance of participant SMEs is a relevant one, since it would be interesting to know the extent to which ratio analysis contributed to the financial performance of SMEs. The following responses were obtained:

- One participant said that they were good measures for the business's budget and prepared the business for any disruption that might have been signalled.
- Another interviewee indicated that the results of ratio analysis helped to form strategy for the next period by making it possible to take proper measures to correct any trouble shown by significant variations in some ratios.
- An interviewee at another SME acknowledged that the results of ratio analysis helped the business to perform better, not only financially but generally, since financial performance is the driver of the rest.
- The other participants said simply that these results were very helpful.
- The business that used PRO ACC 5 indicated that manufacturing is a long-term process (whether at start-up or after a recession), and it can take years of operations before any return can be seen as a reflection of what emanates from financial ratios. In other words, the business may be growing, but it cannot see the money; only with time will the money become evident.
- Another participant said that many ratios were not often used and that management accounts and cash flow were much better accounting measures for the business's requirements.
- One participant said that ratios are helpful, but would have to be adapted to new business strategies.

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- Seven of the participant businesses indicated that they knew nothing about bankruptcy prediction models. One interviewee said that she knew very little about them. Another said she had some knowledge, but never used them. Yet another said she had never heard of them. Consequently, all the questions about bankruptcy prediction models were not applicable to the participant SMEs, since they could not use what they did not know.

V. Conclusion and Recommendations

The researchers endeavoured to explore and describe the financial performance measures used by manufacturing SMEs in Pretoria. The study was undertaken because so many studies are conducted focusing on obstacles faced by SMEs in obtaining finance, and not enough focus is placed on how these SMEs in fact manage their finances. Studies have revealed that many SMEs find themselves in financial difficulties because their cash flow is not properly managed (Kim & Sohn, 2010).

The objective of identifying financial tools used by manufacturing SMEs in measuring their financial performance was achieved during the field study. The findings revealed the following ratios to be the most widely used by participants:

- Cash flow to total debt (used by six participants);
- Current ratio (used by six participants);
- Working capital to total assets (used by five participants);
- Cash flow to average total current liabilities (used by five participants);
- Gross profit margin ratio (used by four participants); and
- Inventory turnover (used by four participants).

Compared with the ratios identified by various authors in the literature as the best financial measures (Edmister, 1970 and Vallely, 2008), current ratio, networking capital to total assets, and cash flow to total debt are the ratios that appeared to be most widely used by the participants. Compared with the ratios used in the bankruptcy prediction models presented, of the five ratios in the Altman Z-score, only working capital to total assets, and sales to total assets were used by participants. As for the five ratios used to measure predictive accuracy in Daya's second test, only cash flow to average total current liabilities and net income to total assets were used by the participant SMEs. Some ratios were not emphasised by the above authors as being among the best financial measures, but were found to be used by many of the participants. These were:

- Gross profit margin ratio (used by four participants); and
- Inventory turnover (used by four participants).

None of the participants used bankruptcy prediction models. In fact, almost all the participant SMEs knew either nothing or very little about bankruptcy prediction models. The limited use of ratios and non use of bankruptcy prediction models raises the issue of the second objective of the study, which was to recommend necessary improvements on financial performance measurement of SMEs. This will be discussed under recommendations. Interviewees' lack of knowledge of bankruptcy prediction models may necessitate relevant training for the financial officers of SMEs. This touches on the third objective, which will also be discussed under recommendations. The researchers found that most of the participants used financial ratios to measure their financial performance, but to a very limited extent. Very few ratios were used by individual SMEs, and most of the ratios used were not the best indicators identified in the literature. However, some of the interviewees acknowledged the need to use more ratios.

It is recommended that SMEs use the bankruptcy prediction models not necessarily for predicting failure, but as a tool to constantly assess how they are doing financially so as to take appropriate measures should a threat be perceived. It was found that most of the participants knew nothing or very little about the models, which is indicative of a need for relevant training. SMEs would benefit by using more ratios, especially those referred to in the literature section, to improve their financial performance measures. SMEs should probably consider using the six ratios mentioned above as the ratios most widely used by participants, since these seem to be working well not only for the majority of participants, but for businesses in general. The owners and/or managers of SMEs should enrol their financial staff at relevant institutions such as universities for training in bankruptcy prediction models. The models presented in this article may be used by SMEs as well, since they are simple and inexpensive, and should not pose problems to trained financial staff. Those SMEs that can afford it should try to use specialised software (e.g. PASTEL or PRO ACC5), which was found to be effective by the small number of participants who used such packages. The SMEs would then be able to use ratios that are computed from the software.

This article will contribute to filling the gap in the literature on SME financial performance measurement. If taken seriously by SMEs, the information presented will help them in effective financial performance measurement by drawing attention to the various tools that are available to them as well as the necessity of training financial staff in various measures.

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