Performance management in the South African motor manufacturing industry: a framework

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Abstract
South African motor manufacturers should find ways to improve their performance management systems to ensure survival in the face of strong competition in the market. The main objective of this study is to evaluate the industry’s approach to performance management and to make recommendations about a framework for performance management that can be implemented to obtain a competitive advantage. A well-known instrument that proves to be highly effective in performance management is the balanced scorecard. This instrument manages performance on four distinct levels, namely from the financial perspective, the customer perspective, internal business processes and learning and growth. It is apparent from the results of this study that performance management is still very much a one-way process, and that a lack of communication is the primary reason for unsatisfactory workforce performance. Furthermore, the majority of motor manufacturers consider the customer perspective as the most important of the four above-mentioned perspectives. Motor manufacturers also disagree about the number of performance measures that need to be included in the performance management system, and the majority feel that both controllable and non-controllable fixed costs must be included in the measurement of management performance. Shareholder value measures are also largely neglected in practice.

Key words
Balanced scorecard
Framework
Motor manufacturing industry
Non-financial measures
Performance management

1 Introduction
It is no secret that competition in the motor industry is extremely stringent (Barnes 2000). In 2007, South African consumers could choose from about 1 390 variants from 50 different brand names (Kruger 2007). The motor vehicle market in South Africa
introduces a new model almost every week and until recently, sales were reaching record highs. However, Papadatos (2007) and Furlonger (2005c:36) warned that profit margins are low and their opinion was that the market will not be able to continue growing at the same rate. They were recently proven correct when the South African economy started to cool down because of high inflation and the resulting interest rate hikes that the South African Reserve Bank imposed. In July 2008, new passenger vehicle sales in the South African market declined by 20% compared to July 2007 (Volkswagen 2008a).

Another highly topical subject is the threat that international competitors pose to the local economy. China is the largest investor in developing countries and its entry into the vehicle market also poses a threat for South Africa (Laschinger 2005:8).

Another major problem experienced by the industry for a long time has been the high car prices. Cars have since become much more affordable (Kruger 2007; Bharath 2005:11). However, the industry still experiences pressure to reduce prices. The Competition Commission announced in June 2005 that several motor companies and their dealers were to be charged with price fixing and collusion (Furlonger 2005b:40). A few years ago, when the exchange rate of the rand was excessively high (about R13 to the US dollar), South African motor companies claimed to offer the world’s cheapest cars. Today, the exchange rate is closer to half of that. Hence on a straight exchange rate comparison, South African cars have become among the world’s most expensive.

It is clear that, in light of the challenges explained above, South African motor manufacturers should find ways to improve their performance management systems to ensure survival with the strong competition in the market and an unfavourable economy. Neely (1999:211) and Burgess, Ong and Shaw (2007:586) support the view that increasing competition necessitates an improved performance management system. A well-known instrument that proves to be extremely effective in performance management is the balanced scorecard, developed by Kaplan and Norton in the early 1990s (Neely 2005; Bhagwat & Sharma 2007).

In a recent article, Neely (2005:1267) concludes that the performance management domain is a relatively mature field of academic study. Although various research articles discuss the popularity of the balanced scorecard in the USA and Europe and the growing interest in Asia (Neely & Najjar 2006:101), Africa is not even mentioned. This is confirmed by the lack of scientific literature on performance management in the African context. Therefore an investigation into current performance management practices in the motor manufacturing industry of South Africa, a developing country, should be of immense value – and this study acts as one of a few first attempts to fill this gap.

2 Theoretical background
In order to evaluate the effectiveness of current performance management practices in the industry, one first needs to identify the theoretical considerations that the literature suggests.

2.1 General balanced scorecard principles
The balanced scorecard developed from a multidimensional performance measurement system in the 1990s to a total strategy driver (i.e. a performance management system instead of only a measurement system). The balanced scorecard is viewed as a
communication and learning instrument, rather than a control system (Kaplan & Norton 2001:10). Management alone should not formulate the objectives - the staff’s input should also be obtained (Ukko, Tenhunen & Rantanen 2007:42-49; Huang & Hu 2007:179; Kocakülâh & Austill 2007:73).

The balanced scorecard does not only measure financial performance, but also considers performance from three non-financial perspectives, namely internal business processes, the customer, and learning and growth. Non-financial measures are vital because of their long-term outlook (Kaplan & Norton 2001; Drtina, Gilbert & Alon 2007:4; Kocakülâh & Austill 2007:73). Banker, Potter and Srinivasan (2000:66) conducted a study that proved that non-financial measures are related to future financial performance, and give examples of companies in the motor industry that use non-financial measures effectively, namely Chrysler, Ford and General Motors.

A key tool for designing and deploying a balanced scorecard is a strategy map. Such a strategy map indicates visually the interaction between key performance areas in the different perspectives of the balanced scorecard within the company and how each contributes to improved financial performance (Neely 2005:1272; Drtina et al. 2007:5; Kocakülâh & Austill 2007:73). The strategy map is therefore used to map the cause and effect relationship between the different perspectives of the balanced scorecard (Lagace 2008:2; Bhagwat & Sharma 2007:56; Kaplan & Norton 2000:168).

2.2 Critical success factors and strategies in the motor manufacturing industry

On a global scale, the motor manufacturing industry operates in a highly competitive environment (Schlie & Yip 2000:346). Furthermore, overcapacity in the market is of global concern (Saad & Patel 2006:38) and is also a challenge in South Africa (Furlonger 2005a:36-37).

Based on global motor manufacturing industry trends and evidence from various empirical studies, the following can be regarded as the critical success factors in this industry:

- effective cost management (materials, labour and overheads) and effective management of the supply base and work force (Schmitz & Platts 2004:231; Van Riemsdijk & de Leede 2001:243)
- customer satisfaction, on-time delivery, quality and price of the vehicles (Van Riemsdijk & de Leede 2001:244; Saad & Patel 2006:45)
- an effective manufacturing process and adequate management of inventory (Saad & Patel 2006:45)
- information management (Saad & Patel 2006:45) and the effective management of rapidly changing technology (Schlie & Yip 2000:348)
- financial efficiency (Saad & Patel 2006:45)

In order to address the above critical success factors and obtain a competitive advantage, motor manufacturers should adopt a strategy based on the principles of either cost leadership or differentiation (Hansen & Mowen, 2003:492). For the motor manufacturing industry, a cost leadership strategy means the standardised production of vehicles in large numbers in order to reduce costs, whereas differentiation means the production of
high quality vehicles where the focus is on brand value that allows the manufacturer to ask a price premium on the vehicle. Proff (2000) proves empirically that a hybrid cost leadership/differentiation strategy may also be used to obtain a balance between economies of scale and the quality of the product, which Ford and General Motors, for example, are successfully applying.

2.3 Performance measures in the balanced scorecard

The balanced scorecard should only focus on a few key performance areas and related measures. It is useless to expose management to too much information, and several studies have shown that the most successful companies focus only on a few critical measures. Furthermore, the literature also suggests that the company will not only have one corporate scorecard for the company as a whole, but also separate scorecards for each division/employee that feeds into the overall scorecard (Prickett 2004:4; Barlas, Neilson, Thompson & Williams 2004:19; Huang & Hu 2007:176).

Within the financial perspective, the company should find an effective way to measure the performance of management. This is mostly in the form of some kind of profit measure. Drury (2004:843-844) suggests that a manager should not be evaluated by deducting fixed costs that are not under his/her control because this could be viewed as unfair and can be demotivational.

Financial performance measures a company can use may include shareholder value (e.g. economic value added [EVA]), profitability and growth (e.g. sales volume growth, cost reduction, return on assets, return on equity and residual income), as well as liquidity and solvency (e.g. working capital ratio, debtors’ days, inventory turnover and ratio of debt to assets) (Talluri, Vickery & Droge 2003; Horngren, Datar & Foster 2006:393-397; Correia, Flynn, Uliana & Wormald 2007:5-25; Koen & Oberholster 1999).

With regard to the customer perspective, a company should divide the whole population of potential customers into segments, and then choose only those key segments in which it wishes to compete. No company has the resources to serve all markets and a company should focus only on those segments it can serve better than its competitors (Rix 2004:93).

The most pertinent performance measures that a company could use for its customer perspective are market share, client acquisition and retention rate, client satisfaction, client profitability, time, price and quality (Kaplan & Norton 1996:67; Lorentzen & Barnes 2004:475).

The measures needed in the internal business processes perspective can be summarised in the company’s value chain. Of particular importance in the motor manufacturing value chain is the ability to deliver vehicles on time (Lorentzen & Barnes 2004:475; Saad & Patel 2006:45), as well as the effective utilisation of new technology (Schlie & Yip 2000:348). Another crucial activity in the motor manufacturing value chain is ensuring the quality of the vehicles (Lin & Lu 2006; Bandyopadhyay & Sprague 2003; Zadry & Yusof 2006). Measures that could be used to measure quality include defect rates, ratio of good output to total output, first-time returns and rework percentages (Kaplan & Norton 1996:120). According to the internal business processes perspective, it is also necessary to measure productivity, where the ratio of output to input is calculated (Horngren et al. 2006:480).

Regarding the learning and growth perspective, Kaplan and Norton (1996:98) regard innovation as critical. Companies tend to focus too much on performance measures of their
current operations and neglect to pay attention to measuring the effectiveness of their research and development (R&D) processes. This is especially important in the motor manufacturing industry, which operates in an environment in which technological development plays a key role. Measures that can be used to measure innovation may include sales volumes of new products, sales of self-owned products and R&D expenditure as a percentage of sales (Lorentzen & Barnes 2004; Kaplan & Norton 1996:98).

The other side of the learning and growth perspective revolves around the company’s workforce. The most common measures to use with regard to the workforce are workforce satisfaction, worker retention (or staff turnover), workforce productivity (e.g. the ratio of output per unit of labour input) and workforce capabilities (Gómez-Mejía, Balkin & Cardy 2004:19; Jackson & Schuler 2003:257). The latter aspect can, for example, be measured by the strategic work coverage ratio, that is, the ratio of the number of workers who are qualified at a specific level relative to the company’s organisational needs (Kaplan & Norton 1996:133). Motivation and empowerment also play a key role in building workforce capabilities. This can be measured by, say, the number of suggestions made by workers, and as a complementary measure, the number of suggestions implemented (Kaplan & Norton 1996:136-137).

Information system capability is also vital in the modern information era (Lyons, Coleman, Kehoe & Coronado 2004:658). Information system capability can be measured, for example, by the strategic information coverage ratio – the ratio of the company’s current access to information relative to strategic needs (Kaplan & Norton 1996:136).

3 Research problem, objectives and questions

3.1 Research problem and hypothesis

The research problem that will be investigated in this study, is that the current performance management practices in the South African motor manufacturing industry may not conform to the best practices suggested by the literature, and that these shortcomings in the performance management systems may prevent the manufacturers from obtaining a competitive advantage.

**Hypothesis:** The current performance management practices in the South African motor manufacturing industry contain some weaknesses that prevent the manufacturers from gaining a competitive advantage.

3.2 Research objectives and research questions

The objectives of the study are as follows:

- To contribute to a better understanding of performance management in the motor manufacturing industry of South Africa. More specifically, this study evaluates the industry’s approach to performance management and the balanced scorecard, and compares the findings to the best practices suggested by the literature.
- To recommend a framework for effective performance management in the South African motor manufacturing industry, which should contribute to the manufacturers gaining a competitive advantage. The framework will take into account current shortcomings in the performance management systems of the manufacturers.
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The following research questions, relating to each of the above two research objectives, have been formulated:

□ What is the South African motor manufacturing industry’s approach to performance management and what are the shortcomings in the industry’s performance management practices if compared to the best practices?

□ In order to address the shortcomings identified, what should a framework for effective performance management in the South African motor manufacturing industry look like?

4 Method

4.1 Research design

In order to address the first research question of identifying shortcomings in performance management in the industry, the design is in the form of a research questionnaire aimed at identifying current performance management practices. The questionnaire was supplemented by telephone interviews with the participants in the study.

In order to address the second research question of recommending a framework for effective performance management, a thorough literature review was conducted to identify the best performance management practices. By taking into account these best practices, as well as the shortcomings identified as a result of the first research question, a framework was developed in the balanced scorecard and strategy mapping formats.

4.2 Participants and research methodology

A questionnaire was developed on the basis of the principles identified in the literature review. The questionnaire consisted of 30 questions. Since this article is part of a larger study, only seven of these questions were used in this article to present the most prominent shortcomings identified. Some questions focused on general performance management principles such as the type of performance management system used by the participant’s company, the way in which performance data are communicated, the link between performance management and strategy, and so on, whereas other questions focused on more practical issues relating to the balanced scorecard such as the attention given to each of the four balanced scorecard perspectives, the quantity and types of measure in each perspective, and so forth. Some questions were open ended and allowed the participant to describe circumstances unique to his or her company, which were not listed in the questionnaire. The seven questions used in this study are presented in an addendum to this article. They are used in this article in the same order as presented in the addendum.

To ensure content validity and the completeness of the questionnaire, questions were developed for each dimension identified in the literature review. An effort was also made to ensure that the questions were compatible with the principles thus identified. The face validity of the questionnaire was ensured by piloting the questionnaire with an academic expert in the field of performance management, as well as a statistics consultant.

The sample of participants to which the questionnaire was distributed, were drawn from all South African motor manufacturers. The sample consists of the six South African motor manufacturers with the highest percentage of market share in 2006 (the time the study was conducted), totalling 83% of the passenger vehicle market share, namely BMW,
DaimlerChrysler, Ford, General Motors, Toyota and Volkswagen (NAAMSA 2006:5-6). Each of these manufacturers has 7% or more of the total market share, whereas the remaining manufacturers each have smaller percentages (the largest of these with a 5% market share). Choosing one more participant would have increased the total market share to 88%, making only an insignificant difference to the total coverage of the population in terms of market share. Owing to the qualitative nature of the study (see below), a reasonable amount of time had to be invested in interviewing each participant and the number of participants was therefore restricted to six. According to the July 2008 sales figures, these six manufacturers still have a total of 83% of the passenger vehicle market share (NAAMSA 2008).

A 100% response rate was vital in this study, which was obtained by contacting each participant and explaining the necessity of their input and that a report of the findings would be sent to each participant on completion of the study. Great care was taken to ensure that the questionnaire was sent to the correct individual, that is, the senior manager responsible for performance management in the company as a whole. To this end, it was often necessary to speak to a number of managers in the company before the correct person/persons was/were identified. Most of these individuals had the job title of “group financial manager”, or a similar designation. This individual answered the questions on behalf of all parties in the company, by using the knowledge and experience associated with his or her position.

The questionnaire was distributed to each participant in the sample via e-mail, whereafter the questionnaire was discussed with each participant by means of a semi-structured telephone interview, which lasted approximately 40 minutes per participant. The participant responses were entered into a Microsoft Excel® spreadsheet and aggregated for all participants in order to analyse percentages and present the data in chart form (Drtina et al. 2007:9).

It should be noted that, even though the sample size was only six, the unit of analysis in this study was the company as a whole and not the individual. Each participant was qualified to give his or her view on performance management in the company as a whole. Furthermore, the companies included in the sample were selected by using goal-oriented and judgmental sampling (Barnett 1991) in order to achieve an 83% representation of the total population in terms of market share.

The methodological paradigm used in this study was qualitative research (Henning 2004:5), because the participants were interviewed and asked open-ended questions with follow-up questions. Kennerley and Neely (2002:1227) followed a similar approach in an international performance management study. In this study, charts and percentages were used as a means to visually present the findings and provide a basis for the discussions, similar to the approach adopted by Saad and Patel (2006). The lack of more complex statistical analysis was supplemented by the qualitative interviewing methods mentioned above. This method was verified with the statistics consultant mentioned above, and the authors completed an e-learning course on interviewing skills before conducting the interviews.

4.3 Description of participants

A short description of the six participants in the study is provided below.
4.3.1 **BMW**

BMW South Africa produces motor vehicles mainly for the exclusive buyer from its Rosslyn plant, north of Pretoria. This is a world-class plant capable of producing customised cars for discerning customers across the globe. A large proportion of the vehicles produced are exported to BMW markets in other countries. The company recognises its corporate social responsibility and is committed to investing in South African education, technology, sport, the community, employment equity and the environment. BMW South Africa has implemented an HIV/AIDS programme designed by the workforce and is also committed to sustainability by using environmentally compatible materials, designing components suitable for end-of-life recycling and researching and developing alternative mobility concepts (BMW 2008).

4.3.2 **DaimlerChrysler**

DaimlerChrysler manufactures Mercedes-Benz and Mitsubishi vehicles at its manufacturing plant in East London. The company’s headquarters are located in Zwartkop, Gauteng, from where the Mercedes-Benz, Smart, Maybach, Mitsubishi Motors, Freightliner, Western Star and FUSO brands are marketed and financed. The company is committed to the South African democracy and to being a good corporate citizen. Some key corporate social responsibility focus areas are education, health (especially HIV/AIDS and tuberculosis), community development and safety, environment and sport development (DaimlerChrysler 2008).

4.3.3 **Ford**

Ford Motor Company was founded by Henry Ford in 1903. Ford Motor Company South Africa is based in Silverton, Pretoria. The company’s core and affiliated automotive brands include Ford, Mazda, Volvo, Jaguar and Land Rover. The company’s single greatest contribution to automotive manufacturing was the moving assembly line to facilitate mass production. The company retains and expands Henry Ford’s heritage by developing products that serve the varying and ever-changing needs of people in the global community (Ford 2008; NAAMSA 2007:41).

4.3.4 **General Motors**

General Motors South Africa is a wholly-owned subsidiary of General Motors Corporation. Its manufacturing plant is located in Port Elizabeth in the Eastern Cape. The sales and marketing office is based in Johannesburg. General Motors’ products include Chevrolet, Opel, Isuzu, Hummer, Saab and Cadillac. General Motors South Africa also exports its products to sub-Saharan African countries. The company employs approximately 3 700 employees and provides jobs for many people in the Port Elizabeth area. Community involvement focuses specifically on education (General Motors 2008).

4.3.5 **Toyota**

Toyota is one of South Africa’s largest automotive producers and exporters. Its manufacturing plant in Prospecton is one of the most advanced facilities of its kind in the country. Toyota’s commitment to corporate social responsibility is incorporated into its vision, namely “prosperity for all stakeholders through world competitiveness and continuous growth. Innovation into the future; a passion to create a better society”. Toyota contributes to the environment through its hybrid vehicle technology. The company contributes to employee and community wellness through its HIV/AIDS programme and
the Toyota Academy, its training division. Being part of a Japanese group of companies, the concept of kaizen, or continuous improvement, is a key focus area (Toyota 2008).

4.3.6 Volkswagen
Volkswagen South Africa is located in Uitenhage in the Eastern Cape. The Volkswagen group consists of eight brands, namely Volkswagen, Audi, Bentley, Bugatti, Lamborghini, Seat, Skoda and Volkswagen commercial vehicles. The product range extends from low-consumption small cars to luxury-class vehicles. Volkswagen aims to provide attractive, safe and environmentally friendly vehicles. The company believes in transformation, job creation and skills development and sets key targets and measures its success in these areas. Other social responsibility focus areas are community development, health and the fight against HIV/AIDS. To contribute to people’s safety, they have also established the Volkswagen Driving Academy. The group’s vision for the future is to be the most innovative volume brand in the world, thus focusing mainly on technology (Volkswagen 2008b).

5 Results

5.1 Approach of South African motor manufacturers to performance management and shortcomings identified
The purpose of this section is to address the first research question, namely what the South African motor manufacturing industry’s approach to performance management is and what the shortcomings in the industry’s performance management practices are compared to the best practices. Note that the confidentiality of the participants was protected by not linking any of the results below to a specific participant in any way.

5.1.1 Direction of communication
The participants were asked to decide whether their balanced scorecard (or similar multi-dimensional performance management system) followed a bottom-up or top-down approach. In a top-down approach, senior management set the objectives and communicate them downwards to lower-level staff. In a bottom-up approach, the performance management system is decentralised and upward communication exists. This is a critical factor, because as discussed in section 2.1, it is essential for lower-level staff to have enough input into the performance management process.

Figure 1 Direction of communication

![Direction of communication graph]

33%
67%

Top-down (67%)
Bottom-up (33%)
From figure 1 above, one can deduce that the performance management process is mostly still a management-driven process (67% of participants) and that lower-level staff have less input in the setting of performance objectives (33% of participants). One participant was of the opinion that if too much opportunity for upward communication exists, workers could abuse this privilege to complain about personal matters such as salaries, working conditions, etc. The participants also reported that, in their experience, workers do not know on which aspects to focus because they are not necessarily aware of what is important for the company as a whole. One of the participants who responded that the company adopted a bottom-up approach, indicated that some departments still followed a more autocratic leadership style, but that the culture of the company as a whole was shifting towards a decentralised process of constant opportunity for feedback in meetings, strategic sessions and workshops.

5.1.2 Reasons for unsatisfactory workforce performance

Valuable information can be obtained by determining what issues prevent the employees of the manufacturers from performing at their full potential. If these issues relate to a lack of communication, this could provide evidence that the balanced scorecard is not working as intended (i.e. it is not a total strategy driver; see sec. 2.1).

Figure 2 Reasons for unsatisfactory workforce performance

Based on their experience, the participants identified unawareness of the problems and challenges that the company faces as the main cause of unsatisfactory workforce performance, as well as confusion about what is expected of workers (fig. 2 above). Another participant felt that absenteeism of workers was the main problem because this slowed down the production process, which in turn led to an unsatisfied customer and a snowball effect of problems. Lorentzen and Barnes (2004:475) also use staff absenteeism as a measure to evaluate the competitiveness of a motor manufacturer.

5.1.3 Workforce comprehension of strategy

One of the basic principles of the balanced scorecard is that it is a learning instrument, a total strategy driver (see sec. 2.1). All of the participants made use of a balanced scorecard or similar performance management instrument. They were then asked to decide whether or
not, in their opinion as senior managers and on the basis of their experience, the implementation of this system improved the workers’ comprehension of the company strategy.

**Figure 3 Workforce comprehension of strategy**

The majority of participants (66%) felt that their performance management system contributed to a better comprehension of strategy by the workforce. The participant who responded “not applicable” indicated that the company had not been using the multidimensional performance management system long enough and it was therefore not possible to say whether comprehension of strategy had improved. Some participants stated that the instrument led to better comprehension company-wide and at corporate level, but that line workers were not necessarily aware of the company’s strategy. One participant also mentioned that, even at corporate level, scepticism would always exist and that the buy-in of all employees into the new system would not be obtained.

5.1.4 *The four perspectives*

It is necessary to establish which of the four balanced scorecard perspectives (see sec. 2.1) are the most applicable to the South African motor industry in order to formulate the most suitable and effective performance measures.

**Figure 4 The four perspectives**
As indicated in figure 4 above, the customer perspective (36%) is the most important for the participants, followed by internal business processes (27%), financial aspects (22%) and learning and growth (15%). The general feeling of these senior managers is that motor manufacturers would not exist if it were not for their customers. The internal business processes perspective is almost as important as the customer – without the right product, the business would not be successful. The fact that financial factors are considered to be less important is viewed as a positive sign – this provides evidence that the bottom line is no longer the primary focus of management, but rather the other drivers that will ultimately lead to better financial performance anyway. The fact that learning and growth are viewed as the least important of the four perspectives may be attributed to the fact that R&D is less significant in the regional context (in this case South Africa), as confirmed by Schlie and Yip (2000:346). However, the participants did mention that the workforce and training were of paramount importance.

5.1.5 Number of performance measures

Companies should not include too many performance measures in their performance management system (see sec. 2.3). The objective of figure 5 below was to determine if the participants generally make use of a smaller or a larger number of measures.

Figure 5 Number of performance measures

Half of the participants argue that a large number of measures should be monitored, whereas the other half feel that, on the basis of their experience, the opposite is true. One participant mentioned that his company uses a large number of measures, but identifies the top 10 measures and that these core measures receive more attention. Another participant explained that his company currently makes use of a large number of measures, but is moving to a smaller number. After implementation of the balanced scorecard, management had started realising that there were too many measures to be monitored effectively. One participant explained that his company believed in the 80/20 principle, which focuses on 20% of the measures that influence 80% of the business.
5.1.6 Types of financial performance measures
Companies do realise that financial performance measures are not as important as previously thought, but the types of financial measures used (see sec. 2.3) may not be adequate. The figure below illustrates the types of financial performance measures used in the industry. Productivity measures are also included below because of the fact that they relate to input costs.

**Figure 6 Types of financial performance measure**

The fact that profitability (37%) and growth (33%) (e.g. growth in sales, earnings, etc.) are still the most-used performance measures is not surprising, because profit remains critical for any business. Thirdly, productivity (15%) may be attributed to the fact that the participants operate in a manufacturing environment. A matter of concern is the fact that shareholders’ value scored only 9% (see the recommendation in sec. 5.2.1 below). Liquidity (6%) is significant for any company, but perhaps because the selected participants had been established in the industry for a long time, liquidity was not chosen as an important measure.

5.1.7 Evaluating management performance
The goal of figure 7 below was to establish whether only controllable fixed costs are included in measuring management performance (usually some form of net profit ratio), or if non-controllable fixed costs are also included (e.g. allocated head office costs). This is vital, because only controllable fixed costs should be used in the evaluation of a manager’s performance – it would be unfair to evaluate someone on criteria over which he or she has no control (see sec. 2.3).
It is clear from figure 7 above that the majority of the participants include both controllable and non-controllable fixed costs in this performance measure.

The participants who include all fixed costs in the calculation argue that the company’s net profit objective is also the manager’s net profit objective – hence all fixed costs are deducted. However, one of the participants whose company deducts only controllable fixed costs explained that a specific management bonus is linked to this particular performance measure.

The research question posed at the beginning of the section above, namely to identify the shortcomings in current performance management practices in the industry, was thus answered because the results of the research questionnaire identified some weaknesses in the approach of motor manufacturers to performance management.

5.2 Framework for effective performance management in the South African motor manufacturing industry

The purpose of this section is to answer the second research question, namely the development of a framework for improved performance management in the South African motor manufacturing industry.

5.2.1 Recommendations based on the shortcomings identified

- See the results in section 5.1.1. Currently, most South African motor manufacturers use a top-down approach to performance management. However, as discussed in the literature in section 2.1, it is suggested that lower-level staff should have more input in the performance management process, as was empirically proven by Ukko et al. (2007:42-49). Workers would be more motivated to achieve the set objectives if they played a part in setting them. Top management may well be more aware of the direction the company should be moving in and will be able to see the bigger picture, but sometimes fail to identify basic problems at ground level.

- See the results in section 5.1.2. Owing to the fact that unsatisfactory workforce performance appears to be explained by a lack of communication, manufacturers should
find ways to communicate the company’s problems, challenges and strategies to the workforce more effectively. The balanced scorecard is one of the most effective ways of doing this – it can be used to integrate this communication on all levels and to drive the whole process. If workers are involved in the feedback process where meeting of the objectives is monitored, they will feel part of the company’s success, or will be better informed of what went wrong if the results are not as good as expected. In this way, the balanced scorecard becomes a total strategy driver, rather than only a measurement system, as discussed in the literature review (sec. 2.1).

□ See the results in section 5.1.3. Management should determine the reasons why the same level of awareness of strategy currently does not exist at the lower level as is the case at management level, as well as the reasons for resistance to change. This will allow management to implement the appropriate steps to improve the situation. The steps mentioned may include, inter alia, the setting of written objectives for lower-level staff, as well as training sessions and individual meetings with workers.

□ See the results in section 5.1.4. South African motor manufacturers currently do not emphasise the learning and growth perspective as much as the other perspectives. The manufacturers should consider also including measures for innovation, even if R&D is not as important on ground level in South Africa (see sec. 2.3). R&D does not necessarily have to refer to the development of new vehicles, but may also refer to developing the production process or using technologies that specifically apply to the South African market.

□ See the results in section 5.1.5. Only half of the participants realise the importance of using only a few critical performance measures, as discussed in the literature review in section 2.3. If too many measures are monitored, the attention given to each individual measure will be reduced – it is therefore recommended that South African motor manufacturers should focus their resources on only those factors that are most relevant to their unique circumstances.

□ See the results in section 5.1.6. Although it is understandable that profitability and growth are critical measures, manufacturers should never underestimate the importance of shareholder value-based measures such as EVA. The first-mentioned measures focus only on the short term, whereas the latter measures have a long-term outlook and focus on adding value for investors, which will eventually lead to increased profitability anyway.

□ See the results in section 5.1.7. Most of the participants evaluate their managers’ performance by including non-controllable fixed costs in the profit calculation. If a manager is evaluated on non-controllable fixed costs, this will demotivate him or her and can be viewed as unfair, as discussed in the literature review (sec. 2.3). It should be relatively simple to recalculate the measure taking only controllable costs into account, and this should replace the current measure.

5.2.2 Strategy map

By taking into account the critical success factors of the motor manufacturing industry (see sec. 2.2) and the results of this study (see sec. 5.1), the following general strategy map was developed for the motor manufacturing industry, taking into account unique South African circumstances and the corporate profiles of the participants as discussed in section 4.3.
### 5.2.3 Generic balanced scorecard

From the general weaknesses identified in performance management in the industry and the recommendations made above, and by utilising the above strategy map, a generic balanced scorecard for the South African motor manufacturing industry was designed (per schedule A on the last page of this article). The aim of this scorecard is to provide a framework for the industry as a whole to measure its current performance management system against what the ideal situation should be. The idea is not to provide detailed instructions to the industry on what it should measure, but rather to provide food for thought on what direction the manufacturers could follow to improve their performance management system.

The following points, derived from the principles discussed in the literature review in section 2 and the results in section 5.1, should be read with the generic framework, in addition to the recommendations made above. This forms an integral part of the framework and should be considered in conjunction with the suggested performance measures in order to design the perfect scorecard for the company.

1. Two additional columns could be added to the framework for each perspective, namely “targets” and “initiatives”. Hence the performance measures should be matched with specific targets that the company should achieve and initiatives relating to how to achieve them. The initiatives to reach these targets should be linked directly to the overall company strategy. The framework does not attempt to provide these targets and initiatives on the generic scorecard because they are too subjective and will differ for each company.

2. The company should create a culture in which performance management is viewed as an important instrument to obtain a competitive advantage and where the goal is not simply to measure historical performance. This should be communicated throughout the

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#### Figure 8 Strategy map for South African motor manufacturers

<table>
<thead>
<tr>
<th>Learning and growth</th>
<th>Internal business processes</th>
<th>Customers</th>
<th>Financial performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research and development in hybrid vehicle technology</td>
<td>Defect-free and environmentally friendly vehicle production</td>
<td>Satisfied and loyal customers</td>
<td>Growing revenues</td>
</tr>
<tr>
<td>Competent workforce and employment equity</td>
<td>Increased productivity and mass production optimisation</td>
<td>Acquisition and retention of customers</td>
<td>Increased profitability</td>
</tr>
<tr>
<td>Retention and development of key workers</td>
<td>Utilisation of new technology: producing superior cars</td>
<td>Help vehicle dealers develop their customer relations skills</td>
<td>Adding value to shareholders and other stakeholders</td>
</tr>
<tr>
<td>Align business and personal goals of employees</td>
<td>Fighting HIV/AIDS: workforce and community</td>
<td>High automotive market share</td>
<td>Black economic empowerment</td>
</tr>
<tr>
<td>Adequate information system</td>
<td>Staff attendance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>On-time delivery of vehicles</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---
whole company, even to the lowest level of staff, using methods like meetings, newsletters, workshops, task agreements and the company’s intranet.

3 Every effort should be made to ensure that the performance management system becomes a total strategy driver and not only a measuring instrument.

4 This generic framework is presented for the company as a whole. However, each company should also formulate individual scorecards for each division (and even each worker) that fit into the overall scorecard.

5 When formulating measures, targets and initiatives, the company should consider its position with regard to its pricing strategy (cost leadership or product differentiation).

6 The performance management system should be used on a day-to-day basis and should not merely be a monthly or annual exercise of measuring actual performance against targets.

The research question posed at the beginning of the discussions above, namely to develop a framework for effective performance management in the industry, was thus answered by developing a strategy map and generic balanced scorecard for the industry above, taking into account the best practices suggested by the literature.

6 Conclusion

South African motor manufacturers have many challenges to overcome in the industry, the most important of which are high levels of competition, low consumer trust in the high car prices, overcapacity in the industry and the threat posed by international competitors.

The proposed solution to the problem is an increased flow of performance data to management by means of an appropriate performance management system. This system should include performance measures that focus not only on financial factors, but are also aimed at measuring performance with regard to customers, business processes, employees, research and development and the company’s information system. The balanced scorecard is suggested as the most appropriate multi-dimensional, financial and non-financial performance management system that takes into account all the above factors and that would help South African manufacturers to gain a competitive advantage in the industry.

The aim of this study is to guide South African motor manufacturers to improve their own performance management system, by learning from the common mistakes that currently exist in the industry. The framework that was discussed is meant to address this aim and should provide any South African motor manufacturer with the necessary performance management framework to gain a competitive advantage relative to other manufacturers in the industry. The research questions of identifying shortcomings and recommending a framework for improvement have thus been achieved.

7 Limitations and future research

This study, like all studies, has limitations. Firstly, survey results restrict generalisation, because the sample does not represent all South African motor manufacturers and the method of analysis did not make use of complex statistical techniques. The results of this study should be interpreted in light of the above. Secondly, the results of each participating company depended on the view of one individual, which may not fully reflect performance management in that particular company. Future research could expand this to gain more
responses across different functional roles in the company. Despite these limitations, this study does provide insight into the somewhat immature field of performance management in the South African industry and makes suggestions to address the weaknesses identified, which should contribute to a base for future research in this area.

Schedule A: A framework for performance management in the motor manufacturing industry of South Africa

<table>
<thead>
<tr>
<th>Financial</th>
<th>Objectives</th>
<th>Performance measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>To set a challenging budget and to outperform this budget</td>
<td>Vehicle sales volume growth; cost reduction; return on assets; return on equity; residual income</td>
<td></td>
</tr>
<tr>
<td>To ensure that the company maintains the most optimal capital structure and that it is able to pay its debt in the normal course of business</td>
<td>Liquidity (working capital ratio; debtors’ days; inventory turnover) and solvency (debt : assets)</td>
<td></td>
</tr>
<tr>
<td>Very important: To add value to the stakeholders. This will lead to an increase in share price and long-term profitability. Focus on discounted cash flows</td>
<td>Economic value added (EVA), calculated as: (operating profit after tax — (capital employed X weighted average cost of capital))</td>
<td>black economic empowerment statistics</td>
</tr>
<tr>
<td>To ensure that management of the company contribute to the best performance of the company as a whole</td>
<td>Controllable contribution (sales less variable costs less controllable fixed costs)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Customer</th>
<th>Objectives</th>
<th>Performance measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>The goal should be to manage the performance measures below for just the right number of customers — do not serve too many customer segments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To attract the most buyers in the segments the company is serving</td>
<td>Market share (expressed in number of vehicles sold and rand terms)</td>
<td></td>
</tr>
<tr>
<td>To attract new customers at the highest possible rate increase</td>
<td>Number of new customers compared to last month or % increase</td>
<td></td>
</tr>
<tr>
<td>To retain as many as possible of the company’s customers</td>
<td>Number of customers this month who previously purchased from the company</td>
<td></td>
</tr>
<tr>
<td>To ensure that customers are satisfied with the vehicles</td>
<td>Statistics from customer surveys</td>
<td></td>
</tr>
<tr>
<td>To ensure the company obtains the optimum profits from its customers</td>
<td>Net profit per customer or per customer segment</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Internal Business Processes</th>
<th>Objectives</th>
<th>Performance measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>To ensure that the company produces defect-free and environmentally friendly vehicles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To ensure that the vehicle is delivered to the customer at the agreed time</td>
<td>Percentage of on-time vehicle deliveries</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning &amp; Growth</th>
<th>Objectives</th>
<th>Performance measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>To ensure that the company utilises its workers in the most effective way</td>
<td>Workforce productivity, workforce competence and employment equity</td>
<td></td>
</tr>
<tr>
<td>To ensure that the workers contribute to the best performance of the company as a whole</td>
<td>Workforce satisfaction (measured by surveys/interviews) and retention rate of key workers</td>
<td></td>
</tr>
<tr>
<td>To ensure that the company keeps innovating all the time, especially in hybrid vehicle technology to fight global warming</td>
<td>R&amp;D expenditure as a % of sales; sales of new models this month, sales of self-owned products, number of new models introduced this year</td>
<td></td>
</tr>
<tr>
<td>To ensure that management receive sufficient and adequate information to enable them to make the correct decisions at the right time</td>
<td>The strategic information coverage ratio (information provided relative to that of the company’s strategic needs)</td>
<td></td>
</tr>
</tbody>
</table>
Bibliography


NAAMSA, vide National Association of Automobile Manufacturers of South Africa.


Addendum: Questions used in the research questionnaire

1 Performance management in this organisation
   a. is managed from the top where top management establish objectives centrally and communicate them downwards to ensure that all staff are aware of what is required to achieve success
   b. is a decentralised process where all levels of staff give their input and where downward as well as upward communication networks exist

2 What, in your opinion, is the main cause of bad workforce performance in the organisation?
   a. The worker is confused about what is expected of him/her
   b. Lack of awareness of problems/challenges in the organisation
   c. Lack of motivation
   d. The relevant managers’ leadership role is not adequate
   e. Other………………………………………………………………………..

3 If the company has already implemented a formal balanced scorecard or similar instrument, would you say that there has been a radical improvement in workers’ comprehension of the strategy?
   a. Yes
   b. No
   c. Not applicable

4 Arrange the following items in order of importance for the organisation (use the numbers 1 to 4 in the blocks, where 1 indicates the most important and 4 the least important option):
   a. Financial factors like maximising earnings
   b. Research and development, training of the workforce and constant innovation
   c. The customer
   d. The product, production processes, cost reduction and information system

5 Mark the option that best describes the organisation’s performance management system:
   a. The organisation monitors a large number of performance measures to ensure that attention is paid to all issues
   b. The organisation focuses only on a relatively small number of critical measures

6 With regard to measuring the economic performance of the business and its divisions, choose the 3 most important performance measures for this organisation and arrange them in order of importance. Use the numbers 1 to 3, where 1 indicates the most important and 3 the least important option:
   a. Productivity-based measures, that is, measures that indicate production input-output ratios
   b. Shareholder value-based measures that focus on cash flows and economic value added
   c. Profitability ratios, such as return on investment, residual income and net profit percentage
   d. Growth percentages such as growth in sales or net profit
   e. Liquidity ratios such as current ratio, stock turnover or debtors’ days
   f. Capital structure ratios such as gearing ratios (level of debt in capital structure)
Describe other financial performance measures to which the organisation pays specific attention, if there are any.

7 How is management performance measured in the organisation?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Net profit or net profit percentage after deduction of all fixed costs</td>
</tr>
<tr>
<td>b.</td>
<td>Net profit or net profit percentage after deduction of only those fixed costs that can be controlled by the manager</td>
</tr>
</tbody>
</table>