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The measurement of export readiness of companies in South Africa

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In order to stimulate economic growth and to increase employment and specialisation, governments all over the world attempt to grow their countries' exports. However, in South Africa many companies are experiencing difficulties in entering export markets and being able to sustain export growth. A possible reason is that the companies are not export-ready before they attempt to expand their position into foreign markets. Export promotion programmes are based on the results of companies completing export readiness questionnaires. In South Africa, it was found that the questionnaires that were used were not scientifically designed and the outcomes did not result in convincing evidence of the export readiness of the companies evaluated. This study aimed to develop an export readiness questionnaire, to be used by TISA (Trade and Investment South Africa), in which the questions are statistically tested and compiled to highlight the weaknesses (development areas) of potential exporters. The results of 30 questionnaires were statistically analysed, and four areas of particular concern for new exporters were identified. A new, statistically verified questionnaire was developed in order to assist TISA to identify specific areas of development needed, and to focus their efforts to assist potential exporters in South Africa to become more competitive and successful exporters.

Key words: South Africa, export readiness, export promotion

Introduction

Governments all over the world attempt to enhance export development in their respective countries in order to achieve various goals (for example, to stimulate economic growth, increase employment and specialisation, and enhance market diversification). In South Africa, many companies have recently been able to secure a strong presence and reputation in foreign markets. Others have not been in a position to expand their sales reach into foreign markets, for a variety of reasons. Some of these include (ITRISA 2002: 1):

- A lack of skills
- Insufficient financial capabilities
- Operational inefficiency
- A lack in managerial effectiveness
- A weak export culture in many industrial sectors
- A lack of competitiveness
- Uncompetitive prices.

The problem is that many of these companies are faced with a shrinking domestic market with the appearance of competition from abroad. They have therefore been forced to cut costs, and thus cut jobs, in order to become more competitive.

The successes of already globally competitive firms need to be enhanced, while those companies that are experiencing difficulty in achieving competitiveness and/or making successful entries into foreign markets need targeted assistance as well as a more export-supporting environment. As a first step in entering the global market, companies need firstly to determine where their weak points/development areas lie. This can only be determined through a thorough export-readiness evaluation. If a company or trade promotion organisation can assess the various factors that are necessary, and determine which of these are lacking, the firm can decide to embark on further training/development in these areas. In this way, the firm can become more globally competitive and can help South Africa gain a larger global market share (ITRISA 2002: 2).

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Objectives

The first objective of this study is to examine the way in which export readiness of South African companies is evaluated and then compare it to the evaluation of export readiness of companies in other countries. It will then be possible to outline the various export readiness factors that are important.

The second aim is to compile a statistically derived export readiness questionnaire by means of which trade promotion organisations can evaluate potential exporters and help them determine their weaknesses and development areas. To achieve this aim, the export readiness questionnaires from other countries and institutions were analysed, and a pilot export readiness questionnaire was created from the most frequently asked questions. This pilot questionnaire was then used by TISA (Trade and Investment South Africa) for potential exporters, and the results were analysed to derive statistical results for the various questions asked. This has led to the creation of a recommended export readiness questionnaire for use in export promotion organisations.

Export readiness factors

Defining export readiness

'Export ready' is a term commonly used by export assistance organisations to signify that a firm has the character, capacity and courage to enter international markets. It qualifies a company for export assistance on a somewhat more consistent, challenging and sophisticated level than a company that is still in the process of learning how to export, and that lacks the financial or organisational commitment required to enter into foreign markets.

Export readiness is often used to describe a company that is willing and able to take the information, resources and assistance that are provided and use them in a positive and productive manner. The ability to learn and manage the 'unknowns', and complete each task required to be successful, is a common profile of an 'export ready' firm (Food Export USA Northeast 2002).

In addition, export readiness is market-specific, and the same company may be export ready for one market and not export ready for another. This may arise from the nature of the products and services offered, the expertise of the company, and the requirements and preferences of the individual export market (Karamally 1998: 3).

The following sections will therefore discuss ways in which a company should assess its export readiness as well as the various factors that influence a company's export readiness.

Assessing export readiness

In order to become an exporter, a company should be in at least one of two situations. The first situation is that the company holds a strong position at the buyer's end. The company either has a special relationship with an international buyer, or the company has the necessary expertise for specific markets and has the ability to secure markets for a variety of products. In this position, the company would be referred to as a procurement agent or middleman. The company would work according to a buyer's shopping list, or respond to international tenders, and would not necessarily have expertise in the products being bought (DTI 2002).

The second situation is that the company has a product or range of products, or has assured access to the product and has expertise in trading in that specific product. It is preferable that the company is currently selling the product into the domestic market and wishes to expand to international markets. Exporting should not be seen as a separate industry, but merely as an extension of the local market (DTI 2002).

If the company qualifies under the second situation, the company's success in international markets will be dependent on a variety of factors, which will be discussed in the next section.

Export readiness factors

Determining a company's export readiness is the primary step in establishing an export component to the business. Many of the concepts to be considered are similar to the domestic side of the business. The majority of companies strive for monopolistic competitiveness, whereby enterprises must define their markets narrowly enough to dominate them, yet broadly enough to make a profit. Exporting thus becomes very desirable if the right markets can be targeted. However, since there is an 'international variable' to every aspect of exporting, these issues must be addressed from a different, informed and very realistic perspective. The first step to exporting is for management to overcome the reluctance to export. Thereafter, the following issues must be considered in order to evaluate the company's export readiness:

Motivational factors

There are general motivational reasons why companies decide to export. It may be found that one or more may match an individual company's motivation for exporting:

- *Contributing to general long-term expansion*
  If the company's objectives are to expand the business over the long term, exporting may be a good option. Building an international sales and marketing programme involves taking time to identify market opportunities, developing working relationships with overseas partners, and engaging in profitable transactions that are in alignment with the overall goals of the company (Tradeport 2003).

- *Enhancing competitiveness*
  Generally, participation in the international marketplace provides opportunities for companies to improve their overall competitiveness. By selling internationally, a company can gain insights into customer requirements, competitor activity and different ways of doing business. Moreover, by competing internationally, companies may acquire new technologies, and new ideas for products, as well as partnerships (Tradeport 2003; Food Export USA Northeast 2002).

- *Exploiting unique technology and expertise*
  Entering the export arena because of a technological advantage that the product or company possesses may help in achieving success in the international marketplace. Superiority in product quality and expertise can give a company an edge over competitors that may not possess such advantages.

- *Improving return on investment*
  If the reason for exporting is to see improved return on investment, exporting may be profitable. Generally, succeeding at exporting requires long-term goals and objectives, whereas short-term gains and profitability will not be an immediate reality. Companies should seek multiple benefits from exporting, such as expanded customer networks, exposure to new ideas and technology, and ideas for global sourcing (Tradeport 2003).

Organisational factors

These are normally the organisational factors that influence a company's decision to export. There are a variety of scenarios that best match a company:

- *Management commitment*
  Commitment from management is the primary determining factor of export success. Management shows its commitment to an international sales programme by setting aside funding to support the programme, allotting time to manage this programme and assigning personnel to carry out the programme's transactions. Management must be willing to sacrifice near-term profits for long-term sales. Reluctance to do so during the period of establishing international customer relationships may hinder export success and market penetration. Management must be realistic and know that international sales plans involve long-term objectives and not short-term pay-offs (PASourceNet 1997).

- *Funding support*
  Management must be willing to allocate sufficient funds and create an adequate budget for export activities. Businesses that want to break into exporting will need funds for working capital, product modification, medium-term credits to foreign customers, and operations such as staffing, communications and travel budgets (Jaffe & Pasternak 1994: 28).

- *Personal expertise and commitment*
  Having in-house staff with international experience can facilitate entry into the international marketplace. If such people are not available, the company can hire or train present staff to assume the responsibilities. These people need to be aware of rules and regulations regarding exporting the specific class of product. The employee or employees should also be knowledgeable about the language and culture of the target market.

- *Production capabilities*
  Selling a product internationally (as well as domestically) requires the capacity to produce or manufacture the product. The company should possess the space and equipment needed to manufacture for the specific countries the company is selling to. If the company is already selling domestically, the production capacity should be available to handle and store additional orders, because expanding into the international marketplace will result in a higher number of units to manufacture (Tradeport 2003).

- *Company's export goals*
  Increasing profits and growth are the main reasons for exporting. However, the company must be aware that exporting pays off when it

takes a long-term approach of developing an export plan, building international relationships and organising export functions internally. Boosting competitiveness, extending product life-cycles and balancing revenue deviations occurring in domestic markets are other possible company goals for exporting. Whatever the goal, the company should consider whether the expected benefits outweigh the costs.

After these factors have been considered, it is also important to evaluate the product's readiness to export. Many factors play a role in determining if a product is ready to export. Considering the target market and the product itself will help in deciding if the product is a viable business solution. The following factors must therefore be evaluated.

Target market considerations

An important aspect to consider with respect to the target market is the life-cycle position that the product will enter in the target market. This refers to the product life-cycle theory that was developed by Vernon in 1996 (Salvatore 2001). According to this model, when a new product is introduced, it usually requires highly skilled labour to produce. As the product matures and acquires mass acceptance, it becomes standardised. It can then be produced by mass production techniques and less-skilled labour.

A potential exporter needs to examine the target market carefully to determine the stage of the product's life-cycle at which the market is, and therefore the stage at which the product will enter the market. If the product enters near the maturity stage, it will not have a long profitability period and will have to be adjusted into mass production rather quickly.

Product considerations

Once the target market has been considered, it is also necessary to evaluate the product itself. It should be determined whether the company has an exportable product and whether that product is ready to be exported. The following factors are important in assessing the product:

- *Product modifications*

  A product may be sold without modifications to international markets, as long as it meets standards and regulations set by the respective country. Some countries have strict governmental regulations that require special testing, safety, quality and technical conformity measures. Others impose tariffs and taxes on certain product classifications. The cost of adapting and modifying the product for international sale should be considered (Trade Point Pretoria 2003).

- *Training to operate the product*

  Products may require training to operate, which places greater responsibility on the company and distributor or agent. The company must decide how to support this responsibility.

- *Support after sale*

  Products that require considerable support after sale must be handled by a distributor or agent that is well positioned to provide such a service. After-sale support may include maintenance, parts inventory, training and warranty (PASourcenet 1997).

- *Versatility*

  A product that has multiple applications has greater potential in the international marketplace. In exploring the product potential in a new market, a flexible product can appeal to a number of diverse audiences.

- *Differentiated products*

  Products that have unique features enjoy a competitive advantage and better reception in foreign markets. Such unique features include patents, superior quality, cutting edge technology or adaptability. If the product has competition in a foreign market, it may be difficult to sell. It should be verified that the product has significant advantages over its competitors by looking at its unique features, suitability and enhanced after-sales service. If a product is new and unique, it should be determined whether any low-cost market research exists to help assess the market potential (Cacchione 1996: 30).

Export readiness measurement

In the initial stages of the export process, companies need to be certain that they comply with the export readiness factors. This cannot be done alone, and companies need support from institutions that have experience in the field. Substantial resources are devoted to export promotion programmes designed to increase the propensity of companies to export. Governments have developed various approaches towards export promotion or assistance. The next sections will discuss some of these programmes in other countries as well as in South Africa.

Export readiness as part of export promotion programmes

Before attempting to look at the South African situation with respect to export promotion, it was firstly necessary to evaluate export promotion programmes in other countries so that efficient comparisons could be drawn. Most of this information was available only on the Internet, and tended not to provide sufficient information. It was, however, possible to accumulate information about export promotion in Malaysia (About MATRADE 2001), Japan (JETRO 2002), Singapore (IE Singapore 2001), the Philippines (DTI 2001) and Belgium (Export Vlaanderen 2003). It was also possible to evaluate the export readiness questionnaires that those countries use to evaluate the potential of exporters.

It became clear that export promotion in many of these countries has only been fully developed in recent years, and that considerably more attention has been given to the subject over the last two decades. Most of these countries have been able to establish a support system that helps potential exporters as well as exporters in all areas of the export process. They help potential exporters determine their true export readiness, and if the companies are not ready (and are lacking in certain areas), government systems provide sufficient support for companies to develop the necessary expertise.

When starting to export, these trade promotion agencies also help exporters throughout the process of exporting by providing them with information about such matters as clients, markets and business decisions. They also provide training opportunities to companies that need to expand their knowledge.

Overall, it seems that most of these countries have a well-oiled machine running to support their exporters fully through the export process and further development. Exporters in these countries are not alone in their export activities.

These governments are also working on those areas where their support systems are lacking, and have long-term plans in place for what they want to achieve in the future.

Export readiness as part of export promotion in South Africa

When TISA was formed in 2000 as a division of the Department of Trade and Industry (DTI), the original investment promotion agency, Investment South Africa (ISA), and the export functions of the DTI were merged to form a single organisation. TISA became responsible for stimulating foreign direct investment and exports of South African goods and services to international markets.

TISA focuses on promoting sectors of the South African economy that have shown the greatest potential and marketability. TISA identifies opportunities and provides core market intelligence in 48 regional offices within South Africa's diplomatic centres worldwide, but these have rarely been evaluated to determine their effectiveness and efficiency.

The DTI has developed the Export Marketing and Investment Assistance (EMIA) scheme to support companies in exporting financially. Since 2000, TISA has been responsible for the management of the EMIA scheme. The purpose of assistance under the EMIA scheme is to partially compensate exporters for certain costs incurred in respect of activities aimed at developing export markets for South African products and to recruit new foreign direct investment into South Africa (EMIA 2003; Sacks 2001: 6).

Currently, the assistance of potential companies in determining their export readiness is still in its initial phase. TISA makes use of an export readiness questionnaire that is supposed to assess the different factors that are necessary for a company to be regarded as export ready. They make use of two questionnaires. The first is a detailed questionnaire in which extensive information is requested, and the other is a short, desktop-version questionnaire in which only the basic factors of export readiness are evaluated to obtain an initial impression of the company's export readiness.

The statistical analysis in the next section is aimed at evaluating the results that were derived from a new pilot questionnaire on potential exporters for use in the development of a completely new, statistically derived questionnaire for TISA.

Statistical analysis

During the course of this research, TISA acknowledged the fact that its existing questionnaires had not been scientifically designed and that the outcomes were not convincing in terms of assessing the export readiness of companies. It was therefore requested that a new, desktop-version questionnaire be developed.

In compiling a new questionnaire, it was necessary to examine the export readiness questionnaires currently used in South Africa, as well as the export readiness questionnaires from various other countries. The questionnaires currently used by TISA were examined, as well as the questionnaire used by NEPA (Ntsika Enterprise Promotion Agency), the local enterprise promotion agency. Questionnaires were also obtained and examined from other countries, such as Canada (DFAIT 2002), the Netherlands (CBI 2003), the USA, Malaysia (About MATRADE 2001) and a variety of organisations, such as the Centres for International Trade Development (CITD) (2001), PASourcenet (1997), Trade Port (2003), Trade Point (2003) and the Burbank Group (2003).

By examining a total of ten questionnaires, it was possible to determine the most frequently asked questions, and therefore to be able to derive a questionnaire with the most important questions. A pilot questionnaire was developed, which consisted of 30 questions, six of which focused on company details, and the other 24 of which focused on export readiness factors such as management commitment to exports, export administration skills, capacity to supply, quality management and technical know-how, financial resources and competitive intelligence. The questionnaire was then piloted by TISA among 30 potential exporters applying for assistance through the EMIA scheme during the period July to September 2004. The results of the 30 questionnaires were then statistically analysed. The methodology and results are discussed in the following sections.

Composition of the data

During the period July to September 2004, 30 potential exporters that applied to the EMIA scheme were asked to fill in the export readiness questionnaire. It is therefore not possible to derive conclusions about the total population of exporters, as the companies that were part of this study were not chosen to be representative of all exporters, sectors, size, number of years in operation or province.

In the first question, the participants were asked to specify the specific sector in which their company operates. The results are shown in Table 1.

It is clear that most of the participants (50%) operate in the manufacturing sector, with the second largest group being in services (16.7%) and the third largest in agriculture (13.3%).

Table 1: Sectors

Sectors	Percentage
Agriculture	13.3
Mining	3.3
Manufacturing	50.0
Electricity	0
Construction	0
Trade	10.0
Financing	0
Services	16.7
Government	0
Other	6.7

Secondly, the participants had to specify the number of staff the company currently employs, with the three categories being fewer than 50, 51–200, and more than 200 employees. The results are shown in Table 2.

Table 2: Number of employees

Number	Percentage
Fewer than 50	66.7
51–200	23.3
More than 200	10.0

It is clear that most companies (66.7%) that participated in the study are small and medium enterprises (SMEs), with fewer than 50 employees; the second largest category (23.3%) is companies that employ between 51 and 200, and the smallest percentage (10%) of companies has more than 200 employees.

Thirdly, participants were asked to provide the number of years the company has been in operation. The results are shown in Table 3.

Table 3: Years in operation

Years	Percentage
0–5 years	20.0
6–10 years	33.3
11–20 years	26.7
More than 20 years	20.0

Table 4: Province of location

Province	Percentage
Northern Province/Limpopo	3.3
Gauteng	40.0
Mpumalanga	0
North West	0
Northern Cape	0
Western Cape	43.3
Eastern Cape	3.3
Free State	0
KwaZulu-Natal	10.0

From these results, it appears that most companies (33.3%) participating in the study have been operating between 6 and 10 years, and the second highest group (26.7%) have been in operation between 11 and 20 years.

Fourthly, it was important to establish the province in which the companies were located. The results are shown in Table 4.

An interesting result was found, as most of the participant companies (43.3%) were located in the Western Cape, and the second largest group (40%) in Gauteng. The rest were spread among Limpopo province, the Eastern Cape and KwaZulu-Natal.

In the fifth question, participants were asked to provide their total turnover for the last financial year. This was categorised in five sections according to TISA's specifications, as shown Table 5.

Finally, the person that filled in the questionnaire had to specify the position held within the company. This was categorised as low-level management, middle-level management or top-level management. The participants were divided as shown in Table 6.

Table 5: Total annual turnover

Total turnover	Percentage
Less than R150 000	3.3
R150 000–R4 million	26.7
R4 million–R10 million	30.0
R10 million–R40 million	20.0
More than R40 million	20.0

Table 6: Management level of participant

Management level	Percentage
Low-level management	20.0
Middle-level management	36.7
Top-level management	43.3

After the participants had provided the company details in questions 1 to 6, they proceeded to the second section of the questionnaire, which focused on export readiness constructs, to determine the company's level of expertise and capacity in each construct field.

Results of the statistical analyses

Export readiness assessment

The 24 questions that were based on the various export readiness factors necessary for the company to be successful in export markets were initially divided into six fundamental constructs, namely management commitment to exports, export administration skills, capacity to supply quality management and technical know-how, financial resources and competitive intelligence. The questions were then asked randomly so as not to direct the responses by giving the specific construct under which the question is classified.

From examining the results, four areas were highlighted in which potential exporters experience problems, namely:

- Potential exporters do not necessarily have the capacity available to expand production rapidly to supply a large demand from foreign markets in addition to the local demand. Companies need to ensure that this is feasible in their operations, and government needs to determine measures that can be taken to assist companies in this.
- The problem of standards compliance arises. A large percentage of exporters feel that complying with standards, local or international, is not applicable to them. This may be because of the nature of their products, or because they are not aware of the standards and requirements their specific products need to comply with in order to be accepted abroad. A more extensive study is required to determine the reasons for non-compliance.
- It became clear that most small companies do not have access to the necessary financial resources to be able to develop an export programme for their company.

- Many companies, mostly smaller and not in operation for a very long period, do not have access to the necessary information on world markets, and this implies, overall, that potential exporters do not perform competitive intelligence as extensively as would be desirable. Performing competitive intelligence is a very important function for a company if it wants to be successful in export markets. It provides them with the ability to better plan their operations and develop marketing plans by knowing what the rest of the market is doing.

Factor analysis results

The data were also analysed more extensively through a statistical software program, LISREL 8, in order to make more substantive conclusions. In doing so, a two-factor criterion proved to be the most interpretable factor structure, with these two components weighing 78% of all the factors. Thus all factor loadings for these variables are known.

To estimate the factor loadings for the other variables, the relationship between each of these was estimated using all the others as instrument variables. This was done by using the unrotated, the varimax and the promax criteria. The difference is that with the varimax criterion, the factors are still uncorrelated, while the promax criterion correlates the factors (Joreskog, Sörbom, Du Toit & Du Toit 2000).

Of the 24 items that were included in the analysis, 13 items loaded on to the two factors using the principal component analysis. Based on the interpretation of the items that were loaded on the two scales, they were labelled 'current capacity' and 'internal structure'.

The detail of the items of each factor is as follows:

- *Factor 1 – Current capacity*
  All the items that load on to Factor 1 pertain to the existing resources and knowledge available to the company, as well as its current status in the market. This factor included five items relating to the subject. There was only one exception, namely, that relating to management's commitment to exports.
- *Factor 2 – Internal structure*
  The second factor included eight items relating to the internal structure in place in the company, such as quality control system, financial report system, marketing strategy/plan, communication system and market information system (in other words, competitive intelligence practices). The exception was one item related to standards compliance.

The final 13 items derived from the factor analysis were tested for their reliability by submitting them to item analysis, using the varimax criterion, which requires that factor loading is only viable if it loads more than 0.60 on the one factor, and simultaneously less than 0.35 on the other factor. Rules of thumb suggest that the item should not load more than half on the other factor (Johnson & Wichern 2002). This resulted in the final sorted factor loading matrix set out in Table 7.

Relating the data from Table 7 back to factors 1 and 2, it is clear that the most obvious problems were seen in the two fields of current capacity and internal structure. This again proves more extensively the conclusions that were made from the export assessment results. Most potential exporters seem to experience their biggest drawbacks from exports in internal operations, namely production capacity and financial resources. They also have two other internal barriers, namely, compliance with standards and world market information. With regard to the former, it has already been noted that further studies are needed to determine why companies do not feel they need to comply with any standards. With regard to the latter, it is clear that the concept of competitive intelligence is not seen as an essential part of a company's operations, and this needs to be brought to their attention.

Table 7: Factor loading matrix

Sorted Varimax-rotated factor loading matrix		
ITEM	**FACTOR 1**	**FACTOR 2**
	Current capacity	**Internal structure**
Q7	**0.864**	0.042
Q8	**0.864**	0.042
Q9	**0.864**	0.042
Q24	**0.867**	-0.498
Q25	**0.867**	-0.498
Q10	0.035	**-0.906**
Q11	0.035	**-0.906**
Q12	0.035	**-0.906**
Q13	-0.012	**-1.000**
Q14	0.318	**-0.948**
Q17	-0.044	**-0.975**
Q22	0.041	**-0.845**
Q30	-0.252	**-0.968**

As the study delivered only 30 data points, it was not statistically possible to do more extensive analyses. To be able to do a more detailed study, it would be necessary to pilot these questionnaires among more than 50 potential exporters, which is recommended if more extensive results are needed. For the purpose of this exploratory study, the results achieved were adequate.

From all the results, it became clear that it is extremely important for potential exporters to realise the need for stability in their current situation. A company needs to be settled in the local market, with a sustainable, efficient operational system. The production capacity and financial resources need to be in place before any attempt can be made to export. The company also needs to be willing and able to conduct efficient research on potential export markets, as well as to realise the importance of an export development programme, by including extensive competitive intelligence practices.

Companies need to realise the implications of the export process. Therefore, they need to realise all the complexities and technicalities of the export process. They also need to realise that supplying any product abroad implies that the product will need to comply with strict standards and requirements, and therefore they need to ensure that their product adheres to such requirements.

Conclusions and recommendations

By analysing the results, as discussed, it became possible to develop a new, improved, statistically verified, shortened questionnaire for TISA. This questionnaire is included as Appendix A.

Potential exporters may realise the complexity of exporting, but that is not to say that they have the knowledge or experience to develop an efficient development programme on their own. As the questionnaire consisted only of questions with yes/no responses, it was easy for a company to agree with a statement only because it recognised its importance. It is therefore recommended that this questionnaire be further developed into a questionnaire based on a four- or five-point scale (Likert scale) against which each answer can be measured. This will help government agencies to provide assistance to companies in the specific areas in which they are weak, and companies can then be helped to develop as increasingly export ready businesses that will eventually stand a good chance of being successful exporters.

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APPENDIX A

RECOMMENDED EXPORT READINESS QUESTIONNAIRE

COMPANY DETAILS

Please mark the appropriate answer or complete where necessary:

1. Sector in which you are active:

Agriculture		Transport	
Mining		Financing	
Manufacturing		Services	
Electricity		Government	
Construction		Other (Specify)	
Trade			

2. Number of employees:

Fewer than 50	
51–200	
More than 200	

3. Years in operation:

0–5 years	
6–10 years	
11–20 years	
More than 20 years	

4. Province in which you are located:

Northern Province/Limpopo	
Gauteng	
Mpumalanga	
North West	
Northern Cape	
Western Cape	
Eastern Cape	
Free State	
KwaZulu-Natal	

5. Total turnover in the last financial year:

Less than R150 000	
R150 000–R4 million	
R4 million–R10 million	
R10 million–R40 million	
More than R40 million	

6. Your position in the company

READINESS ASSESSMENT

7. We are convinced that exports are an important aspect of our future survival and are able to commit a substantial amount of time to developing an international market.

YES	NO

8. We have an understanding of export procedures and the various roleplayers involved in processing export orders.

YES	NO

9. We have a product/products that has/have been successfully sold in the domestic market, and our production is consistent in volume and quality.

YES	NO

10. We have a quality management/assurance/control system in place.

YES	NO

11. We have a recent financial report (profit and loss statement and balance sheet).

YES	NO

12. We collect/gather information on potential buyers and competitors (their products and prices) on a regular basis.

YES	NO

13. We are prepared to rearrange the way our business operates to become internationally competitive.

YES	NO

14. We have an efficient communication system and sufficient resources to handle administration matters efficiently and respond to enquiries, complaints, etc.

YES	NO

15. We have spare capacity, or are able to increase our capacity rapidly, to produce over and above our domestic market needs.

YES	NO

16. We have access to technical expertise and have undertaken research and development in order to improve our product's features to suit international market requirements.

YES	NO

17. We can afford to invest in adapting our product/ packaging if required.

YES	NO

18. We have information on the size of the world market for our product(s).

YES	NO

19. We have sufficient experience and adequate resources to support and develop an export marketing plan.

YES	NO

20. Our product/products comply/ies with a recognised South African (SABS) and/or other international standard and/or specification. (Mark N/A if not applicable.)

YES	NO

21. Our turnover grew over the last 2 years.

YES	NO

We thank you for your time and effort in completing this questionnaire.

Involving the management accountant in external reporting to prevent corporate accounting scandals

S. Roos

The role of the professional management accountant is moving ever further away from 'number-crunching' and performing accounting duties that mostly require technical skills, while increasingly emphasising strategic business accounting and internal corporate consulting. The management accountant can now become involved in the external reporting of information that ideally ought to form part of corporate reporting in order to assist in the prevention of corporate accounting scandals. The reporting of forward-looking information, quantitative non-financial and qualitative information, as well as broader stakeholder information, already forms part of the internal reporting duties of management accountants in most corporations. This, coupled with their evolving role, places management accountants in an ideal position to participate in the external reporting of such information and thereby to play a pivotal part in the prevention of corporate accounting scandals.

Introduction

International corporate accounting scandals have received widespread media attention and inflicted serious damage on the world economy. The press extensively covered two US scandals in particular, those of Enron and WorldCom. These were, however, by no means the only significant corporate accounting scandals, as many more were uncovered in various countries across the world within a short span of time. South Africa, still reeling from the effects of the Masterbond scandal of the 1980s, saw Regal Treasury Bank and LeisureNet, among others, collapse amid questions surrounding improper accounting. The collapse of Enron, also referred to as ''the Watergate of business'' (Allen 2002: 207), has in many ways become the symbol of a much more widespread corporate dilemma. International capital markets have lost vast amounts of value, and individuals (from former employees to pensioners) have had much of their personal wealth destroyed.

The profession that has suffered most damage in the wake of recent corporate accounting scandals is undoubtedly the accountancy profession. The profession is a diverse one and is made up of the following specialist fields, each of which forms part of the financial reporting system:

- *External auditors* are appointed to independently and objectively express an opinion on the fairness of presentation of an organisation's financial statements. As prominent auditing firm Arthur Andersen's involvement in especially the Enron and WorldCom accounting scandals has been widely publicised, much academic research has since been directed at investigating the role of the external auditor in such scandals. In South Africa, the Draft Auditing Profession Bill of 2004 now aims to ''introduce a more comprehensive and modern legislative framework for regulating the auditing profession'' (National Treasury 2004).
- *Internal auditors* are employed by the organisation to audit financial transactions, procedures and controls on an ongoing basis. Together with external auditors, they report to the audit committee of large corporations. Corporate governance practices such as the role of the audit committee and of non-executive directors have been the focus of a number of recent international studies and have received increased attention in the light of the scandals.
- *Financial accountants* are responsible for the presentation of an organisation's financial information in the format required by law and by generally accepted accounting practice (GAAP) for external reporting purposes. Since the recent wave of corporate accounting scandals, international accounting bodies have been carefully reviewing accounting statements and issuing

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guidelines in an attempt to limit opportunities for misrepresentation of the organisation's financial results and position. In South Africa, there has also been the establishment of the GAAP Monitoring Panel, which has the authority to advise the JSE Securities Exchange on alleged cases of non-compliance with generally accepted accounting practice by listed companies (GAAP Monitoring Panel 2002: 2).

- *Management accountants* are responsible for reporting relevant financial and non-financial information to the management of an organisation in order to enable them to take informed strategic and operational decisions. As management accountants have traditionally not played a significant role in the external reporting process, comparatively less research has been done to establish their potential role in preventing corporate accounting scandals. This study attempts to explore this particular area.

The Financial and Management Accounting Committee (as it was known at the time) of the International Federation of Accountants (IFAC) included in its 2001 study of the profession a reminder that the term ''management accounting, under one label or another, referred to that part of the management process which continuously probed whether organizations' resources were wasted or well used to create value for shareholders, customers or other stakeholders'' (Connell 2001: i).

Objective of study and research problem

Recent corporate accounting scandals have had a devastating effect on the world economy. The aim of this study is to investigate the evolving role of the management accountant in modern corporations, and to determine whether the management accountant can play a significant part in the prevention of corporate accounting scandals through the external reporting of information that could place the existing statutory content of corporate reports in its proper perspective.

Definition of terms

Management accounting

A number of professional accountants in South Africa belong to the UK-based Chartered Institute of Management Accountants (CIMA), and are represented by its Southern Africa Regional Branch. The institute formally defines management accounting as follows:

> The application of the principles of accounting and financial management to create, protect, preserve and increase value so as to deliver that value to the stakeholders of profit and not-for-profit enterprises, both public and private. Management accounting is an integral part of management, requiring the identification, generation, presentation, interpretation and use of information relevant to formulating business strategy, planning and controlling activities, decision making, efficient resource usage, performance improvement and value enhancement, safeguarding tangible and intangible assets, corporate governance and internal control (CIMA 2000: 15–16).

Corporate accounting scandals

As used here, 'corporate accounting scandals' refers to those incidents where corporations have purposefully and significantly misstated their financial results and/or financial position in external statutory reports, resulting in negative financial consequences for stakeholders.

Subject fields in accounting and corporate accounting scandals

Most students of accounting will primarily be schooled in four subjects. Although the terminology may vary depending on the particular academic and professional environment, the subjects can broadly be labelled 'financial accounting', 'auditing', 'taxation' and 'management accounting'. Successful students may end up in business positions where they specialise in one or more of these fields.

Financial accounting is defined as ''the classification and recording of the monetary transactions of an entity in accordance with established concepts, principles, accounting standards and legal requirements and their presentation, by means of profit and loss accounts, balance sheets and cash flow statements, during and at the end of an accounting period'' (CIMA 2000: 14). Financial accounting primarily focuses on the publication of external financial statements. In most countries, corporations have to publish such statements at least annually, while stock exchange regulations often require listed corporations to post interim results more frequently, for example biannually or quarterly.

Corporate accounting scandals occur when the rules of accounting are contravened in these public, published corporate reports, and the scandals are therefore grounded in the field of financial accounting.

Auditing is the process of verifying specified information. CIMA defines an audit as ''a systematic examination of the activities and status of an entity, based primarily on investigation and analysis of its systems, controls and records'' (CIMA 2000: 7). Independent external auditors perform their procedures with the aim of issuing a statutory audit report wherein they express an opinion to the public as to whether, in all material respects, the statutory financial statements of the entity fairly present the results and position of the corporation at a specified date. Recent corporate accounting scandals have severely damaged the reputation of external auditors, as many members of the public considered themselves to have been betrayed by the independent experts who, by law, were paid to protect their interests.

The subject field of *taxation* studies all the various forms of taxation to which entities are subject in terms of laws in relevant countries.

In fact, the subject fields of financial accounting, external auditing and taxation have one important characteristic in common: all three are governed by externally imposed regulations in the form of laws and/or standards.

The role of *management accounting*, however, is to provide the information that the corporation requires, and that its managers need and want (Allott, Weymouth & Claret 2001: 132). Much of this information is used for decision-making inside the corporation, but never published externally. Management accounting is not governed by external laws and, although IFAC does issue practice standards to provide ''guidance on good or best practice'' (IFAC 2003), there are no enforceable governing standards. Management accounting is therefore flexible and has the potential to respond rapidly to changing needs.

Because management accounting is essentially an internal and not an external reporting function, it has not come under fire from authorities in the aftermath of recent corporate accounting scandals. The view taken in this study, however, is that corporate accounting scandals, although not created by management accountants, may well be prevented with the assistance of management accountants.

There are three reasons why it would be in the best interests of management accountants to become involved in the prevention of corporate accounting scandals. Firstly, recent corporate accounting scandals have damaged the reputation of all professional accountants, as the public sometimes fails to distinguish between different types of accountants (*Financial Management* 2002: 34). Secondly, in order to remain successful as professionals, management accountants will either have to seize the challenges they face or run the risk of partial or even complete redundancy (Azzone & Masella 1994: 55). Thirdly, if the reporting function of a corporation is seen as a sub-system of the corporation, the larger corporate community, and society as a whole, then the possibility of a corporate accounting scandal occurring threatens the entire system and all its containing systems. In order to preserve the system, all elements will have to move towards making the necessary changes in an integrated and harmonious manner.

Traditional role of the management accountant

Traditionally, management accountants were required to possess a high level of technical knowledge and skill in order to implement and utilise relevant management accounting techniques. The management accountant typically spent a great proportion of time on routine cost accounting and budgeting processes (Parker 2002), variance analysis, routine management reporting (Cooper 2003), and engaging in numerous other tasks that required lengthy data-preparation and so-called 'number-crunching' (Parker 2002). There was also a strong focus on cost determination and financial control (Allott et al. 2001: 133). The traditional management accounting approach perhaps best suited the formerly popular 'command and compliance' style of management, in terms of which as many aspects as possible had to be continuously measured in financial terms (Allen 2002a: 12).

In essence, management accountants were seen as bookkeepers (Newman & Westrup 2003: 33), and primarily fulfilled a support role in most corporations ''labouring under the shadow of financial reporting, auditing and taxation'' (Parker 2002). The finance department of corporations, under which management accountants were usually classified, mostly acted in isolation (Millet 2002: 20) as it performed its time-consuming and largely routine tasks.

In the late 1980s, management accounting became the object of much criticism. In a prominent book, Johnson & Kaplan (1987: 177, 205) argued that many management accounting techniques were obsolete, and that they provided little benefit to organisations. In response, new techniques such as activity based costing, the balanced scorecard approach, strategic management accounting and the measurement of economic value added were introduced (Cooper 2003). However, certain traditional management accounting practices – budgeting in particular – remain important to this day, even though they now appear to be used alongside new and advanced accounting techniques (Burns & Vaivio 2001: 390).

Evolving role of the management accountant

Many organisations have experienced significant changes in organisational design, competitive environment and information technology in recent years. At the same time, advances in information technology have impacted on the manner in which information is collected, measured, analysed and communicated. Many observers remark that such broad change ought to be met with a change in management accounting practice (Burns & Vaivio 2001: 389).

The traditional role of the management accountant is being threatened as technology enables accounting knowledge to become widely accessible and comprehensible (*The Bottom Line* 2003: 1). In this threat, however, lies a great opportunity. Improvements in available information technology are now freeing up management accountants' time by accurately and quickly performing the most time-consuming tasks. This enables the management accountant to attend to more advanced diagnostic, advisory work, as well as to decision-making and control. A 1998 UK survey by CIMA found that, while technical accounting skills were still valued, tasks that required such skills were increasingly being automated or delegated by professional management accountants (Parker 2002). Technical competence, it seems, is no longer the golden key to a successful career as a management accountant. Management accountants must now play a wider role in business, making it necessary for them to also acquire a broad range of management skills (Allott et al. 2001: 136).

In future, management accountants will have a clear role to play in areas such as planning, forecasting, measuring financial and non-financial performance, and monitoring (May 2002: 29). Advances in information technology have made it possible to track additional non-financial aspects, such as quality, in a corporation, and to improve management information systems in order to enable decision-making, planning and control with a greater emphasis on non-financial performance (Hussain & Gunasekaran 2002: 223). Research by CIMA also pointed to the increasing importance of management accountants' involvement in information systems design and maintenance, advising on operational decision-making and projects, personnel organisation and management, and strategic financial planning. According to further research, the highest-ranking skills or attributes that management accountants would have to possess in future are analysis and interpretation, information technology and systems competence, broad business knowledge, and an ability to integrate financial and non-financial information (Parker 2002). Furthermore, management accountants will increasingly have to play their part in ensuring that a corporation operates ethically in its corporate governance (*The Bottom Line* 2003: 2).

Notably, research identified strategic management as the first priority for management accountants of the future (Parker 2002). This includes the development and implementation of strategy, rather than merely the reporting of the results thereof (Millet 2002: 20). The product of management accountants' insight and experience allows them to guide senior managers to the right decision (*The Bottom Line* 2003: 2). What was traditionally seen as management accounting information will increasingly be integrated with strategic management information (Parker 2002). Management accounting is, in a sense, becoming management, and management accountants have to function as internal strategists and consultants (Allott et al. 2001: 138).

Parker (2002) calls for management accountants to turn their attention to strategic planning and 'feed-forward' control, and to become involved in strategic management, knowledge management, risk management, environmental management and change management. They should emerge to assume a value-adding, knowledge-based, leadership role. Millet (2002: 20) takes the argument further by advocating that strong internal financial management capabilities can serve as a key source of competitive advantage for corporations.

Interestingly, a study of evolving management accounting practices in South Africa found that management accountants in this country, compared

to their UK counterparts, indicated that it was more important to pay attention to a broader group of stakeholders, as stakeholders other than shareholders were seen to be comparatively more influential in South Africa. Furthermore, the study concluded that management information systems were comparatively more valuable in the uncertain South African environment (Luther & Longdon 2001: 313, 315).

The role of the management accountant is evolving, and the profession, by its very nature, is constantly changing. The management accountant of the future is likely to be in a strong position to assist in reporting new categories of information that may place the traditional financial information in external statutory corporate reports in context, so as to assist in the prevention of corporate accounting scandals. This is analysed in more detail in the following section.

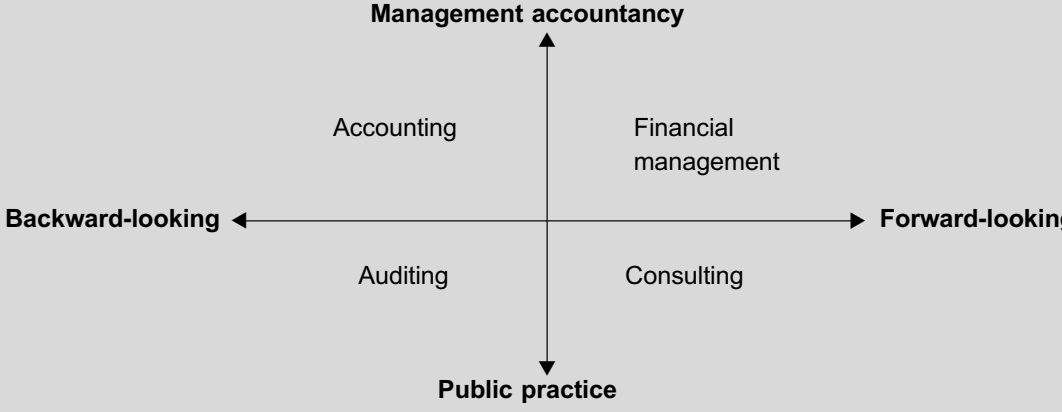
Forward-looking information and the management accountant

Traditionally, management accountants are inclined to take a future-oriented view of the performance of their corporation. It is often part of their task, after all, to provide the executive management of the corporation with regular (for example monthly) reports on the corporation's anticipated performance. Where corporate investment opportunities are evaluated, well-established management accounting techniques ensure that alternative options are compared on the basis of expected future cash flows, again establishing a future orientation.

Allen (2002b: 12) uses a figure (reproduced as Figure 1) to distinguish between management accounting and 'public practice', a term that usually refers to professional accountants employed by independent accounting firms that offer external auditing services.

As Figure 1 illustrates, financial management, performed by management accountants, is the forward- and outward-looking function of professional accountants.

Metcalf (2002: 23–24) points out that all major businesses already draw up forecasts to monitor their progress for internal management purposes. If forecasts were to be published in external corporate reports, the credibility thereof could be enhanced if corporations were to declare that the forecasts published were consistent with those provided in the corporation's internal management accounts. Reporting on business value drivers and factors affecting future performance, he stresses, are ''at the core of the management accounting role in business''.



Vertically, the profession is divided between outsiders looking in (accountants in public practice) and insiders looking out (management accountants). Horizontally, there are backward-looking tasks (accounting and auditing) and forward-looking tasks (financial management and consulting).

Source: Allen 2002b: 12

Figure 1: Four sectors of the accountancy profession

Quantitative non-financial and qualitative information and the management accountant

Contemporary management accountants are employing a broad range of performance measures. Where financial accountants may focus their attention on recording the financial amount of a corporation's sales in the relevant period, management accountants are likely to reflect on the market share, and to investigate the size of the increase or decrease in market share, as well as the identity of the competitors that impacted on such changes. Similarly, while financial accountants may record a loss in the income statement, management accountants will be more likely to investigate the reasons behind the loss. This could lead management accountants to investigate a variety of factors, such as possible reputational problems, slow innovation, or a lack of response to customer needs (Allen 2002a: 12). The use of quantitative non-financial and qualitative performance measures is therefore already well established in management accounting practice, and is becoming increasingly important.

Metcalf (2002: 24) notes that ''it would seem reasonable'' for the same process to be applied in the selection of business value drivers for external reporting purposes as is already used in internal management reports. If such information were to be reported in the statutory reports, ''it would also be appropriate for this section to be both prepared and reviewed by accounting professionals experienced in producing clear, forward-looking and commercially relevant reports, rather than by those who are more focussed on control and compliance''. Metcalf's wording implies that the management accounting professional is in a better position than the financial accountant to prepare, and in a better position than the auditor to report on, any externally published non-financial information regarding value drivers.

An important function of management accounting is to explain progress towards meeting the corporation's strategic objectives. Steve Marshall, a fellow of CIMA, is of the opinion that professionals who can work with management information and are as comfortable with non-financial indicators as with financial indicators are likely to find themselves in huge demand in the modern business environment (CIMA 2002a: 9).

It is the task of the management accountant to reconcile this broader view of the business, as expressed in the various performance measures, with the narrower financial view shown in the accounts. The management accountant is therefore required to integrate different sources of information and to explain the interconnections between financial and non-financial measures in order to obtain a coherent and comprehensive picture of the corporation's performance (Cooper 2003).

Broader stakeholder information and the management accountant

The fields of management, on the one hand, and accounting, on the other, are both evolving into multidisciplinary professions (Parker 2002). What is likely to develop in future is a kind of 'hybrid accountant' (Newman & Westrup 2003: 33). Research in the US has shown that most professional management accountants in that country now refer to themselves as analysts, business partners, managers or controllers (Siegel & Sorensen 1999: 6). CIMA sees management accountants in strategic planning roles such as those of chief finance officer, chief business officer, chief operating officer, chief information officer and chief strategic development officer (Parker 2002). In the spirit of these changes, the former Finance and Management Accounting Committee of IFAC renamed itself 'Professional Accountants in Business' with effect from 1 July 2003 (CIMA 2003).

Connell (2001: ii), chair of the renamed IFAC committee, sees the parallel transformations in management accounting towards management and governance respectively as heralding a ''greater good''. They work towards ''the elimination of waste (of the world's resources), the creation of value (for diverse stakeholders), and the just and equitable distribution of the outcome. Thus, they both fashion and harness what a reformed profession might contribute to civil society and environmental conservation in a conflictual and increasingly constrained world''.

Management accountants, who usually possess a greater tolerance for flexible performance measurement and the use of non-financial and qualitative measures than other professionals in the finance department, are in a strong position to advance the fulfilment of the information needs of broader stakeholder groups. As already described, their corporate role has an increased emphasis on 'management' and a diminished emphasis on 'accounting' (Allott et al. 2001: 134). This places management accountants in an ideal position to influence strategy and to report externally with broader stakeholder interests in mind, thereby

assisting in the de-emphasising of traditional, narrowly defined, historic, financial measures such as earnings per share.

Management accountants' potential contribution to external corporate reporting

There are already ample opportunities for management accountants to assist in the prevention of corporate accounting scandals. For example, they can assist in eliminating the traditional over-emphasis on earnings per share – a measure that the disgraced Enron-corporation was said to have been fixated on (CIMA 2002b: 3). Earnings per share is often criticised for its historical and largely shareholder-oriented nature. Even when financial results are not purposefully misstated, there is usually no single 'right' figure to record as earnings, since alternative accounting policies can produce different results, and the necessary valuations and estimates inevitably involve judgement. This is an area where the management accountant can play an important role in linking estimates with management accounting information (Mallett 2001: 32). As far as corporate governance is concerned, management accountants are able to advise the corporation's audit committee and its board about what, in their opinion, may need to be disclosed in external corporate reports and to suggest how it should be disclosed (Hayward 2003: 32).

There is reason to believe, however, that management accountants are poised to move beyond their traditional roles and to contribute more directly to external corporate reporting. Recent CIMA research has shown that accounting should be seen as a single generic process comprising several different layers of information gathering, reporting and use (Starovic 2003: 18). For example, in order to be able to meet the new stringent external reporting regulations that were implemented in the post-Enron era in numerous countries, many corporations' internal management information systems will have to be improved (*Financial Management* 2003: 8). Improved management information systems can then effectively be linked to financial accounting systems through technology, which will free up more resources in many corporations and, perhaps more importantly, allow corporations to report comprehensive business information rather than merely the traditional financial information.

By accepting a more direct role in external reporting, management accountants may also be solving part of the perceived problem regarding audit independence. For a number of years, there have been strong calls for external auditors to add value to the corporations they audit in order to justify the fees they charge, which has resulted in auditors paying increased attention to suggesting improvements after completing their audit procedures, and in large amounts being paid to accounting firms in the form of consulting fees. In the wake of recent corporate accounting scandals, it is widely believed that this may have been a rather unhealthy practice, and that independent external auditors, by definition, should not be so closely involved in their clients' businesses. Management accountants, however, are in an ideal position to identify potential problems in their own corporations, as well as to ensure that executive and non-executive directors ask the right questions (Prickett 2002: 18). Furthermore, Blyth (2003: 37) remarks on another potential threat to external auditors in that, in the long run, they may find themselves losing revenue to producers of alternative forms of corporate reports, such as the unaudited findings published by research agencies. It is therefore also in the best interests of external auditors to work towards involving in the reporting process those parties that may positively contribute to improved external corporate reporting, notably management accountants.

One of the most indicative examples of what corporate reports in many countries may be required to contain in future is the UK's Operating and Financial Review (OFR). Although the OFR ''shall reflect the directors' view of the business'', it encapsulates many of the external reporting areas in which management accountants' expertise may be particularly useful. In November 2004, the UK's Accounting Standards Board issued Reporting Exposure Draft 1 (RED1), which is to be commented and advised on and will eventually be moulded into a new ''principles-based'' accounting standard. The UK government proposes that listed companies be required to prepare a statutory OFR for the first time for financial years beginning on or after 1 April 2005 (FRC 2004). The OFR requires disclosure regarding the nature, objectives and strategies of the business, current and future development and performance, resources, risks and uncertainties, relationships and financial position, including cash flows and liquidity. Key performance indicators have to be supplied, together with information that enables their interpretation (ASB 2004: 8, 24).

If external corporate reports could provide a balanced view of historical and forward-looking

information and a balance between financial and non-financial information, as well as balance the interests of different stakeholder groups, they are likely to reflect internal management information more closely. Presently, however, many corporations' external corporate reports bear little resemblance to the management information used in running the business (Temkin 2003: 14).

The corporate reporting future that should be strived towards is one where a convergence of internal and external reporting and, by extension, of management accounting and financial accounting, takes place. Both management accountants and financial accountants will need to improve their understanding of how their roles affect each other, and how their roles can be aligned in order to obtain superior results (Starovic 2003: 18). In future, a wide range of stakeholders ought to be able to rely on the management accountant's contribution to well-balanced, comprehensive external corporate reports.

Conclusion

Starovic (2003: 18) argues that recent corporate accounting scandals have highlighted a need to focus not only on external corporate reporting, but also on internal corporate reporting. The reliability of internal reporting is about ''culture, expectations and the human aspects of performance measurement''. If companies were to be more transparent in their external disclosures, they would first have to put the right systems and cultural aspects relating to management information into place. Starovic concludes that the public reporting of information that corporate managers use internally will be beneficial, and that ''there should be no great difference (sensitive material apart) between the information used to manage the company and that reported to external stakeholders''. CIMA's post-Enron executive briefing calls for similar changes, stating that ''there should be little difference between the performance measures used internally and those reported to external stakeholders'' (CIMA 2002b: 4).

If professional management accountants fail to seize the opportunities available to them, they are likely to face a diminished level of responsibility and respect. Mike Jeans, a former president of CIMA, believes that management accountants should embrace technology and ''free themselves to start making real contributions to the strategic and ethical decision making in corporate boardrooms and smaller businesses''. The biggest challenge, he concludes, would be to change behaviour (*The Bottom Line* 2003: 2). Management accounting is now being lifted to the next phase of accountability and responsibility (Ernst & Young 2003: 1). In the post-Enron era, ethical corporate governance requires focused, timely and relevant management information delivered to the right people in an open and transparent manner (*Accountancy* 2003: 38).

Quality internal and external information embracing transparency, including financial and non-financial information, is needed in order to prevent corporate accounting scandals. Professional management accountants have specific expertise in providing such information (Byrne 2002: 3). The once well-defined lines between different types of corporate accountants appear to be blurring, and accountants will increasingly have to be willing to move into new roles. Professionals trained to be flexible in their approach, such as management accountants, are those most likely to move into new business territories (Allott et al. 2001: 133) – in this case, great benefits can result from a conscious move into the territory of external corporate reporting. Management accountants should mould their professional future not only by becoming more involved in the management of the corporations they serve, but also in reporting the kinds of information that they have specific expertise in analysing, to a broad range of stakeholders. If this could be achieved, the corporate world may well therein have one of its best chances of ridding itself of corporate accounting scandals.

Recommendation

An independent task team appointed by IFAC to investigate the rebuilding of confidence in corporate reporting believes that, in order to eradicate corporate accounting scandals, it will be necessary to take action ''at all points along the information chain'' (Task Force 2003: 23). The view taken in this study is that professional management accountants, as elements in the corporate reporting system, can play a pivotal role in ridding the world of corporate accounting scandals by exploiting their unique combination of skills and their evolving role in corporations, in order to actively participate in external corporate reporting.

It is therefore recommended that management accountants, individually as well as collectively through the professional bodies that represent them, actively pursue the exploitation of the opportunity to participate more directly in the external corporate reporting process and the elimination of corporate accounting scandals.

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The valuation of employee share options for accounting purposes: is IFRS 2 on target?

Z.Y. Sacho & J.G.I. Oberholster

This paper investigates the valuation of employee share options (ESOs) for accounting purposes. As a result of ESOs differing from normal traded options, it is often contended that ESOs cannot be valued reliably for accounting purposes. The paper demonstrates that sufficient academic literature is available to support the fact that ESOs can be valued reliably using an option-pricing model of one form or another. The paper also points out the quintessential distinction between company cost of ESOs and the value of the ESOs to the executive. Because of the different risk profiles of the executive and the company, the value of the ESO to the executive will differ from the value to the company. The objective when valuing ESOs for accounting purposes is to value the ESO from the company's perspective (that is, the company cost), rather than from the executive's perspective. The paper proves that the recently issued International Financial Reporting Standard 2 (IFRS 2) accords with the findings of this paper and is therefore academically sound.

Introduction

An employee share option (ESO) is a call option written by a company on its own shares and granted to its employees in exchange for services rendered, or to be rendered, by them to the company (Sacho 2003: 59). According to the accrual concept as defined in the International Accounting Standards Board (IASB) Framework, the effects of transactions and other events are recognised when exchange transactions occur (and not as cash or its equivalent is received or paid), and they are recorded in the accounting records in the periods to which they relate (IASC 1989: para. 22). Therefore, if an employee renders services to an employer, the expense of the employee compensation must be recorded in the period in which the services are rendered and not when cash is finally paid to the employee (IASC 1998: Objective). The recent issuance of IFRS 2 – *Share-based Payment* by the IASB requires ESOs granted to employees to be recognised in financial statements (IASB 2004c: para. 7). Consequently, if an employee is compensated with ESOs, the value of the ESOs granted to the employee in exchange for services would need to be determined at an interim stage before exercise date, in order to recognise the compensation expense in the income statement when the services are rendered and *not* when the cash is paid for such services.

From a review of the prevailing literature on the valuation of ESOs, it is evident that the valuation thereof is complex and highly controversial. It would seem logical to assume that because an ESO is a type of call option, option-pricing models, such as the Black-Scholes-Merton model or the Cox-Ross-Rubenstein binomial model, could be used to value the ESO instrument. However, Brown & Katsanis (2002) state that such classic option-pricing models were specifically developed to be used to value traded options that can be bought or sold on the open market. Since ESOs differ in a number of important respects from traded options, Malkiel & Baumol (2002: A18) contend that valuing ESOs with an option-pricing model such as the Black-Scholes-Merton model may not produce accurate results. This paper specifically assesses whether option-pricing models can be used to value ESOs for accounting purposes. By using a literature review technique, the paper briefly examines the various option-pricing models developed for valuing ESOs and then relates these to the measurement proposals of IFRS 2. The paper uses this approach to prove whether the measurement principles of IFRS 2 are academically acceptable. This paper should also put into perspective the media hype surrounding the valuation of ESOs for accounting purposes.

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The fair value approach to valuing ESOs

ESOs can be measured using various measurement bases, including historical cost, intrinsic value, minimum value and fair value. The meaning of historical cost is self-evident; the intrinsic value method measures the ESO at the positive difference between the current market price of the underlying shares and the exercise price of the options; while the minimum value method ignores the volatility variable when valuing ESOs (Sacho 2003: 114–115). However, the first three methods all suffer from a deficiency in that they do not capture the full value of the ESO (IASB 2004b: para. BC77, BC79 & BC83). It is only the fair value approach that captures the total value of the ESO.

IAS 39 – *Financial Instruments: Recognition and Measurement* defines the term 'fair value' as ''the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction'' (IASB 2003: para. 9). Financial accounting has evolved from making use of the historical cost approach as the main measurement basis for financial instruments to the use of the fair value approach to measuring financial instruments in most instances. Today, it can be said that fair value affects the measurement of most transactions, including transactions in which non-cash resources are acquired through the issue of equity instruments. For example, a business acquisition is measured at the fair value of the consideration given, including the fair value of any equity instruments issued by the acquiring entity (IASB 2004a: para. 24). It follows that measuring ESO transactions at fair value ensures that these transactions are represented faithfully in the financial statements, and consistently with other transactions in which the entity receives resources (employee services) as consideration for the issue of equity instruments (ESOs). It is felt that this treatment is correct, since it is not only consistent with the valuation of other financial instruments, but also reflects the substance of the transaction in that the entity is compensating the employee with valuable instruments for services rendered, or to be rendered, to the entity. The sections that follow address the various methods of determining the fair value of ESOs for accounting purposes. Based on the results found, the paper then attempts to prove whether IFRS 2's methodology of valuing ESOs is correct or not.

Factors affecting the valuation of a traded call option

As mentioned in the introduction to this paper, an ESO is a call option written by the company on its own shares. In order to understand the option-valuation techniques for valuing ESOs for accounting purposes, it is first necessary to understand the factors that affect the valuation of a normal traded option.

Before delving into the valuation of a call option, some terminology needs to be explained. A 'call option' is defined as the right, but not the obligation, to *buy* an asset at a pre-agreed price on or before a given date. A 'put option' gives the holder the right, but not the obligation, to *sell* an asset at a pre-agreed price on or before a given date. The pre-agreed price in the contract is known as the 'exercise price' or 'strike price'; the future date is known as the 'expiry date', 'expiration date' or 'maturity date', and the asset is known as the 'underlying asset' or the 'underlying' (Hull 2002: 4, 160; Ross, Westerfield, Jordan & Firer 2001: 625). In this paper, the underlying asset is assumed to be a share in a company, unless stated otherwise. The date on which the option is taken up or exercised is known as the 'exercise date', and the amount of time until the expiry date of the option is known as the 'option term'. A 'European option' is an option that can only be exercised on the expiry date, whereas an 'American option' can be exercised at any date until the expiry date (Hull 2002: 4–5, 160). Most option contracts require that the buyer or holder pay for this right. This payment to the option seller or writer is known as an 'option premium', which is determined by market forces and is equivalent to the option's value or price (LIFFE [S.a.]a).

In simple terms, a call option derives its value from the fact that the holder thereof has the right to purchase the underlying shares at a discount to the market. It is similar to a discount coupon a consumer gets at a supermarket. With a discount coupon, the consumer is able (has the right) to purchase an item off the shelf for less than the shelf price. Similarly, a call option gives the holder the right, but not the obligation, to purchase the underlying shares at the strike price instead of the prevailing market price. It is this 'discount', being the difference between the prevailing market price of the underlying shares and the strike price of the call option, that creates value for the option holder. The reason is that, at exercise date, the option holder can use the option as legal tender to acquire the underlying shares at the strike price instead of

the prevailing market price. This 'discount' is known as the option's intrinsic value. Hull (2002: 167–168) defines the term 'intrinsic value' as the maximum of the value that the option would have if it were exercised immediately (in other words, the difference between the current market price of the underlying asset and the strike price) and zero. If the option has a positive intrinsic value, whereby the current market price of the underlying shares is greater than the strike price (known as an 'in-the-money option'), the call option has value for the option holder. The reason is that if the option holder could exercise the option immediately, the option would entitle the option holder to purchase the underlying shares at the cheaper strike price rather than at the prevailing market price. Ignoring transaction costs, the option holder could then immediately sell the shares at the market price, thereby realising a cash inflow and a profit equal to the option's intrinsic value (Ross et al. 2001: 626; Hull 2002: 167–168).

From the option holder's perspective, until the earlier of expiry date and exercise date, call options written on shares become more valuable as the share price increases above the strike price of the options, and they become less valuable as the share price decreases (Ross et al. 2001: 626). Therefore, over the option's term, increases in its intrinsic value increase the call option's value, and decreases in intrinsic value have the opposite effect. However, Hull (2002: 168) points out that the total value of a call option is not equal to its intrinsic value. Rather, it is equal to the sum of the option's intrinsic value and its time value. The London International Financial Futures Exchange (LIFFE) ([S.a.]b) defines the term 'time value' as the value over and above the intrinsic value of the option that the market places on the option. The time value of an option is a function of the following variables:

- The time to expiry date
- The volatility of the underlying share price
- The risk-free interest rate
- The dividends expected during the life of the option (LIFFE [S.a.]b).

'Time to expiry date' refers to the amount of time outstanding until the expiry date of the option. The time to expiry variable influences the value of the call option, because the further away the expiry date is, the more opportunity there is for the share price to rise above the strike price. Reference is made only to the share price rising above the strike price, because we consider only factors affecting the probability that the option holder will exercise the ESOs. Thus, the longer the time outstanding until expiry date, the greater the option's time value. As the expiry date approaches, the time value of a call option tends to zero, and the rate of time value decay accelerates. The symbol theta (θ) measures the effect that time to expiry date has on an option's time value. 'Volatility' is a mathematical measure of the amount of movement observed in the underlying share price so as to help predict future share price movements. The more volatile the underlying share price is, *ceteris paribus*, the greater the probability that the share price will move above the strike price, making the call option more valuable. Likewise, decreases in volatility tend to decrease a call option's time value. The symbol vega (ν) is used to denote the effect that a change in implied volatility has on an option's value (Hull 2002: 183–184, 317; LIFFE [S.a.]b). Hull (2002: 184–185) states that the risk-free interest rate affects the price of a call option indirectly. In general, an increase in the risk-free interest rate increases the growth of the underlying share but decreases the present value of the intrinsic value that the optionee will receive. The first effect will always dominate the second effect, making the price of a call option rise when the risk-free interest rate increases. In general, dividends have the effect of reducing a share price on the ex-dividend date. Consequently, the value of a call option bears an inverse relationship to the size of any anticipated dividends (Hull 2002: 184–185).

Over the years, option-pricing models have been developed that combine the foregoing variables in order to compute the total value for a traded share option at an interim stage. A traded share option is a share option that can be bought and sold in an active market such as the Chicago Board Options Exchange (LIFFE [S.a.]a). Option-pricing models employ very advanced mathematical tools to value traded share options, but these fall beyond the scope of this article. Today, the two most significant models for valuing traded share options are the Black-Scholes-Merton option-pricing model and the Cox-Ross-Rubenstein binomial option-pricing model. The valuation of options was found to be of such significant influence to society that the developers of the Black-Scholes-Merton model, Robert C. Merton and Myron S. Scholes, shared the Nobel Prize in Economic Sciences in 1997. Fischer Black, who would have shared the Nobel Prize, was deceased at the time the award was conferred (*Economist* 2002).

Differences between traded share options and employee share options (ESOs)

Introduction

Although ESOs are a type of call option, they differ in a number of important respects from traded share options. These differences significantly complicate the problem of applying traditional option-pricing models developed specifically for traded share options to the valuation of ESOs (Rubenstein 1994: 5). Before exploring the various option-pricing models developed for ESOs, it is first necessary to address the differences between traded options and ESOs.

Option term

The option term of ESOs is much longer than that of a conventional traded option, as this gives the employee sufficient time to boost the share price above the exercise price, which simultaneously allows the entity to retain its employee for this period of time. Over longer periods of time, it becomes difficult to estimate the underlying share's volatility and dividend yield, which are inputs in conventional option-pricing models. Furthermore, with long periods of time, even slight errors in such variables can materially change the calculated option values based on option-pricing formulae (Rubenstein 1994: 6–7; IASB 2002a: para. BC174).

In addition, because of the possibility of early exercise as explained later, the option term of ESOs is stochastic (random), which is in contrast to the Black-Scholes-Merton model that relies on a determinable option term. Option-pricing models such as the Black-Scholes-Merton model also rely on the fact that volatility remains constant over the life of the option. However, because of an increased option term with an ESO, such an assumption will not hold (Hemmer, Matsunaga & Shevlin 1994: 25). In fact, Varian (2002: C2) points out that the purpose of issuing ESOs is to increase the underlying share price, and it is therefore illogical to assume that the statistical properties of ESOs are constant.

Vesting conditions and forfeiture probability

Most ESO contracts include vesting conditions. These are conditions that must be satisfied before the employee is entitled to exercise the share options (IASB 2002b: para. IG31). Such conditions can be broken down into the following:

- Service conditions – the employee must remain in the entity's employ for a specified period before being eligible to exercise the options. Such options are also termed 'fixed options' or 'plain vanilla plans'.
- Performance conditions – the company must achieve a certain growth target (for example, share price increase or market share growth) before the employee can exercise the options. Such options are also termed 'variable options' or 'performance options' (Cuny & Jorion 1995: 195; IASC 2000: Appendix D).

These vesting conditions are unique to ESOs and do not occur with traded options.

The date on which the employee fulfils the vesting conditions is called the 'vesting date'. From this date until the expiry date, the option can be exercised, and the underlying shares can be bought and sold. However, before this date, the option cannot be exercised (MyOptionValue.com [S.a.]). Accordingly, an ESO is sometimes called a Bermudian option (being between the United States and Europe), because it is not an American option (since it cannot be exercised at any time), nor is it a European option (since it can only be exercised at any time after the vesting period) (Rubenstein 1994: 8). Should the vesting conditions not be fulfilled (for example, if the employee leaves during the vesting period), any unvested ESOs lapse. Alternatively, should the employee have vested options and terminate his or her services early, the options must be exercised immediately (Carpenter 1998: 128; Cuny & Jorion 1995: 195; IASB 2002b: para. IG31). Both Cuny & Jorion (1995: 195) and Rubenstein (1994: 10) argue that the existence of vesting conditions creates a forfeiture probability that does not exist with conventional options, and it is this forfeiture probability that significantly reduces the value of an ESO compared to a traded option as a result of the option's term being reduced. Similar sentiments were expressed by Weygandt (1977: 48–49) and Young (1993: 58–59).

Non-transferability (liquidity value) and non-hedgeability

Unlike traded options, which can be traded on an options exchange, ESOs are inalienable and therefore cannot be sold by the employee – they can only be exercised (FASB 1995: para. 169). The G4+1 Paper (2000) notes that the inability to transfer an ESO limits the opportunities available to the holder before the expiry date to terminate exposure to future price changes in the underlying

shares. For example, the holder may wish to sell the option if he or she believes that over the remaining term, the underlying share price will fall. In the case of a normal traded option, the option holder could sell the option rather than exercise it, which enables the holder to receive the option's fair value (its intrinsic value and remaining time value). However, with an ESO, the only possibility open to the option holder in such situations is to liquidate his or her position by exercising the option (albeit after the vesting period), which entails forgoing the remaining time value and only receiving the option's intrinsic value (IASC 2000: para. 4.30-4.32). Accordingly, this results in the time value of an ESO being significantly less than that of a conventional traded option, causing the ESO to be valued at less than a traded option.

Bodie, Kaplan & Merton (2003: 66) and Hall & Murphy (2002: 8) point out that most executives are inherently undiversified, with their physical as well as their human capital being invested disproportionately in their company. Hence, if such people are compensated with options, they will tend to reduce their risk profile and diversify their portfolios. Since they cannot realise their ESOs on the market, they will tend to exercise them as early as possible so as to diversify their wealth (Bodie et al. 2003: 66; Hall & Murphy 2002: 8). Therefore, by imposing the restriction on transferability, the entity has shortened the life of the ESO relative to a traded option, reducing its value accordingly.

Furthermore, Huddart (1994: 210–211) explains that in the United States, the employee can also not implement a trading strategy to hedge his or her position in the employer's shares by short selling the shares. This is prohibited by section 16-c of the Securities Exchange Act (Carpenter 1998: 131). Similarly, ED 2 notes that employees are often unable to protect themselves from future changes in the value of their options by buying and selling derivatives such as a zero-cost collar, as such arrangements are not always available from investment bankers (IASB 2002a: para. BC158-BC159). Hedging restrictions coupled with non-transferability restrictions therefore imply that executives may exercise their ESOs earlier, causing the value of the option to be significantly less than that predicted by the classical option-pricing models (Rubenstein 1994: 13; Noreen & Wolfson 1981: 385–386).

Other features of employee share options

According to Rubenstein (1994: 17), the exercise strategy of the employee is also dependent upon the taxation legislation in the relevant country and the type of ESO (for example, indexed options, fixed options or variable options). For example, an employee may decide to delay exercising the option in order to postpone the payment of taxation. Such delay may increase the value of the option, because the time value of the option increases (Rubenstein 1994: 17).

Although prohibited in most countries, ESOs may also be exercised in a different manner to a traded option if employees (especially executives) are privy to inside information not yet available to the market, which would not be the case with traded options (Hemmer et al. 1994: 25; Carpenter 1998: 128). Finally, Kulatilaka & Marcus (1994: 53) found a further anomaly with ESOs, in that their values tend to fall when volatility rises, which is in contrast to conventional option-pricing model predictions.

Justification for the use of option-pricing models for valuing ESOs for accounting purposes

Because of the many differences between ESOs and traded options discussed in the previous section, it could be argued that it is not possible to measure ESOs reliably using option-pricing models (IASB 2002a: para. BC288). However, the IASB concluded that there is a large body of academic literature to support a conclusion that it is possible to make a reliable estimate of the fair value of ESOs using option-pricing models. This argument is examined in the following section. The IASB also felt that users of accounts (in response to its G4+1 Discussion Paper) regarded the estimated fair values of ESOs using option-pricing models as being sufficiently reliable for recognition in the financial statements. It argued that the purpose of setting accounting standards is to ensure that, wherever possible, the information provided in the financial statements meets users' needs (IASB 2002a: para. BC291). Consequently, if the users of financial statements regarded the fair value estimates using option-pricing models as sufficiently reliable for recognition in the financial statements, this provides sufficient evidence of measurement reliability.

Furthermore, the IASB noted that option-pricing models provide only estimates of the actual value of ESOs, which may result in some understatement or overstatement of the ESOs (IASB 2002a: para. BC280). However, IAS 8 – *Accounting Policies, Changes in Accounting Estimates and Errors* states that the use of reasonable estimates is an essential part of the preparation of financial statements and

does not undermine their reliability (IASC 1993: para. 33). For example, material estimates are made for the collectability of doubtful debts, the useful life of property, plant and equipment, and for valuation of post-employment benefit liabilities. Thus, the authors contend that making estimates of the value of ESOs using option-pricing models does not detract from the reliability of financial statements.

Finally, the IASB acknowledged that the mathematics surrounding option-pricing models is complex, but felt that this should not preclude their use. The reason is that only the input variables into such models need to be determined, and the necessary calculations are performed on a calculator or spreadsheet (IASC 2000: para. 4.25). Similarly, the Financial Accounting Standards Board (FASB) noted that, as for the pension fund liability, where the accountant uses an actuary to estimate the fair value of the liability, so too it is unnecessary for the accountant to understand the inherent mathematics in option-pricing models (FASB 1995: para. 164). Consequently, recent proposals by the FASB and the IASB regarding the measurement of ESOs have correctly gone the route of using option-pricing models to determine the fair value of ESOs.

Some option-pricing models available for valuing ESOs for accounting purposes

Introduction

It must be pointed out that the objective in determining the fair value of ESOs for accounting purposes is to determine the price at which a willing buyer and a willing seller would be prepared to exchange for the ESOs in an arm's length transaction (FASB 1995: para. 9; IASB 2002a: para. BC80). It is submitted that such amount is equivalent to the option premium or value the ESO would attract if sold or issued by the company on the market to a third party investor for cash. It is this value that must be determined using an option-pricing model, in order to accurately record the value of the ESOs issued to compensate the employees. It is therefore quite possible for a valuation technique to value ESOs but not to satisfy the objective of 'fair value'.

In an innovative paper, Hall & Murphy (2002: 3) made the quintessential distinction between the 'executive value' of an ESO and the 'company cost' of an ESO. They stated that the economic cost to the company (the option writer) of granting an ESO is the amount that the company could have received if it were to sell, in an arm's length transaction, a similar option with similar terms to an outside investor as a share purchase warrant. Therefore, the economic cost to the company of granting an ESO is equal to the opportunity cost of issuing the ESO to the employee and thereby forfeiting the option premium proceeds it could have received had it issued the ESO on the market for cash. These authors correctly pointed out that it is this value that should be measured using an option-pricing model, since this meets the objectives of 'fair value' for accounting purposes as it determines the value of the equity instrument issued to acquire the employee's services. However, the value to an undiversified risk-averse executive (the option holder) is the amount of riskless cash that the holder would exchange for a non-tradable option, and this amount must not be used for financial accounting purposes (Hall & Murphy 2002: 9). The difference between the cost of the option to the company and the value of the option to the executive is a function of the executive's risk premium, which is usually quite high as a result of the undiversification of the executive's portfolio and his or her relative risk aversion (Hall & Murphy 2002: 6–9). Consequently, only adjustments affecting the value of the options to the writer thereof must be made to classic option-pricing models when using them to value ESOs for accounting purposes. Because the risk premium of the executive is higher than that of an outside investor willing to purchase a similar option, the value of an ESO to the executive is lower than that of the investor and therefore the issuing company.

The following sub-sections explore various option-pricing models developed for valuing ESOs as described in the academic literature. The purpose of this review is to demonstrate that ESOs can be valued with reasonable reliability for the purposes of financial reporting. On the basis of this review, the requirements of IFRS 2 with respect to the valuation of ESOs will be evaluated. It would not be appropriate for the authors to express an opinion as to the exact technical workings of each option-pricing model examined, as this falls beyond the scope of the article. Rather, the accountant will need to instruct the relevant expert doing the valuation of the ESOs that the objective of 'company fair value' must be achieved. Consequently, each of the valuation techniques mentioned in the following sub-sections must be evaluated and adjusted where need be, to see whether they meet the conditions of 'company fair value'.

The modified Black-Scholes-Merton model

In October 1995, the FASB issued Statement No. 123 (SFAS 123) – *Accounting for Stock-based Compensation*, which is still in force today in the United States. According to research conducted by Ernst & Young LLP, the overwhelming majority of US companies use the Black-Scholes-Merton model to value their ESOs for the purposes of SFAS 123 disclosure (Ernst & Young LLP 2002: 5). Weygandt (1977: 50) found that option-pricing models such as the Black-Scholes-Merton model provide good answers to the valuation of nonqualified stock options (NQSOs) in the United States. In fact, Foster, Koogler & Vickrey (1991: 595) used the normal (non-dividend) Black-Scholes-Merton model for valuing ESOs for firms that do not pay dividends, and the continuous dividend version developed by Merton (1973) for firms that do pay cash dividends.

Jennergren & Näslund (1993: 182) proposed a modification to the Black-Scholes-Merton model which takes into account the fact that an executive may leave the organisation early before the options have matured. They denoted this feature inherent in ESOs in their modified valuation model by using the symbol lamda (λ). These authors found that if λ was constant and followed a Poisson process, the value of ESOs could be calculated using the Black-Scholes-Merton model (Jennergren & Näslund 1993: 180, 182). Cuny & Jorion (1995: 193, 195–196) further developed this model and proved that λ should not be assumed to be constant, but rather is negatively correlated with share price performance. They concluded that ignoring the link between departure rates (λ) and the share price leads to a substantial under-valuation of ESOs (Cuny & Jorion 1995: 2003).

Hemmer et al. (1994: 38–40) also developed a modification of the Black-Scholes-Merton model to compute the value of an ESO. They computed the value of the ESO as if it expired at vesting date, plus the expected time the ESO would be held from the vesting date until expiry date, multiplied by the annual average increment in the value of the ESO from the vesting date until expiry date (Hemmer et al. 1994: 38–40). Furthermore, the Analysis Group/Economics extended the Black-Scholes-Merton model to take into account all the unique features of ESOs so as to determine the fair value of the ESO, which would equal the hypothetical price that a diversified outside investor would pay for the right to receive the ESO cash flows in an arm's length transaction. Such value would meet the objectives of 'fair value' for accounting purposes as already described (Sinnett 2003: 55).

However, severe criticism has also been levelled at the use of the Black-Scholes-Merton model for determining the fair value of ESOs. Frederic W. Cook & Co. Inc. (2002: 2) notes that US companies used the unadjusted Black-Scholes-Merton model to value their ESOs and that this grossly overvalued the options, because the model does not take into account all the differences enumerated earlier between ESOs and a normal traded option. According to Maxim Integrated Products Inc. (2002: 2), the reliability of the Black-Scholes-Merton model for measuring options for longer periods is not empirically supported. They emphasise that the model makes use of a number of assumptions and inputs, such as volatility, risk-free interest rate, dividends and option duration, all of which are subjective and prone to manipulation. They therefore conclude that the Black-Scholes-Merton model cannot be used to achieve credibility and comparability of financial statements because of its distortion of the true value of ESOs (Maxim Integrated Products 2002: 2). This is supported by Ciccotello & Grant (1995: 76), who note how new companies with higher volatilities in their share price would attempt to minimise the impact of the Black-Scholes-Merton model on their earnings by making the estimates of share price variances as low as possible. This literature suggests that an adjusted Black-Scholes-Merton model provides inaccurate valuation results for ESOs.

Nevertheless, Soffer (2000: 170) found that although other models may be theoretically sounder, the SFAS 123 proposals in computing the ESO values (of which the Black-Scholes-Merton model is the most-used method) provide reasonable values for computing a discounted cash flow valuation of a firm. Similarly, Carpenter (1998: 129, 147) found that the Black-Scholes-Merton model was very close to the correct option value under the 'adjusted' valuation techniques employed in her survey; in fact, she found that the Black-Scholes-Merton model values were slightly less than the values generated by other models used in her study. Hall & Murphy (2002: 6–7, 37) contend that the reason executives feel that the Black-Scholes-Merton model values ESOs too high is that the model does not consider the 'risk-adjusted pay' from the executive's point of view. They maintain that although the Black-Scholes-Merton model does require certain adjustments in order to be used to value ESOs, any restrictions on tradability and hedging affect the value of the ESOs to the

executive (the option holder) and *not* its cost to the company (the option writer) (Hall & Murphy 2002: 15). Similar views are expressed by Carpenter (1998: 132) and Lambert, Larcker & Verrecchia (1991: 130–131, 145).

The modified binomial option-pricing model

Maller, Tan & Van de Vyver (2002: 13) emphasise that the binomial lattice and similar option-pricing models developed by Cox, Ross & Rubenstein (1979) are extremely flexible in that they can be extended to more ''exotic options'' such as ESOs. Rubenstein (1994: 1–19) developed an enhanced binomial option-pricing model for ESOs requiring 16 input variables, yet he found that different assumptions could lead to material deviations in ESO prices. Aboody (1996: 362–365) also developed a modified version of the binomial option-pricing model to value ESOs. His model required that during the vesting period, the value of the ESO was the value of a normal option multiplied by the probability that the employee would remain in the firm until the option vests. After the vesting period, the value of a vested option would be multiplied by the probability of early exercise to account for the non-transferability aspects of ESOs. His model assumed a constant share volatility and dividend payout ratio, since estimating such variables was deemed to be too subjective (Aboody 1996: 362-365). This suggests that Aboody's model could not be applied in practice, since it would be incorrect to assume a constant share volatility and dividend pay-out ratio for any company, especially in today's volatile economic environment.

Other researchers developed binomial valuation models to take into account the effects of non-transferability and non-hedgeability of ESOs. Both Kulatilaka & Marcus (1994: 47–55) and Huddart (1994: 211–230) developed binomial option-pricing models based on the optimal exercise policy of the option holder that is unable to hedge or sell the ESOs. More recently, Analysis Group/Economics designed a model for ESOs that assumed that the underlying shares follow a binomial process and that exercise decisions are made so as to maximise the utility of the optionee's expected wealth (Sinnett 2003: 55). Nevertheless, Maller et al. (2002: 12) felt that such utility-maximising models require estimates that are impractical to obtain from anyone other than the actual employee. In addition, the authors submit that making some of these adjustments may be unnecessary, because some of the adjustments affect only the value of the ESO to the executive and not to the company.

Carpenter (1998: 133) developed an extension of the binomial option-pricing model to value an American option by introducing a so-called 'stopping-rate' (q) to the standard model. The stopping rate is the probability that the executive will stop the option early as a result of any event relevant to ESOs but not to traded options, such as a desire to diversify or employment termination. She felt that apart from the stopping rate, the executive would act in exact accordance with American option theory (Carpenter 1998: 129). She also found that her extended American option model performed identically to the more complex utility maximising models developed by Huddart (1994) and Kulatilaka & Marcus (1994), suggesting perhaps that little is gained by incorporating a preference-based decision process in a valuation model (Carpenter 1998: 154). On the basis of her results, therefore, Carpenter's model could potentially be used to value ESOs for financial reporting purposes.

Finally, Maller et al. (2002: 14) developed a binomial model that incorporated the possibility of executive departure and other specific features found in ESOs issued by Australian listed companies. Their model was applied to more than 100 Australian companies, and they found that using their model proved to be informative and useful to shareholders (Maller et al.: 2002: 12, 20). This further supports the argument that a binomial model can be used to value ESOs for accounting purposes.

The Boudreaux & Zeff model

Boudreaux & Zeff (1976: 159–162) proposed using the Capital Asset Pricing model as described by Sharpe (1964) and Lintner (1965) to estimate the future share price of a firm. They then suggested that the difference between the expected future share price and the exercise price, discounted using the expected return on the shares derived from the Capital Asset Pricing model, is to be used as the valuation of ESOs (Boudreaux & Zeff 1976: 160–162). However, Smith & Zimmerman (1976: 359) criticised such a model, in that the parameters required to implement the model were not objective and verifiable, and discounting based on the expected return of the share could not be applied in this scenario. This demonstrates that their model could not be applied for accounting purposes.

The Valrex® model

The ingenious Valrex model values an ESO by first determining its values as a traded call option and

then stripping away the option's liquidity value (that is, the value attributable to being able to sell the option). It uses the principle that if one holds a security that cannot be traded for a certain period and purchases a put option to sell such security at its free-market price, the holder has effectively purchased marketability for the security. The price of the put option is therefore the liquidity value of the security. The Valrex model computes the fair value of a freely tradable call option on the underlying shares of the ESO using a trinomial (as opposed to a binomial) option-pricing model, similar to that developed by Cox et al. (1979). Thereafter, the liquidity value is computed using an at-the-money 'put-on-call option', which is a put option to sell the freely tradable call option at an exercise price equal to the current price of the call option. The difference between the fair value of the freely tradable call option and the put-on-call option is the Valrex's fair value of the ESO, which therefore excludes any selling privileges embedded in the freely tradable call (Katsanis 2001: 4, 8). Katsanis (2001: 8; 2002) reports that the Valrex model results in a more reliable measure of ESO value than the Black-Scholes-Merton model and other option-pricing models. In contrast to the Black-Scholes-Merton model, the Valrex model did not fluctuate significantly as the volatility input variable changed (Katsanis 2001: 8). The results of this research imply that the Valrex model could be a reliable alternative in valuing ESOs for accounting purposes.

From the literature reviewed, it is evident that option-pricing models have been explored thoroughly in the academic literature and can be modified to take into account the differences mentioned in the discussion of each of the models. Thus, many of the valuation models developed can be used to value ESOs adequately for accounting purposes. However, it is evident from the literature review that the binomial model provides more flexibility for valuing ESOs with different option contractual terms. Such flexibility and academic superiority of binomial models should mean that the binomial model is more appropriate for the valuation of ESOs than the Black-Scholes-Merton model.

The requirements of IFRS 2

IFRS 2 states that, ideally, the fair value of the ESO should be determined at the fair value of traded call options with similar terms and conditions. However, if no such traded call option exists, an option-pricing model (such as the Black-Scholes-Merton model or a binomial model) may be used instead (IASB 2004c: para. 17). IFRS 2 does not specify a specific model for determining the fair value of the ESO, and by implication allows an entity to follow either a binomial or similar model or the Black-Scholes-Merton model. Consequently, any of the models discussed could be used to value ESOs, provided that they meet the requirements of the standard (as discussed later). The reason is that the IASB felt that at the time of writing, there was no conclusive method for valuing ESOs. It reasoned that the purpose of accounting standards is to set principles, rather than setting prescriptive standards on valuation, which would become outdated by improved valuation methodologies in the future (IASB 2004b: para. BC162 & BC177). However, the authors feel that the IASB should narrow down the selection of option-pricing models for ESOs and instead prescribe specific models for ESO valuation (for example, the binomial model). This would facilitate comparability and consistency between companies, in accordance with the IASB Framework. By not doing so, companies may be enticed to choose an option-pricing model that results in the lowest ESO value. Alternatively, companies could be required to use two valuation models for valuing their ESOs, so that one model acts as a reasonability test for the other, thus containing the risk of manipulation.

IFRS 2 correctly points out that the objective when valuing ESOs for accounting purposes is to value the ESOs from the perspective of a knowledgeable, willing market participant who has access to detailed information about employees' exercise behaviour (IASB 2004c: paras. B7 & B10). Thus, factors that affect the value of the ESOs from the employee's perspective only are not relevant to estimating the price of the ESOs for accounting purposes.

IFRS 2 states that the valuation of ESOs must be reduced to allow for the probability of forfeiture due to the non-fulfilment of vesting conditions (IASB 2004c: para. 19). This is correct, because if an outside investor wished to purchase the ESO, he would have had to consider the fact that it can only be exercised after fulfilment of vesting conditions. IFRS 2 suggests that to account for the effects of non-transferability and non-hedgeability, either the ESO's *expected life* (rather than its contracted or *maximum life*) must be entered into the option-pricing model, or the effects of early exercise must be modelled into the model. It asserts that the use of the expected life or modelling early exercise in the option-pricing model, is appropriate, whether or not the employee can hedge his or her position using derivatives. The reason is that if the employ-

ee were able to hedge the effects of non-transferability by using derivatives, this would result in the ESOs being exercised later than they otherwise would be. Therefore, non-transferability would not be a constraint in this case, resulting in estimated life being equal to contractual life. However, if the employee cannot mitigate the effects of non-transferability through the use of derivatives, he or she is likely to exercise the options much earlier. This would significantly reduce the estimated value of the option (IASB 2004b: para. BC165). The authors submit that this is sound academic logic and would result in the correct valuation of ESOs for accounting purposes.

IFRS 2 requires companies to estimate expected volatility, dividends and the risk-free interest rate using factors that knowledgeable, willing market participants would consider (IASB 2004c: paras. B5–B6). Thus, these variables must use market assessments of the future instead of simply basing estimates on historical information (IASB 2004c: para. B15). This requirement is consistent with the definition of 'fair value', since it estimates the fair value and considers the forecasts that a knowledgeable, willing buyer would consider in deciding to purchase the ESOs.

Finally, IFRS 2 states that in exceptional circumstances, when no fair value of the ESO can be determined, the entity must value the ESO using its intrinsic value until the earlier of exercise date and expiry of the ESOs (IASB 2004c: para, 24). The authors submit that such a requirement is consistent with IAS 39, which requires investments whose fair value cannot be determined reliably to be measured at cost instead of fair value (IASB 2003: para. 46(c)). However, the authors feel that the approach of IFRS 2 in extending the measurement date beyond vesting date is inconsistent with its own requirements that equity instruments cannot be remeasured after issuance date. If one assumes that the ESOs are finally issued at vesting date (which is the logic behind IFRS 2), then no remeasurement can occur after that date. However, where fair value cannot be estimated reliably, IFRS 2 requires ESOs to be remeasured even after vesting date.

Conclusion

Based on the literature review, this paper has shown that the fair value approach for valuing ESOs is the most correct measurement base for valuing ESOs. This accords with IFRS 2, which requires the fair value of ESOs to be recognised at grant date. The paper demonstrates that the most appropriate method of determining such fair value is through the use of an option-pricing model, preferably a binomial option-pricing model. IFRS 2 also requires the use of an option-pricing model to value the ESOs, yet fails to narrow down which valuation model to use. Although it does try to solve the problem by providing further guidance on the selection of an appropriate model in Appendix B of IFRS 2, the authors nevertheless feel that the Standard falls short in this area.

The paper then found that the objective when valuing ESOs for accounting purposes is to determine the amount that the company (the option writer) would have received from a third party investor for the same option issued to the employee. In other words, the opportunity cost of paying the employee with options compared with issuing them on the market for cash must be measured. Consequently, only adjustments that affect such equilibrium arm's length price must be made when adapting existing option-pricing models to the unique features of ESOs. Factors that affect the risk premium of the executive but do not affect that of the issuer (or writer) must be ignored when valuing ESOs for accounting purposes. IFRS 2 defines the term 'fair value' in a very similar manner to the findings of this paper and correctly requires adjustments to be made for differences between normal traded share options and ESOs.

Although the requirements of IFRS 2 regarding the valuation of ESOs are complex, this does not undermine the reliability of financial statements. Many estimates are made for amounts included in the financial statements, and any over- or understatement of such numbers is part of the limitations of financial statements that users should be aware of. Nevertheless, provided that the estimates are within a reasonable range of the actual amount, making such estimates does not detract from the reliability of the financial statements. As demonstrated in this paper, a large body of financial literature exists regarding option-pricing models for ESOs. It should thus not be difficult to use one of these models to value the ESOs for the purposes of IFRS 2. Option-pricing requires advanced mathematics and corporate finance skills, which most accountants and auditors do not possess. The accountant or auditor would need to use the expertise of an expert such as a financial mathematician or a financial economist to value the ESOs for accounting purposes. This is consistent with IAS 19 – *Employee Benefits*, which allows the accountant to make use of an actuary to value the post-employee benefit obligation. When valuing the

ESOs, the expert will need to take into account the unique features of ESOs. In addition, the expert should ensure that the valuation complies with the requirements of 'fair value' for accounting purposes. It is submitted that the use of an expert does not undermine the veracity of the financial statements. On the contrary, it makes them more transparent and reliable, as they have been checked by an expert in the field of option-pricing.

In conclusion, it is fitting to say that although the requirements of IFRS 2 may have certain technical flaws and inconsistencies, the Standard provides the building blocks for future accounting standards on ESOs. If its requirements are applied consistently across the various countries and entities, the measurement uncertainties surrounding ESOs should be reduced to an acceptable level.

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Measuring emotional intelligence (EQ): a construct comparison between the Bar-On EQ-i and the OPQ32i EI report

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Recently, there has been increasing interest in the role of emotions in organisational life. Consequently, there is also widespread interest in the topic of emotional intelligence and its predictive validity for work performance. In researching the construct of emotional intelligence, it is of prime importance to investigate the measurement of the construct. The Bar-On Emotional Quotient Inventory (Bar-On EQ-i) is the world's first scientifically developed and validated measure of emotional intelligence (EQ) that has been made available commercially, and at the time of this study is regarded as the benchmark in the measurement of emotional intelligence. The Occupational Personality Questionnaire (OPQ32i) is a competency-based personality questionnaire used in recruitment and development environments. Both these instruments generate EQ reports and seemingly represent different views on EQ. Apart from its focus on the uniqueness of both approaches to EQ and its measurement, this study also explores the degree of the construct correlation between the two instruments. This is an exploratory study, and data were obtained from a total population of 38 sales managers in the South African financial services industry. The results indicate significant construct overlap and correlations between, firstly, the Bar-On EQ-i and the OPQ32i, and secondly, between the Bar-On EQ-i and OPQ32i Emotional Intelligence reports.

Introduction

Recently, a renewed recognition of the role of feelings and emotions in organisational life has emerged (Muchinsky 2000). A number of authors have emphasised the importance of understanding and managing the impact of emotions and related behaviours in terms of organisational success (Fischer & Ashkanasy 2000; Higgs 2001). Corporate interest appears to be strongly related to the continuing search for a way of securing a sustainable competitive advantage (Dulewicz & Higgs 2000). Emotional intelligence is one of the concepts that has received widespread interest in terms of its contribution to organisational effectiveness.

The term 'emotional intelligence' arose from the assumption that factors other than cognitive intelligence contribute to success or the achievement of personal goals (Bar-On 1988). The American psychologist Edward Thorndike (1920) was one of the first to identify the concept of emotional intelligence when he talked about 'social intelligence'. He argued that personal or social intelligence is distinct from academic abilities, and plays a central role in determining how well individuals deal with the practicalities of life. Later, David Wechsler (1943), one of the originators of IQ testing, recognised the importance of 'emotional factors', and argued that the 'non-intellective aspects of general intelligence' should be included in any 'complete measurement'. He defined intelligence as ''the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his (or her) environment'' (Wechsler 1958). In 1948, another American researcher, R.W. Leeper, argued for the idea of 'emotional thought', which he believed contributed to 'logical thought' (Stein & Book 2000). In 1955, Albert Ellis introduced Rational Emotive Therapy – a process that involved taking cognisance of emotions in a logical, thoughtful way (Stein & Book 2000). Then in 1983, Howard Gardner at Harvard University explored the possibility of 'multiple intelligences' and included what he called 'intrapsychic capacities', which in essence amounts to an aptitude for introspection or intrapersonal awareness, and 'personal intelligence'. Sternberg (1985) followed this trend, focusing specifically on

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the existence of a personal or emotional intelligence, and recognised the multi-dimensionality of intelligence. He proposed that intelligent behaviour entails processes and components that occur at different levels.

Salovey & Mayer (1990) coined the term 'emotional intelligence'. They defined emotional intelligence as the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional meanings, and to regulate emotions reflectively in ways that promote emotional and intellectual growth. They developed an ability model of emotional intelligence and consequently describe it as the ability to reason with and about emotions. This ability model of emotional intelligence is considered the most well clarified theoretically (Palmer, Walls, Burgess & Stough 2001).

In 1995, Daniel Goleman's *Emotional Intelligence: Why it can Matter more than IQ*, generated a flood of interest in the role that emotional intelligence plays in our lives, and effectively propelled the concept of emotional intelligence (EQ) into the public domain in a coherent and accessible way. Goleman (1995) adapted the model of Salovey & Mayer (1990) to explore how emotional intelligence relates to working life. His model splits emotional intelligence into the two broad categories of personal and social competence. It is thus a competence model, and Cherniss & Goleman (2001) argue that emotional competencies are job skills that can, and indeed must, be learnt. Emotional competence is defined as a learnt capability based on emotional intelligence that results in outstanding performance at work. Goleman's framework of emotional competence is set out in Table 1.

Dr Reuven Bar-On also investigated and defined emotional intelligence from a competency model perspective. According to Bar-On (1996b), emotional intelligence is defined as the array of personal, emotional and social abilities and skills that influence one's ability to succeed in coping with environmental demands and pressures. He identified five major conceptual components of emotional and social intelligence, which between them are comprised of 15 factors. These are outlined in Table 2.

Based on this framework, the Bar-On Emotional Quotient Inventory was developed. This inventory is arguably the first scientifically developed and validated measure of emotional intelligence. This inventory was commercialised in 1997, shortly after the appearance of Goleman's landmark publication (Goleman 1995), and is currently regarded as the benchmark instrument for measuring EQ. The respective composites and subscales of the Bar-On Emotional Quotient Inventory are illustrated in Figure 1.

Goleman's recent EI framework (Cherniss & Goleman 2001) elaborates on previous versions of his own framework. This altered model shows significant overlap when placed alongside the systematic view of Bar-On's EQ model – albeit after some re-notation and organisation of the scale hierarchy (see Table 2). This systematic view of Bar-On's model (Bar-On 1997a; 1997b) focuses on the arrangement of similar types of factors that logically and statistically fit together (that is 'interpersonal components' or 'intrapersonal components'). The

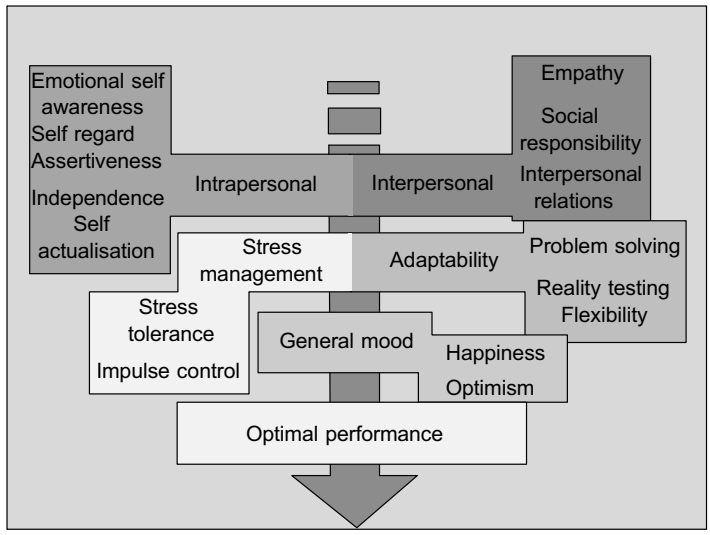

Figure 1: Bar-On EQ-i dimensions and subscales

Table 1: Golemans emotional competence framework

PERSONAL COMPETENCE: How we manage ourselves
A. SELF-AWARENESS
A1. *Emotional self-awareness:* Reading one's own emotions and recognising their impact; using 'gut sense' to guide decisions
A2. *Accurate self-assessment:* Knowing one's strengths and limits
A3. *Self-confidence:* A sound sense of one's self-worth and capabilities
B. SELF-MANAGEMENT/REGULATION
B1. *Emotional self-control:* Keeping disruptive emotions and impulses under control
B2. *Trustworthiness:* Maintaining standards of honesty and integrity
B3. *Conscientiousness:* Taking responsibility for personal performance
B4. *Adaptability:* Flexibility in adapting to changing situations or overcoming obstacles
B5. *Innovation:* Being comfortable with novel ideas, approaches and new information
C. MOTIVATION
C1. *Achievement drive:* The drive to improve performance to meet standards of excellence
C2. *Commitment:* Aligning with the goals of the group or the organisation
C3. *Initiative:* Readiness to act on opportunities
C4: *Optimism:* Persistence in pursuing goals despite obstacles and setbacks
SOCIAL COMPETENCE: How well we handle relationships
D. EMPATHY
D1. *Understanding others:* Sensing others' feelings and perspectives, and taking an active interest in their concerns
D2. *Developing others:* Sensing others' development needs, and bolstering their abilities
D3. *Service orientation:* Anticipating, recognising and meeting customer needs
D4. *Leveraging diversity:* Cultivating opportunities through different kinds of people
D5. *Political awareness:* Reading a group's emotional currents and power relationships
E. SOCIAL SKILLS/ RELATIONSHIP MANAGEMENT
E1. *Influence:* Wielding a range of tactics for persuasion
E2. *Communication:* Listening openly, and sending convincing messages
E3. *Conflict management:* Negotiating and resolving disagreements
E4. *Leadership:* Inspiring and guiding individuals and groups
E5. *Change catalyst:* Initiating or managing change
E6. *Building bonds:* Nurturing instrumental relationships
E7. *Collaboration and cooperation:* Working with others towards shared goals
E8. *Teamwork capabilities:* Creating group synergy in pursuing collective goals

reorganisation of the scales illustrates the content commonality between Bar-On's Emotional Quotient Inventory and Goleman's Emotional Competence Framework. However, it does not take cognisance of Bar-On's topographic approach (1997a; 1997b), which juxtaposes the factorial components of noncognitive intelligence according to a ranked order ranging from 'core (or primary) factors' to 'resultant (or higher order) factors', which are connected by a group of 'supporting (or secondary) factors' (as presented in Table 3). Core factors lead to resultant factors, which are both dependent upon the supporting factors, and include the respective weightings given to items in their loading on to domain scores.

Apart from the Bar-On Emotional Quotient Inventory (EQ-i^{TM}), several other assessments of emo-

Table 2: Bar-On emotional quotient inventory with Cherniss & Goleman notation

A. INTRAPERSONAL REALM (RA): Concerns what is generally referred to as the 'inner self'
A1. *Emotional Self-awareness:* The ability to recognise and understand one's feelings and emotions, differentiate between them, know what caused them and why.
A2 *Assertiveness. (Placed under domain B):* The ability to express feelings, beliefs and thoughts and defend one's rights in a non-destructive way.
A5. *Independence (Placed under domain E):* The ability to be self-reliant and self-directed in one's thinking and actions and to be free of emotional dependency.
A3. *Self regard:* The ability to look at and understand oneself, respect and accept oneself, accepting one's perceived positive and negative aspects as well as one's limitations and possibilities.
A4. *Self-actualisation (Placed under domain E):* The ability to realise one's potential capacities and to strive to do that which one wants to do and enjoys doing.
B. INTERPERSONAL REALM (ER): Concerns what is known as 'people skills'
B1. *Empathy:* The ability to be attentive to, to understand and to appreciate the feelings of others. It is being able to 'emotionally read' other people.
B3 *Interpersonal relations. (Placed in domain C):* The ability to establish and maintain mutually satisfying relationships that are characterised by intimacy and by giving and receiving affection.
B2 *Social responsibility. (Placed under domain A, B & C):* The ability to demonstrate oneself as a cooperative, contributing, and constructive member of one's social group.
C. ADAPTABILITY REALM (AR): Concerns the ability to size-up and respond to a wide range of difficult situations
C3. *Problem solving:* The ability to identify and define problems as well as to generate and implement potentially effective solutions.
C1. *Reality testing:* The ability to assess the correspondence between what is experienced (the subjective) and what in reality exists (the objective).
C2. *Flexibility:* The ability to adjust one's emotions, thoughts and behaviours to changing situations and conditions.
D. STRESS MANAGEMENT (SM): Concerns the ability to understand stress without caving in, falling apart, losing control or going under
D1. *Stress tolerance:* The ability to withstand adverse events and stressful situations without falling apart by actively and confidently coping with stress.
D2. *Impulse control (Under domain A):* The ability to resist or delay an impulse, drive or temptation to react.
E. GENERAL MOOD REALM (GM): Concerns one's outlook on life, the ability to enjoy oneself and others and one's overall feelings of contentment and satisfaction.
E2. *Happiness (Placed under domain D):* The ability to feel satisfied with one's life, to enjoy oneself and others, and to have fun.
E1. *Optimism:* The ability to look at the brighter side of life and to maintain a positive attitude even in the face of adversity.

Table 3: A topographic arrangement of the 15 factors of emotional intelligence measured by the Bar-On EQ-i

Core factors
Emotional self-awareness, Assertiveness, Empathy, Reality testing, Impulse control
Supporting factors
Self-regard, Independence, Social responsibility, Optimism, Flexibility, Stress tolerance
Resultant factors
Problem solving, Interpersonal relationships, Self-actualisation, Happiness

tional intelligence have entered the marketplace. Boyatzis, Goleman, Hay & McBer (in Dann 2001) developed the Emotional Competence Inventory (ECI). Others include the EQ Map™ from Advanced Intelligence Technologies and Essi Systems, Orioli, Sawaf and Cooper; the Emotional Intelligence Questionnaire (EIQ™) from Dulewicz & Higgs (2000), the Multifactor Emotional Intelligence Scale (MEIS™), and the Mayer, Salovey & Caroso EI Test (MSCEIT™) (Dann 2001).

All these measurements primarily assess emotional intelligence. Emotional intelligence reports are, however, also frequently generated as a second order application of a measurement. One such instrument that generates an EQ report is the OPQ32i, which is a competency-based personality questionnaire. The OPQ32 model is an occupational model of personality, which breaks personality down into three domains. These domains are Feelings and Emotions (FE), Thinking Style (TS) and Relationships with People (RP). Apart from a multitude of other second order applications (including team styles, reporting styles and leadership styles) this instrument also generates an emotional intelligence (EI) report. The OPQ32i EI reports on emotional intelligence on two domains and four subdomains, with the relevant OPQ scales loading on to each subdomain. The two umbrella domains are only descriptive and are not allocated scores, compared to the Bar-On EQ-i, where umbrella domains are allocated scores. The two domains are (1) Managing Feelings, which is concerned with how one manages thoughts, emotions and feelings; and (2) Managing Relationships, which is concerned with how one manages relationships with other people.

These two domains are each subdivided into two subscales. The two subscales that cluster under Managing Feelings are 'feelings and emotions' – how one handles one's feelings about oneself and others; and 'personal insight' – how well one understands one's feelings about oneself and others. The two subscales that cluster under Managing Relationships are 'empathy' – how one appreciates the perspectives of other people and how they feel or think about things, and 'social ease' – how flexible one's approach and style are to different work and social situations – as reported in Figure 2.

The OPQ32i EI report was developed on the basis of the theoretical model of Goleman and therefore shows significant construct commonality with Goleman's framework (1995). Although Goleman's Emotional Competence Framework (Cherniss &

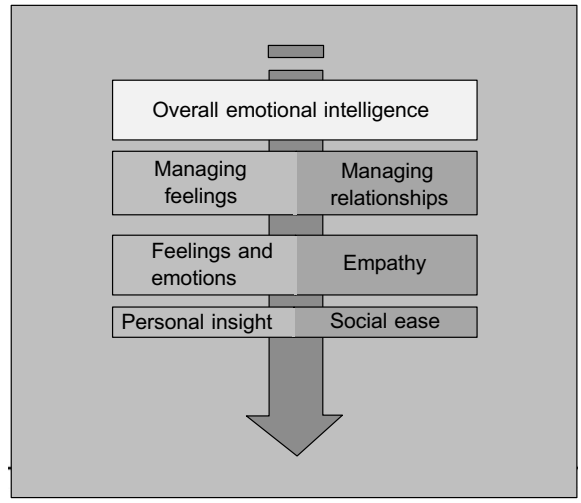

Figure 2: OPQ32i EI report – dimensions

Goleman 2001) has recently evolved quite significantly, the commonality is still evident. The two OPQ EI subscales under both the umbrella domains (Managing Feelings and Managing Relationships) correspond to Goleman's model and theory of EQ. 'Feelings and emotions' correspond to Goleman's 'self-awareness'; 'personal insight' corresponds to Goleman's 'self-management'; 'empathy' corresponds to Goleman's 'relation management'; and 'social ease' to Goleman's 'social skills' (see Table 1).

As mentioned earlier, there is renewed interest in the role of emotional intelligence in organisations and in the predictive validity of the construct for work performance. Law, Wong & Song (2004) confirm that emotional intelligence is a significant predictor of job performance. Stein & Book (2000) and the Irish Management Institute (2003) have shown that specific emotional intelligence subscales can be used for predicting the success of sales personnel. Although emotional intelligence is said to be based on extensive scientific and research evidence, little research has been conducted in the organisational context (Dulewicz & Higgs 2000). Both the Bar-On EQ-i and the OPQ32i are extensively used within the organisational context and also specifically for predicting job performance or sales success, as is the case with the sample used in this study. However, there has not yet been research by the developers of the product, or any other research in the South African environment, to explore the commonalities or differences between these two measurements. It is within this context that two EQ report outputs are scrutinised and compared.

Goleman's EQ model (2001) is based on a theory of performance in the world of work, and the

OPQ32i is a competency-based personality measurement specifically designed for the world of work. As indicated in the content overlay, the two models should have a similar vernacular in terms of workplace demands on personality and hence also on EQ. According to Bar-On, the factorial components of noncognitive intelligence resemble personality factors, and his model is also related to performance in the sense that it "relates to potential for performance, rather than performance itself (that is, the potential to succeed rather than success itself); it is process-oriented rather than outcome-oriented" (Bar-On 1996b). Thus, given their approaches to emotional intelligence from a personality and workplace performance perspective, both Goleman and Bar-On should have much in common with the OPQ32i – as we have consistently argued. However, Law, Wong & Song (2004) recently reported that emotional intelligence was related to, yet distinct from, personality dimensions.

This research therefore sets out to investigate the OPQ32i, the OPQ32i EI report and the Bar-On EQ-i models – what they, respectively, consider the constructs of EQ to be and the nature of the content commonality between the two models. In this regard, the supposed similarities between the Bar-On EQ-i dimensions and Goleman's Emotional Competency Framework have been indicated, as well as the similarities between the OPQ32i EI report and Goleman's Emotional Competency Framework. Since both these instruments seem to overlap to some extent with Goleman's Emotional Competency Framework, we expect that there will also be a great deal of overlap between the Bar-On EQ-i, the OPQ32i and the OPQ32i EI Report. Therefore, on an exploratory basis, this study investigates the degree and direction of the construct relationship between (1) the OPQ32i and Bar-On EQ-i and (2) between the OPQ32i EI report and the Bar-On EQ-i.

Method

Participants

The sample consists of the total population of 38 sales managers in the consultancy division of a blue chip financial services company. The mean age of the sample was 37, ranging from a minimum age of 29 to a maximum age of 49. Within the sample, 87% were males. The size of the sample limits the statistical procedures (in other words, the stepwise logistic regression) and is obviously restricting in terms of generalisation, but on an exploratory basis is sufficient to answer our research question, and give useful insights into the specific manager population.

Measuring instruments

The Bar-On EQ-i (Bar-On 1997a, 1997b) is the first empirically constructed test of emotional intelligence that has been made available commercially and is regarded as the premier measure of emotional intelligence available at the time of this study (Cherniss & Goleman 2001). This instrument generates a total EQ score – an indication of one's noncognitive ability to succeed in coping with environmental demands – and five EQ composite scores or meta-scales based on 15 subscale scores. The inventory has a large normative database of over 50 000 subjects, and it is of particular significance that data were obtained internationally in almost 20 countries, including South Africa. The Bar-On EQ-i is composed of 133 brief items and employs a five-point Likert response format ranging from 'Not true of me' to 'True of me.' It takes approximately 30 to 40 minutes to complete.

Two types of reliability studies were carried out on the Bar-On EQ-i, including internal consistency and retest reliability. Eight types of validity studies were conducted on the Bar-On EQ-i instrument, namely, content validity, face validity, factorial validity, construct validity, convergent validity, divergent validity, criterion group validity and predictive validity. Bar-On (1997a, 1997b) concluded that the Bar-On EQ-i is valid and capable of achieving the objectives for which it was designed. The EQ-i's construct validity has been examined in relation to ten other measures over a 12-year period (1985–1997) and is still continuing, however, not yet including the OPQ32i (Bar-On 1997a, 1997b).

The OPQ32 model (Saville & Holdsworth 1999) is an occupational model of personality, which describes 32 dimensions or scales of people's preferred or typical style of behaviour at work (13 items per scale) and has a large normative database. The OPQ32i consists of 416 items and is self-reporting on an ipsative basis, where a forced choice is requested between the most and least true in 104 quads of four statements each (Saville & Holdsworth 1999). The question as to the validity of the use of ipsative versus normative data is of particular importance in this context. Bar-On (1996a) indicates that it might not be inappropriate to interpret ipsative results in the same way as normative results where there are a larger number of scales – which is the case with the OPQ32

model. Cronbach (cited in Saville & Wilson 1991) indicates that ipsative scales can be used for comparing individuals scale by scale – as is done in this paper. The OPQ32i has evolved over a 20-year period since the commercialisation of the first OPQ Concept Model in 1981, and culminated in the launch of the OPQ32 model in 1999.

Two types of reliability studies were carried out on the OPQ32i, including internal consistency and retest reliability (Saville & Holdsworth 1999). Five types of validity studies were conducted on the OPQ32i instrument, namely, content validity, face validity, criterion validity and construct validity (concurrent and predictive). Saville & Holdsworth conclude that the OPQ32i is valid and capable of achieving the objectives for which it was designed.

Procedure

The OPQ32i is used in the company's recruitment processes, personal development and 360-degree performance evaluation. Each individual concomitantly completed the OPQ32i and the Bar-On EQ-i questionnaires under prescribed test conditions.

Statistical analysis

Statistical analysis was carried out with the help of the SPSS program. Descriptive statistics were used to analyse the data. Although the measuring instruments have proven reliability (Bar-On 1997a, 1997b; Saville & Holdsworth 1999), as already discussed, it was decided also to compute the Cronbach alpha coefficients to assess the reliability of the measuring instruments that were used in the study. The variables that are used to determine the relationship between the Bar-On EQ-i and the OPQ32i are the 32 scales of the OPQ32i and the 15 scales of the Bar-On EQ-i. Firstly, all these scales were correlated (Pearson Product Moment Correlations) – between the whole OPQ32i and Bar-On EQ-i. Secondly, the Bar-On EQ-i was correlated with only the OPQ32i domains that are used to generate the OPQ32i EI report. Thirdly, only the core Bar-On EQ-i scales were correlated with the OPQ32i EI domains.

The magnitude of correlations required for statistical significance for a sample of 40 participants are $r > 0.37$ for $p < 0.01$, or $r > 0.26$ for $p < 0.05$. However, in our discussion of the data, we will harness an additional hurdle and refer only to Cohen's (1988) effect size definitions, where 0.10 indicates a small effect size, 0.30 a medium effect size, and 0.50 a large effect size, and focus on correlations that meet this practical significance criterion.

Results

Descriptive statistics of the Bar-On EQ-i and the OPQ32i are given in Tables 4 and 5 respectively. The Bar-On EQ-i measures EQ on a scale that ranges from 50 to 150, with 100 in the middle of the effective range (median). Scores ranging from 50 to 85 indicate areas of enrichment, scores ranging from 85 to 115 indicate effective functioning, and scores ranging from 115 to 150 indicate enhanced skills. The scores for the respective domains are umbrella or summative scores derived from the subscales clustered under each domain.

From Table 4, the following is clear. The Total EQ (mean = 96.00) and the scores for the respective domains are within the range of effective functioning (between 85 and 115). However, if the standard deviations for the Total EQ and respective domains are scrutinised, the apparent indications are that although the Total EQ is within the effective functioning range, there seem to be areas of enrichment (developmental areas) in all the domains – as indicated by the minimum scores for all domains below 85. It is also evident that there are individuals in the population with enhanced skills in all the domains. A frequency analysis indicated that 6 (17% of the population) respondents' Total EQ is in the area of enrichment (developmental needs), and the remainder of the population clustered toward the upper end of effective functioning into the enhanced skills range. This is of particular importance to the organisational intervention that was designed following this study.

In a study by the Irish Management Institute (2003), where the Bar-On EQ-i was administered to over a 1 000 sales personnel, it was found that EQ as measured by the BarOn EQ-i is highly predictive of general sales success (stepwise logistic regression). The model indicates that of the 15 EQ subscales measured by the BarOn EQ-i, those most predictive of general sales success in the organisation studied were assertiveness, empathy, happiness, emotional self-awareness and problem-solving skills. Geographic area assigned was not predictive of success, nor were gender, ethnicity, education, age or hours worked. The odds for success were 2.7 times greater for those fitting this index. The subscale scores in Table 5 indicate that,

Table 4: Bar-On EQ-i descriptive statistics (N = 38)

Variable	Mean	Min	Max	SD
Domains				
Total EQ	96.00	68	116	18.55
Intrapersonal EQ	100.16	71	119	12.20
Interpersonal EQ	96.68	64	122	12.90
Stress Management EQ	97.82	68	128	12.78
Adaptability EQ	98.76	70	121	10.87
General Mood EQ	99.29	72	123	12.45
Subscales				
Self-regard* (SR)	102.24	80	120	11.26
Emotional Self-awareness** (ES)	94.45	82	121	19.33
Assertiveness** * (AS)	102.24	68	123	12.67
Independence (IN)	96.87	65	120	14.06
Self-actualisation* (SA)	102.89	77	122	10.31
Empathy** (EM)	97.66	53	122	15.38
Social Responsibility (RE)	95.24	44	119	14.78
Interpersonal Relationships (IR)	98.24	67	122	12.98
Stress Tolerance* (ST)	101.24	72	123	12.25
Impulse Control (IC)	95.47	58	126	15.02
Reality Testing (RT)	97.24	61	117	12.66
Flexibility (FL)	100.89	72	129	11.48
Problem Solving ** (PS)	98.95	51	129	14.51
Optimism (OP)	96.29	71	122	13.40
Happiness** * (HA)	102.34	72	123	12.65

* Factors essential for Insurance Sales People success (Stein & Book 2000);
** Factors essential for General Sales People success (Irish Institute for Management 2003).

with respect to general sales success, the highest scores in the tested population were obtained only in the scales of assertiveness and happiness

It should be borne in mind that the population under discussion is specifically focused on insurance sales rather than general sales. In this regard, Stein & Book (2000) indicate that the five most important factors for insurance salespeople (n = 97) seem to be assertiveness (102.24), self-regard (102.24), happiness (102.34), stress tolerance (101.24) and self-actualisation (102.89) – with the present sample's mean scores in brackets. It is clear that the highest five mean EQ-i scores for the sample confirm Stein & Book's findings quite articulately.

The raw scores for each factor in the OPQ32i range from 0 to 26. In the generation of reports, these scores are converted to sten scores. In Table 5, a UK managerial and professional norm group was utilised to give a sten score indication for the study sample compared to this norm group. For 16 of the 32 OPQ32i factors, the study sample had a sten score of 5 – larger than or equal to 50% of the norm group for half the scales. For 6 of the 32 OPQ32i

Table 5: OPQ32i descriptive statistics per scales (N = 38)

Variable	Mean (Sten*)	Min	Max	SD
FE 1 – Relaxed	08.92 (5)	1	17	3.47
FE 2 – Worrying	07.42 (4)	1	20	4.40
FE 3 – Tough Minded	09.26 (5)	3	16	3.55
FE 4 – Optimistic	17.16 (7)	12	24	2.87
FE 5 – Trusting	10.53 (5)	0	20	4.91
FE 6 – Emotionally Controlled	11.76 (5)	4	24	4.88
FE 7 – Vigorous	13.39 (4)	6	24	4.13
FE 8 – Competitive	17.13 (7)	8	25	5.10
FE 9 – Achieving	19.18 (7)	10	25	3.73
FE10 – Decisive	13.55 (6)	4	23	4.99
RP 1 – Persuasive	15.32 (7)	2	24	4.29
RP 2 – Controlling	17.84 (7)	7	25	4.59
RP 3 – Outspoken	12.37 (5)	2	25	5.12
RP 4 – Independent Minded	13.13 (5)	2	22	4.34
RP 5 – Outgoing	10.21 (5)	1	23	5.76
RP 6 – Affiliative	12.18 (4)	5	21	4.57
RP 7 – Socially Confident	12.16 (5)	3	20	5.27
RP 8 – Modest	12.71 (5)	1	22	4.30
RP 9 – Democratic	12.97 (5)	6	20	4.23
RP10 - Caring	13.74 (4)	5	22	4.20
TS 1 – Data Rational	12.24 (6)	2	25	6.40
TS 2 – Evaluative	13.55 (5)	4	19	3.54
TS 3 – Behavioural	12.76 (4)	6	24	4.70
TS 4 – Conventional	11.53 (6)	2	22	5.16
TS 5 – Conceptual	11.50 (5)	4	24	5.01
TS 6 – Innovative	11.29 (5)	0	25	6.52
TS 7 – Variety Seeking	13.32 (4)	7	20	3.50
TS 8 – Adaptable	14.24 (5)	5	21	3.85
TS 9 – Forward Thinking	14.47 (6)	6	21	3.72
TS10 – Detail Conscious	12.39 (5)	1	23	5.93
TS11 – Conscientious	16.29 (5)	7	24	3.76
TS12 – Rule Following	11.47 (6)	4	22	4.91

* Converted to sten score using UK managerial and professional norm (n = 329)

factors, the study sample scored a sten of 4. Thus, the sample scored equal to approximately 31% of the norm group in terms of their worrying, vigorous, affiliative, caring, behavioural and variety seeking factors. For the remaining ten factors, the study sample scored above a sten score of 6. Thus the sample scored equal to approximately 69% of the norm group in terms of the optimistic, competitive, achieving, decisive, persuasive, controlling, data rational, conventional, forward thinking and rule following factors.

While it was reported that the two measuring instruments have good reliability (Bar-On 1997a, 1997b; Saville & Holdsworth 1999), and although the current sample size is a major limitation, it was nevertheless decided to investigate the reliability of the two scales for the current sample. Cronbach alpha coefficients were determined for the Bar-On EQ-i subscales and the OPQ32i EI Report domains. These are shown in Table 6.

From Table 6, it can be seen that Cronbach alpha coefficients of between 0.56 for the Bar-On EQ-i subscale of 'flexibility' and 0.93 for the OPQ32i 'social ease' domain were obtained. According to Nunnally & Bernstein (1994), an alpha coefficient of 0.70 is acceptable. The subscale of 'flexibility' was therefore excluded from the rest of the analysis. Although the Bar-On EQ-i subscales of 'emotional self-awareness' (0.67), 'assertiveness' (0.69), 'self-actualisation' (0.67), 'independence' (0.66), 'social responsibility' (0.69) and 'reality testing' (0.68) also showed alpha coefficients below the acceptable level of 0.70, as recommended by Nunnally & Bernstein (1994), these are still regarded as acceptable in view of the fact that the small sample size might have influenced these alpha coefficients. The correlations reported for these subscales should be interpreted with caution, however, and could not be generalised based on the limitation of the small sample used in this study.

Pearson Product moment correlations were determined to investigate the relationship between the OPQ32i scales and the Bar-On EQ-i umbrella domains. The results of the correlation analysis are displayed in Table 7.

Total Bar-On EQ-i

The total Bar-On EQ-i score is an indication of overall emotional intelligence and shows a practically significant negative correlation of large effect with the OPQ32i scale of 'worrying' (r = -0.60) and a practically significant negative correlation of medium effect with 'data rational' (r = -0.43), 'conven-

Table 6: Cronbach alpha coefficients for the measuring instruments

Cronbach alpha coefficients for Bar-On EQ-i subscales		Cronbach Alpha coefficients for OPQ32i EI report domains	
Emotional Self-Awareness	0.67	Total EI	0.74
Assertiveness	0.69	Feelings and Emotions	0.73
Self-Regard	0.79	Personal Insight	0.89
Self-Actualisation	0.67	Empathy	0.79
Independence	0.66	Social Ease	0.93
Empathy	0.78		
Interpersonal Relationship	0.77		
Social Responsibility	0.69		
Problem Solving	0.75		
Reality Testing	0.68		
Flexibility	0.56		
Stress Tolerance	0.77		
Impulse Control	0.76		
Happiness	0.79		
Optimism	0.74		

Table 7: Correlations between all of the OPQ 32i scales and Bar-On EQ-i domains

	Bar-On EQ-i					
OPQ 32i	**Total EQ**	**Intra-personal**	**Inter personal**	**Stress Management**	**Adaptability**	**General Mood**
FE 1 – Relaxed	0.06	0.03	0.02	0.22	0.01	-0.05
FE 2 – Worrying	**-0.60****	**-0.63****	**-0.47***	**-0.38***	**-0.47***	**-0.43***
FE 3 – Tough Minded	0.10	0.16	-0.05	0.12	0.19	-0.01
FE 4 – Optimistic	-0.05	-0.05	-0.11	-0.07	-0.05	0.07
FE 5 – Trusting	0.21	0.16	0.25	0.16	0.15	0.11
FE 6 – Emotionally Controlled	0.06	-0.05	**-0.31***	**0.36***	**0.35***	-0.13
FE 7 – Vigorous	**0.30***	**0.33***	0.03	0.11	**0.36***	**0.32***
FE 8 – Competitive	0.07	**0.31***	0.03	-0.27	-0.06	0.22
FE 9 – Achieving	**0.47***	**0.50****	**0.39***	0.10	**0.32***	**0.61****
FE10 – Decisive	0.07	0.17	-0.01	-0.08	0.12	-0.05
RP 1 – Persuasive	**0.36***	0.49*	**0.30***	-0.02	0.13	**0.51****
RP 2 - Controlling	0.18	0.24	0.06	0.09	0.12	0.15
RP 3 - Outspoken	0.16	0.27	0.28	0.04	0.04	0.08
RP 4 - Independent Minded	-0.26	-0.20	-0.28	-0.13	-0.12	**-0.34***
RP 5 – Outgoing	0.25	0.28	**0.57****	-0.10	-0.10	**0.43***
RP 6 - Affiliative	0.11	0.06	**0.41***	-0.06	-0.18	**0.30***
RP 7 – Socially Confident	0.18	0.23	0.28	-0.09	-0.11	**0.31***
RP 8 – Modest	-0.12	-0.23	-0.26	0.20	0.06	-0.18
RP 9 – Democratic	-0.10	-0.25	-0.02	0.11	-0.06	-0.11
RP10 – Caring	0.25	0.17	0.25	**0.33***	0.28	0.05
TS 1 – Data Rational	**-0.43***	**-0.36***	**-0.41***	**-0.32***	-0.29	**-0.36***
TS 2 – Evaluative	**-0.31***	**-0.31***	-0.25	-0.03	-0.15	**-0.46***
TS 3 – Behavioural	-0.02	-0.07	0.14	0.21	-0.08	-0.18
TS 4 – Conventional	**-0.34***	**-0.43***	-0.26	-0.12	-0.21	-0.27
TS 5 – Conceptual	-0.04	-0.12	0.02	0.09	-0.04	-0.07
TS 6 – Innovative	0.11	0.16	0.15	-0.01	0.03	0.12
TS 7 – Variety Seeking	0.15	0.25	-0.01	-0.01	0.22	0.05
TS 8 – Adaptable	-0.10	-0.22	0.05	0.02	-0.20	-0.02
TS 9 – Forward Thinking	-0.21	-0.23	**-0.42***	0.05	0.02	**-0.38***
TS10 – Detail Conscious	-0.19	-0.26	-0.22	-0.08	-0.00	-0.25
TS11 – Conscientious	0.13	0.12	0.12	-0.10	0.14	0.22
TS12 – Rule Following	-0.29	**-0.39***	**-0.39***	-0.05	-0.12	-0.21

* r > 0.30 - medium effect
** r > 0.50 - large effect

tional' (r = -0.34) and 'evaluative' (r = -0.31). Furthermore, the total Bar-On EQ-i score shows a practically significant positive correlation of medium effect with 'vigorous' (r = 0.30) and 'persuasive' (r = 0.36) and large effect with 'achieving' (r = 0.47). From this, it seems that a high emotional intelligence (as measured by the Bar-On EQ-i) is associated with a low propensity to worry ('worry-

ing'), a preference for dealing with opinions and feelings rather than facts and figures ('data rational'), a preference for new and less conventional work methods or approaches ('conventional'), a dislike of critically analysing information or focusing on potential limitations ('evaluative'), as well as a preference for keeping busy and enjoying having a lot to do ('vigorous'), being ambitious and having a preference for working toward challenging goals and targets ('achieving') and a preference for changing other people's views or being comfortable using negotiation ('persuasiveness') (as measured by the OPQ32i).

Intrapersonal (RA) EQ domain

The Bar-On EQ-i Intrapersonal domain is concerned with what is generally known as the 'inner self', and includes the subscales of emotional self-awareness, assertiveness, independence, self-regard and self-actualisation. These Intrapersonal scales measure the ability of individuals to know themselves and their feelings. The Bar-On EQ-i Intrapersonal EQ domain correlates with the same OPQ32i scales that the Total Bar-On EQ-i score correlated with, namely, 'worrying' (r = -0.63), 'data rational' (r = -0.36), 'conventional' (r = -0.43), 'evaluative' (r = -0.31), 'vigorous' (r = 0.33), 'achieving' (r = 0.50) and 'persuasive' (r = 0.49). In addition, the Intrapersonal EQ domain shows a practical significant negative correlation of medium effect with 'rule following' (r = -0.39), and a practical significant positive correlation of medium effect with 'competitive' (r = 0.31). It seems that the ability to know oneself and one's feelings (as measured by the Bar-On EQ-i) can be associated with a low propensity to worry ('worrying'), a preference for dealing with opinions and feelings rather than facts and figures ('data rational'), a preference for new and less conventional work methods or approaches ('conventional'), a dislike of critically analysing information or focusing on potential limitations ('evaluative'), a preference for keeping busy and having a lot to do ('vigorous'), being ambitious and having a preference for working towards challenging goals and targets ('achieving'), a preference for changing other people's views or being comfortable using negotiation ('persuasiveness'), as well as a propensity not to be restricted by rules and procedures, a tendency to dislike bureaucracy ('rule following') and to enjoy competitive activities ('competitive') (as measured by the OPQ32i).

Interpersonal (ER) EQ domain

The Bar-On EQ-i Interpersonal EQ domain measures the individual's ability to interact, relate well with others and possess good social skills. This domain includes the subscales of 'interpersonal relationship', 'empathy' and 'social responsibility'. It is about being able to 'emotionally read' other people. The Interpersonal domain correlates, as the Bar-On EQ-i total score, with the OPQ32i scales of 'worrying' (r = -0.47), 'data rational' (r = -0.41), 'achieving' (r = 0.39) and 'persuasive' (r = 0.30). Furthermore, the Interpersonal domain also correlates, as does the Intrapersonal domain, with the OPQ32i scale of 'rule following' (r = -0.39). In addition, the Interpersonal domain seems to be negatively related to the OPQ32i scales of 'emotionally controlled' (r = -0.31) and 'forward thinking' (r = -0.42), but positively related to 'affiliative' (r = 0.41), all of medium effect, and 'outgoing' (r = 0.57), of large effect. From this, it seems that the ability to relate well to others and the possession of good social skills (as measured by the Bar-On EQ-i) can be associated with being low on worrying, data rational and rule following, and being higher on achieving and being persuasive. Apart from this, it can be associated with openly expressing feelings and displaying emotions clearly ('emotionally controlled'), being more likely to focus on immediate, rather than long-term issues ('forward thinking'), enjoying others' company ('affiliative'), as well as being talkative and enjoying attention ('outgoing') (as measured by the OPQ32i).

Stress Management (SM) EQ domain

The Bar-On EQ-i Stress Management EQ domain concerns the ability to understand stress and to work well under pressure without caving in, falling apart, losing control or going under. It includes the subscales of 'stress tolerance' and 'impulse control'. The domain shows a negative correlation of practical significance of medium effect with the OPQ32i scales of 'worrying' (r = -0.38) and 'data rational' (r = -0.32), as well as a positive correlation of practical significance of medium effect with 'emotionally controlled' (r = 0.36) and 'caring' (r = 0.33). It therefore seems that the ability to manage stress (as measured by the Bar-On EQ-i) can be associated with a low propensity to worry ('worrying'), a preference for dealing with opinions and feelings rather than facts and figures ('data rational'), at times not displaying emotions or concealing feelings ('emotionally controlled'), as well as being sympathetic and considerate towards others or becoming involved with others' problems ('caring') (as measured by the OPQ32i).

Adaptability (AR) EQ domain

The Bar-On EQ-i Adaptability EQ domain is concerned with the ability to be flexible, realistic and to solve problems. It includes the subscales of 'reality testing', 'flexibility' and 'problem solving'. The domain shows a negative practically significant correlation of medium effect with the 'worrying' (r = -0.47) OPQ32i scale, as well as a positive practically significant correlation of medium effect with the 'emotionally controlled' (r = 0.35), 'vigorous' (r = 0.36) and 'achieving' (r = 0.32) OPQ32i scales. These correlations suggest that being able to size-up and respond to a wide range of difficult situations (as measured by the Bar-On EQ-i) can be associated with a low propensity to worry ('worrying'), at times not displaying emotions or concealing feelings ('emotionally controlled'), a preference to keep busy and enjoying having a lot to do ('vigorous'), being ambitious and a preference to work towards challenging goals and targets ('achieving') (as measured by the OPQ32i).

General Mood (GM) EQ domain

The Bar-On EQ-i General Mood EQ domain measures the individual's ability to be optimistic and cheerful and to create a positive atmosphere in the workplace. This domain includes the subscales of happiness and optimism. The General Mood domain correlates with the same OPQ32i scales as the Bar-On EQ-i total score, namely, worrying (r = -0.43), data rational (r = -0.36), evaluative (r = -0.46), vigorous (r = 0.32), achieving (r = 0.61) and persuasive (r = 0.51). It furthermore correlates with the same OPQ32i scales as the Interpersonal domain, namely, forward thinking (r = -0.38), outgoing (r = 0.43) and affiliative (r = 0.30). Apart from these, the General Mood domain also shows a practically significant negative correlation of medium effect with 'independent minded' (r = -0.34), and a practically significant positive correlation of medium effect with 'socially confident' (r = 0.31). It therefore seems that being content and optimistic (as measured by the Bar-On EQ-i) can be associated with low worrying, scoring lower on 'data rational', 'evaluative' and 'forward thinking', scoring higher on 'vigorous', 'achieving', 'persuasive', 'outgoing' and 'affiliative', as well as being associated with being prepared to follow the consensus or majority decision ('independent minded') and feeling comfortable when first meeting people or being at ease in formal social situations ('socially confident') (as measured by the OPQ32i).

Although the correlations between the Bar-On EQ-i subscales and the OPQ32i scales are not covered in this article, it can be mentioned that there is no significant correlation between the OPQ32i 'optimistic' (FE4) subscale and the Bar-On EQ-i 'optimism' subscale, which forms part of the General Mood domain. Although the scale names are the same, it seems that the content measured by these two subscales could possibly differ.

As mentioned earlier, the OPQ32i generates an EQ report. Correlations between the Bar-On EQ-i and the subdomains of the OPQ32i EI are displayed in Table 8.

The practically significant positive correlation of medium effect between the Total EQ score of the OPQ32i and the Bar-On EQ-i total score (r = 0.32) indicates a relationship between the two instruments and is an indication of construct correlation between these two instruments. Apart from this overall correlation, the Total EQ score of the OPQ32i also correlates with the Bar-On EQ-i subscale of 'emotional self-awareness' (r = 0.35) in the Intrapersonal domain and the domains of Interpersonal EQ (r = 0.53) and General Mood EQ (r = 0.36).

The OPQ32i Feelings and Emotions domain correlates with the Bar-On EQ-i Intrapersonal EQ (r = 0.31) and the Bar-On EQ-i Interpersonal EQ (r = 0.33) domains and the subscale of 'happiness' (r = 0.48). The Personal Insight domain only correlates with the subscale of 'empathy' (r = 0.37) on the Bar-On EQ-i. The domain of Empathy on the OPQ32i EI correlates with the domain of Stress Management (r = 0.34) on the Bar-On EQ-i. It also shows a negative correlation with the subscales of 'assertiveness' (r = -0.36) and 'independence' (r = -0.31) and a positive correlation with the subscale of 'problem solving' (r = 0.31). It is interesting to note that according to the content commonality hypothesis, and following the foregoing reasoning, the Empathy domain in the OPQ32i-EI report should correlate with the Bar-On EQ-i Interpersonal EQ; it does not correlate significantly (r = -0.07). Furthermore, the 'empathy' subscale on the Bar-On EQ-i does not correlate with the OPQ32i Empathy domain. From this, it seems that the OPQ32i possibly measures other constructs under its Empathy domain, and that the commonality between the scale and domain names does not confirm content commonality, although the small sample prohibits generalisation. However, the Social Ease domain of the OPQ32i EI correlates with the Interpersonal EQ (r = 0.51) and General Mood (r = 0.42) domains on the Bar-On EQ-i. Social Ease also shows a negative correlation with the subscale of 'problem solving' (r = -0.39) and a positive correlation with the subscale of 'happiness' (r = 0.48).

Bar-On (1997a) indicates that of the 15 subscales that are measured in the Bar-On EQ-i, five scales could be regarded as core topographic factors.

Table 8: Correlations between the Bar-On EQ-i domains and subscales and OPQ32i EI report domains

	Total OPQ EI	Feelings and Emotions	Personal Insight	Empathy	Social Ease
Total Bar-On EQ	**0.32***	0.25	0.18	0.01	0.22
Intrapersonal	0.26	**0.31***	0.16	-0.17	0.23
Emotional Self-awareness	**0.35***	0.29	0.11	0.05	0.29
Assertiveness	0.07	0.24	0.05	**-0.36***	0.18
Self-regard	0.25	0.17	0.17	0.04	0.14
Self-actualisation	0.23	**0.36***	0.18	-0.23	0.18
Independence	0.18	0.26	0.17	**-0.31***	0.20
Interpersonal	**0.53****	**0.33***	0.24	0.01	**0.51****
Empathy	**0.52****	0.23	**0.37***	0.07	**0.37***
Social Responsibility	**0.38***	0.19	0.18	0.02	**0.37***
Interpersonal Relationships	**0.41***	**0.34***	0.10	-0.07	**0.46***
Stress Management	0.19	0.05	0.15	**0.34***	-0.08
Stress Tolerance	0.21	0.18	0.06	0.10	0.13
Impulse Control	0.14	-0.07	0.19	**0.43***	-0.20
Adaptability	0.03	0.02	0.09	0.13	-0.14
Reality Testing	0.05	0.08	-0.01	0.04	0.02
Problem Solving	-0.14	-0.15	0.00	**0.31***	**-0.39***
General Mood	**0.36***	0.27	0.15	-0.13	**0.42***
Optimism	0.06	-0.06	0.01	-0.13	0.23
Happiness	**0.51****	**0.48***	0.21	-0.11	**0.48***

* r > 0.30 - medium effect
** r > 0.50 - large effect

They are 'emotional self-awareness' (ES), 'assertiveness' (AS), 'empathy' (EM), 'impulse control' (IC) and 'reality testing' (RT), as displayed in bold print in Table 8.

Emotional self-awareness (ES)

The 'emotional self-awareness' core factor measures the ability to recognise and understand one's feelings and emotions, differentiate between them and know what caused them and why. As already mentioned, this core factor correlates with the Total OPQ32i EI score (r = 0.35).

Assertiveness (AS)

The 'assertiveness' core factor is the ability to express feelings, beliefs and thoughts and defend one's rights in a non-destructive way. As already reported, it demonstrated a practically significant negative correlation of medium effect with the OPQ32i Empathy domain (r = -0.36).

Empathy (EM)

The 'empathy' core factor is the ability to be attentive to and to understand and appreciate the feelings of others. It correlates with three of the five OPQ32i EI domains, namely: Total OPQ32i EI (r = 0.52), Personal Insight (r = 0.37) and Social Ease (r = 0.37). Empathy is the Bar-On EQ-i core factor that correlates with most of the OPQ32i EI domains and with the overall OPQ32i EI. It correlates with scales in both the OPQ32i's Managing Feelings (Intrapersonal EQ) and Managing Relationships (Interpersonal EQ) domains. It is clear that a high score on the Empathy scale on the Bar-On EQ-i is not only related to interpersonal EQ but also Intrapersonal EQ level and Total EQ as measured by the OPQ32i.

Impulse control (IC)

The 'impulse control' core factor is the ability to resist or delay an impulse, drive or temptation to act. This core factor of the Bar-On EQ-i correlated significantly with the Empathy domain of the OPQ32i EI.

Reality testing (RT)

The 'reality testing' core factor is the ability to assess the correspondence between what is experienced (the subjective) and what exists in reality (the objective). This core factor showed no correlation with any of the OPQ EI domains.

Discussion

The relationship between the Bar-On EQ-i and the OPQ32i

The small sample size used in this study is a serious limitation and it should therefore be noted that the interpretation of these results could possibly lead to a Type II error. However, it seems that a total emotional intelligence score and scores on the various domains of the Bar-On EQ-i can be associated with lower scores on some of the subscales ('data rational', 'evaluative', 'conventional', 'forward thinking' and 'rule following') of the Thinking Style domain of the OPQ32i, but in general higher scores on some of the subscales ('persuasive', 'outgoing', 'affiliative', 'socially confident' and 'caring') of the Relationship with People domain, as well as generally higher scores on some of the subscales ('vigorous', 'competitive' and 'achieving') of the Feelings and Emotions domain of the OPQ32i. This is an indication of convergent and divergent construct validity between these two measurements.

It is interesting to note that a lower score on the 'emotionally controlled' subscale of the OPQ32i is associated with the Interpersonal domain of the Bar-On EQ-i, indicating that a spontaneity to engage and openly express feelings can be associated with the ability to relate well with others and the possession of good social skills. However, a higher score on the 'emotionally controlled' subscale of the OPQ32i is associated with the Stress Management and Adaptability domains of the Bar-On EQ-i, indicating that concealing feelings from others and rarely displaying emotions can be associated with the ability to cope with stress and to be flexible, realistic and able to solve problems. The preference on the 'emotionally controlled' subscale (as measured by the OPQ32i) would therefore lead to scoring differently on the Interpersonal domain of the Bar-On EQ-I, on the one hand, and the Stress Management and Adaptability domains of Bar-On EQ-I, on the other.

Another interesting finding is the association between the subscale of 'caring' on the OPQ32i and the domain of Stress Management on the Bar-On EQ-i. It seems that being sympathetic and considerate towards others, helping and supporting others or becoming involved in others' problems can be associated with the ability to work well under pressure without losing control. This is a relationship that can be investigated further.

Contradictory to expectations, no statistically or practically significant relationship was found between the 'optimistic' subscale of the OPQ32i (expecting things will turn out well, concentrating on the positive aspects of the situation and having an optimistic view of the future) and the 'optimism' subscale of the Bar-On EQ-i (the ability to look on the brighter side of life and to maintain a positive attitude even in the face of adversity). Although the definitions seem to overlap, on closer examination it would appear that these two subscales may not be related (r = 0.12). However, the limited sample size and lack of power precludes generalisation. A closer look at the items measuring these two subscales might shed more light on this finding. It is recommended that the relationship be investigated further.

The relationship between the Bar-On EQ-i and the OPQ32i EI subscales

A significant correlation of moderate effect was found between the total EQ score on the OPQ32i EI and the total EQ score on the Bar-On EQ-i, indicating that, to a certain degree, the two instruments measure the same construct. A closer look at the relationship between the OPQ32i EI domains and the Bar-On EQ-i domains and subscales reveals that the total EQ score on the OPQ32i and the Feelings and Emotions domain relate to the Intrapersonal, Interpersonal and General Mood domains of the Bar-On EQ-I, as can be expected. Contrary to expectations, the Personal Insight domain of the OPQ32i only relates to the 'empathy' subscale (within the Interpersonal domain) of the Bar-On EQ-i. According to the definition of 'personal insight' – how well you understand your feelings about yourself and others – one would expect this domain also to show some relationship to the Intrapersonal domain of the Bar-On EQ-i. Furthermore, the Empathy domain (how well you appreciate the perspectives of other people and how they feel or think about things) of the OPQ32i relates to the 'assertiveness' and 'independence' subscales (in the Intrapersonal domain), 'problem solving' (in the Adaptability domain), and the Stress Management domain (specifically the subscale of 'impulse control') of the Bar-On EQ-i. However, one would also expect

this domain to show some relationship to the subscale of 'empathy' and the Interpersonal domain of the Bar-On EQ-i. Although there appears to be an overlap in the definition of these two concepts, there does not seem to be content overlap in terms of how the two instruments measure the concept of empathy. Again, the limited sample size prohibits generalisation. And lastly, as expected, the Social Ease domain shows a relationship with the Interpersonal domain, the 'problem solving' subscale (in the Adaptability domain) and the General Mood domain of the Bar-On EQ-i.

An investigation into the relationship between the OPQ32i EI domains and five core factors of the Bar-On EQ-i indicates that the core factor of 'empathy' relates to the Total EQ score, the Personal Insight and the Social Ease domains of the OPQ32i EI. The core factor of 'emotional self-awareness' also relates to the Total EQ score of the OPQ32i EI. It therefore seems that the ability to recognise and understand one's feelings and emotions, differentiate between them and know what caused them and why, as well as the ability to be attentive to, and to understand and appreciate, the feelings of others (as measured by the Bar-On EQ-i), represents the Total EQ score as measured by the OPQ32i EI. This seems to represent the Intrapersonal and Interpersonal domain of the Bar-On EQ-i relating to the Managing Feelings and Managing Relationships domains on the OPQ32i EI.

Apart from the Intrapersonal and Interpersonal domains, the Bar-On EQ-I measures three other domains as well: Stress Management (SM), Adaptability (AR) and General Mood (GM), which Bar-On describes as social intelligence measures. These domains seem to be related in different degrees to the Managing Relationships domain of the OPQ32i EI, again indicating construct overlap between the two measures.

The respective OPQ32i scales and the formulae that constitute the respective OPQ32i EI domains were not made available for this research. Further research is needed to ascertain the extent to which the construct overlap would be influenced if this could also be factored in.

Commercial application of the two instruments

Both reports generate an emotional intelligence output. The OPQ32i EI is a second order report generated from the OPQ32i, whereas the Bar-On EQ-i is a dedicated EQ instrument. From a developmental perspective, the Bar-On EQ-i is very helpful, user friendly, much more detailed in reporting on subscales, and very appropriate in generating a good understanding of EQ constructs. Given the Bar-On EQ-i's very specific prediction of sales success, further research needs to be conducted as to the corresponding predictive validity of the OPQ32i – with EQ taken into account.

A limitation of this study is that a small sample was used. Consequently, some of the subscales of the Bar-On EQi showed lower Cronbach alpha coefficients than the acceptable level of 0.70, as recommended by Nunnally & Bernstein (1994). The results regarding these subscales should therefore be interpreted with caution. This research could therefore also be repeated with similar, larger samples or samples from other organisations.

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Management practices by South African wholesalers: a purchasing and supply management perspective

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The aim of the article is to report on an empirical research study that was undertaken to determine the extent to which wholesalers in South Africa have adapted to new demands and developments in the management of their purchasing and supply function. The article also provides a synopsis of the literature study that was initiated to investigate the evolution of purchasing to strategic sourcing as part of the broader supply chain management approach, as well as wholesaling operations and their role in supply chains. The results of the study showed that most of the respondents regard the buying and selling of goods as their most important activity, and that there is evidence that they apply both tactical purchasing and strategic supply management practices. However, there is overwhelming evidence that South African wholesalers tend to keep to traditional practices regarding the management of their purchasing and supply activities.

Key words: purchasing management, supply management, strategic sourcing, supply chain management, wholesalers

Introduction

The South African wholesale industry is facing tough times (Hasenfuss 2001: 1). This is the result of emerging trends such as intense global competition, which requires businesses to be quick, agile and responsive; new technology available to any business willing to adopt it; more advanced customer expectations; and the implementation of new strategic, proactive management approaches (Monczka, Trent & Handfield 2002: 8). Thus a new era for business has emerged globally. In order to survive in this environment, wholesaling operations must be professionally managed to achieve success (Lamb, Hair & McDaniel 2002), or risk losing considerable market share (Khan 2001: 1). Mediocrity will not be tolerated in this new era. In fact, wholesalers will only succeed if they can effectively integrate strategy, processes, business arrangements, resources, systems, and empowered workforces to effectively render their core business (Greenhalgh 2001: 1).

Background and demarcation

The core business of wholesaling includes all activities involved in buying a large variety of materials or products and selling them to those buying for resale or business use (Kotler 2000). Purchasing is therefore an important business function of any wholesale organisation.

The purchasing function evolved from an independent administrative activity, involved in a simple transferral of goods, to an interdependent managerial function acknowledging the continuous interaction between variables to efficiently realise the organisation's mission and objectives (Hugo, Badenhorst-Weiss & Van Rooyen 2002: 5). This was known as tactical purchasing (Monczka et al. 2002: 11). According to recent developments, the purchasing function is managed as a fundamental unit of the integrated supply chain management philosophy, known as strategic supply management. Strategic supply management is a cross-functional process used to manage, develop and integrate supplier capabilities to achieve a competitive advantage, involving members from all functions of the organisation (Monczka et al. 2002: 11).

The supply chain management approach forms the umbrella management philosophy, implying that all supplier and buying organisations involved in the process, from raw materials to final consumer

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products, form alliances and are perceived and managed as a unified entity (or process) called a supply chain. An empowered managing team consisting of key members from all organisations involved in the supply chain is formed, with the aim being to jointly contribute and add value to manufacturing goods and to render services effectively to meet customer demands (Reeds 2000: 3). The objectives of this management approach include customer satisfaction, value adding, long-term profitability and the achievement of competitive advantage in the supply chain as a whole. The building blocks of this management approach are focused on managing information flows, financial resource flows, and product and services flows between the various organisations to the benefit of the supply chain (Cronin 2001: 3). The use of new advanced integrated management approaches (such as strategic supply management) by businesses is an important instrument in facilitating change, thus developing more focused, more specialised and high-performing organisations (Carter 2001: 47). It further enables businesses to adapt to the intense global competition, the information revolution and the emergence of new forms of inter-organisational relationships by increasing customer satisfaction, market share and profits (Wisner & Tan 2000: 2).

Choosing suppliers and purchasing products are significant activities in the success of wholesalers, and often determine their success. The introduction of new purchasing or sourcing and supply management approaches may provide the means for wholesalers to achieve objectives such as enhanced customer satisfaction, greater value adding, long-term profitability and the achievement of a competitive advantage (Crowley 1998: 559). However, wholesaling institutions vary considerably in terms of size, activity, style of business, types of products provided and services rendered (Semenik & Bamossy 1995: 506). These variables imply a range of complexity of wholesaling activities. It therefore stands to reason that the applicability of new purchasing and supply management approaches may vary between different wholesaling institutions.

Problem statement

Intense global competition, the information revolution and more sophisticated customers are but a few of the factors that have compelled many businesses to find new and better ways to manage their purchasing and supply activities. As a result, purchasing has evolved from a transaction-based function, focused on unit costs, to a strategic cross-functional process that manages the total cost of the supply chain (Darrow 2000: 1). Wholesalers find themselves in the middle of supply chain networks, providing a critical link between manufacturers and retailers. Manufacturers cannot afford to deal directly with the thousands of small retailers because of the costs involved in selling small quantities and the resultant low profits for manufacturers (Lamb 2002). Wholesalers also perform vital services for retailers and other organisations. Hence, through their purchasing and supply management, they play a pivotal role in the supply chain. Adapting to the supply chain management approach may dramatically influence the efficiency and effectiveness of wholesalers and can mean the difference between success and failure. It can also determine the continued existence of a wholesaler in the supply chain. The probable ultimate advantages to the wholesaler from efficient adaptation to supply chain management are infinite. The question is whether South African wholesalers have adapted to the new demands and developments that strategic supply and supply chain management creates, specifically with regard to managing their purchasing and supply function.

Objectives

The objective of this article is to report on a research study that was undertaken to focus on the role of wholesalers in supply chains, and specifically to determine the extent to which wholesalers in South Africa have adapted to new demands and developments in their purchasing and supply functions. In order to achieve this objective, the article explores the following:

- The development path of purchasing to strategic sourcing
- The concept of supply chain management
- The notion of wholesaling and the role purchasing and supply activities play in wholesaling operations.

Research methodology

Justification of research method used

The study is by nature descriptive and explorative, and contains both quantitative and qualitative elements. There are two reasons for this approach:

- Crucial elements of the study are based on

existing research and secondary data regarding wholesaling and purchasing, and supply management practices.

- Primary sources had to be explored to determine the purchasing and supply management approaches and practices currently employed by South African wholesalers.

Phases of the study

The study was conducted in several phases. Firstly, literature research was initiated to gather and integrate secondary data to investigate concepts of and the development of purchasing to strategic supply management and the evolution of supply chain management. Also, information was gathered on the importance of types, activities and trends of South African wholesalers. Secondly, a questionnaire was compiled containing all the relevant issues identified by the literature studies to enable the researcher to establish how far South African wholesalers have advanced in adopting new practices and approaches to managing the purchasing and supply function. This questionnaire was pre-tested to verify its validity. Although only a limited number of respondents were used to test the validity of the questionnaire, various tests indicated that the items in the questionnaire were valid and that the study could proceed to the next step. Thirdly, a letter and the refined and tested questionnaire were mailed to the selected sample of wholesalers, informing them of the research study and soliciting their cooperation. The letter requested the participants to return the questionnaire via facsimile. Fourthly, after the date of return of these questionnaires had lapsed, additional questionnaires were faxed to all those in the sample that had not yet completed the original questionnaire, in order to improve the response rate.

Research instrument and population

Section 1 of the questionnaire contains questions pertaining to general information on the nature and extent of wholesale operations in South Africa. Section 2 contains questions to abstract data on the purchasing, sourcing and supply management practices applied by these wholesalers.

The questionnaire was posted to a sample of wholesalers, which was constructed from a database compiled by the Bureau of Market Research at the University of South Africa (Schoeman 2001). This database includes a list of 5 054 South African wholesalers categorised in terms of the Standard Industrial Classification (SIC). This constitutes the primary activity of the establishments.

Probability sampling was used, because the database ensured that each member of the population had the same chance of being included in the sample. By utilising simple random sampling, every fourth wholesaler was chosen to be included in the sample. This ensured that the sample constituted approximately 1 289 wholesalers situated in South Africa. Once all the phases of the study had been completed, a total of 134 questionnaires were received, only 103 of which were usable. This ensured a response rate of 7.9%.

The findings of the literature study regarding the development of purchasing management, the concept of supply chain management and wholesaling will be discussed next.

The development of purchasing to strategic supply management

The purchasing of requirements from external sources is important for the existence and operation of any organisation. The efficient management of the purchasing function and activities is of the utmost importance for improving the bottom-line, namely, the competitive position and continued existence of the organisation.

The purchasing function originated as an independent, clerical activity mainly concerned with the processing of orders. After considering the opinions of various authors (Cronjé, Du Toit & Motlatla 2000: 396; Hugo et al. 2002: 9; Burt et al. 2003: 19; Fung 1999: 362; Monczka et al. 2002: 11), the conclusion could be drawn that 'purchasing management' can be defined as 'the organisation of all activities engaged in the acquisition of the correct goods or services from an external supplier in the most efficient and effective manner to be delivered to the right user at the right time'. Figure 1 represents the development and recognition of the purchasing function in organisations. The first stage of Figure 1 depicts the reactive nature of traditional purchasing. In this stage, the purchasing function is not regarded as a vital business function and is therefore assigned to employees who have neither the skill nor the aptitude to lead this function towards its full contribution to the success of an organisation, despite the role it has to play with regard to quality assurance and the cost of the goods sold (Burt, Dobler & Starling 2003: 24).

As managerial philosophies advanced, there was an acknowledgement of the continuous interaction between the variables to efficiently realise the organisation's mission and objectives (Hugo et al. 2002: 4). These new insights also affected the

purchasing function. Hence, during the 1960s and 1970s, the management of the purchasing function included inventory management. As indicated in stage 2, a limited number of purchasing staff were equipped with tertiary education, the purchasing function remained mechanical, and purchasers were concerned with the purchase price, the prevention of line shutdowns and the management of inventory.

Then the world of purchasing changed. Purchasing management became a proactive concept, as illustrated in stage 3 of Figure 1. Training and education were offered to equip professional staff to meet the demands of the challenge posed by increasing material costs, the constantly changing environment, globalisation, major technological advancements, automation in production processes, outsourcing and inflation (Burt et al. 2003: 26). The materials management concept evolved during this period, coordinating and combining related functions such as purchasing, inventory control, receiving and warehousing under the authority of a single individual (Monczka et al. 2002: 15).

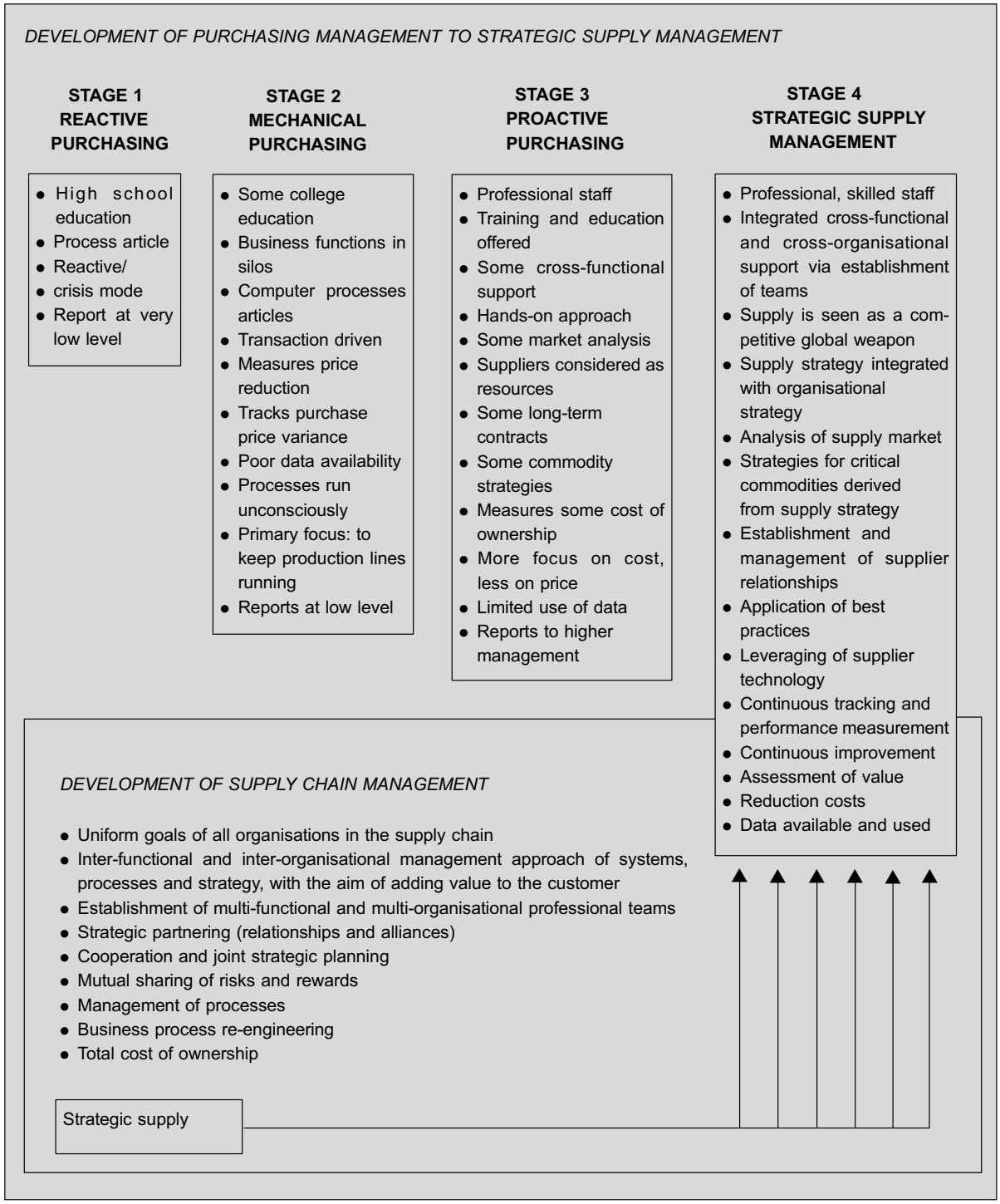
During the early 1980s, physical distribution management was seen as part of materials management. According to Ross (1998), physical distribution management is the management of all activities associated with the warehousing and movement of finished goods and service parts through the distribution channel in order to meet customer order fulfilment and delivery requirements. This became known as logistics management, embracing all movement and warehousing activities, from the purchasing of materials, through the transformation process to the final consumer (Cronjé et al. 2000: 397).

By the late 1980s, competition had become fierce, global firms increasingly captured world market share, the rate of technological advances was unprecedented, the ability to coordinate worldwide purchasing activities increased with the use of global data networks, and the World Wide Web emerged (Monczka et al. 2002: 16). The transition was made to an even more integrated approach, known as 'strategic supply management', as reflected in stage 4 of Figure 1. Supply management became a competitive global weapon, and supply strategies were integrated with organisational strategies. Strategic sourcing forms an integral part of strategic supply management. It consists of a process that involves cross-functional teams to identify, develop, manage and integrate the supplier base of an organisation (Roberts 2002; Ricker 1997). Slaight (1999), Kauffman & Crimi (2000) and Roberts (2002) describe strategic sourcing as a process whereby organisations divide their total spending into categories and then classify the categories on the basis of the importance of that product and service and the complexity of the supplier marketplace. The organisation and the supplier must then recognise that various relationships are required. At one end, the least strategic suppliers may be based on cost, while at the other, the most strategic suppliers may be chosen for their ability to create new business opportunities or technological advances. Targeting and searching for suppliers in such a formalised manner is what strategic sourcing is all about. Strategic sourcing leads organisations to join with suppliers, spur innovation, apply joint expertise to product development and create a genuine supply advantage. Cross-functional teams manage the strategic sourcing process according to best practices, in support of strategic business objectives.

The concept of supply chain management

In addition to the evolution of the purchasing function into strategic supply management, another phenomenon developed – supply chain management – as depicted in Figure 1. Interest in the concept of supply chain management increased steadily when organisations realised the benefits of collaborative relationships within and beyond their own borders. The realisation of the advantages of functional (internal) integration under the concepts of logistics management and value chain management (VCM) was already widely accepted. With the supply chain management approach or concept, the value chain principle is extended to include external parties such as suppliers and customers. Therefore, with supply chain management, external integration is included in business strategy. External integration includes the incorporation of suppliers, customers and the internal activities of an organisation, often referred to as the focal firm, which is the strongest leading firm in a chain of organisations that create and deliver a final product or service to the final customer or consumer in the market. It includes the collaborative activities of all organisations involved in producing a specific product or rendering a specific service. This has become known as the 'supply chain' of a specific product or service (Lummus & Vokurka 1999: 11).

According to Burt et al. (2003: 7) and Monczka et al. (2002: 4), supply chains are essentially a series of linked suppliers and customers; every customer is in turn a supplier to the next downstream organisa-



Source: Adapted from Burt et al. (2003: 8)

Figure 1: The development of purchasing management to strategic supply management

tion, until a finished product reaches the ultimate end user. From another perspective, Lau & Lee (2000: 598), Democher (2000: 141), Christiaanse & Kumar (2000: 270) and Chopra & Meindl (2001: 3) view the supply chain as a process that consists of the stages involved, directly or indirectly, in fulfilling a customer request, including new product development, marketing, operations, distribution, finance, purchasing and customer service suppliers, manufacturers, distributors, retailers and customers.

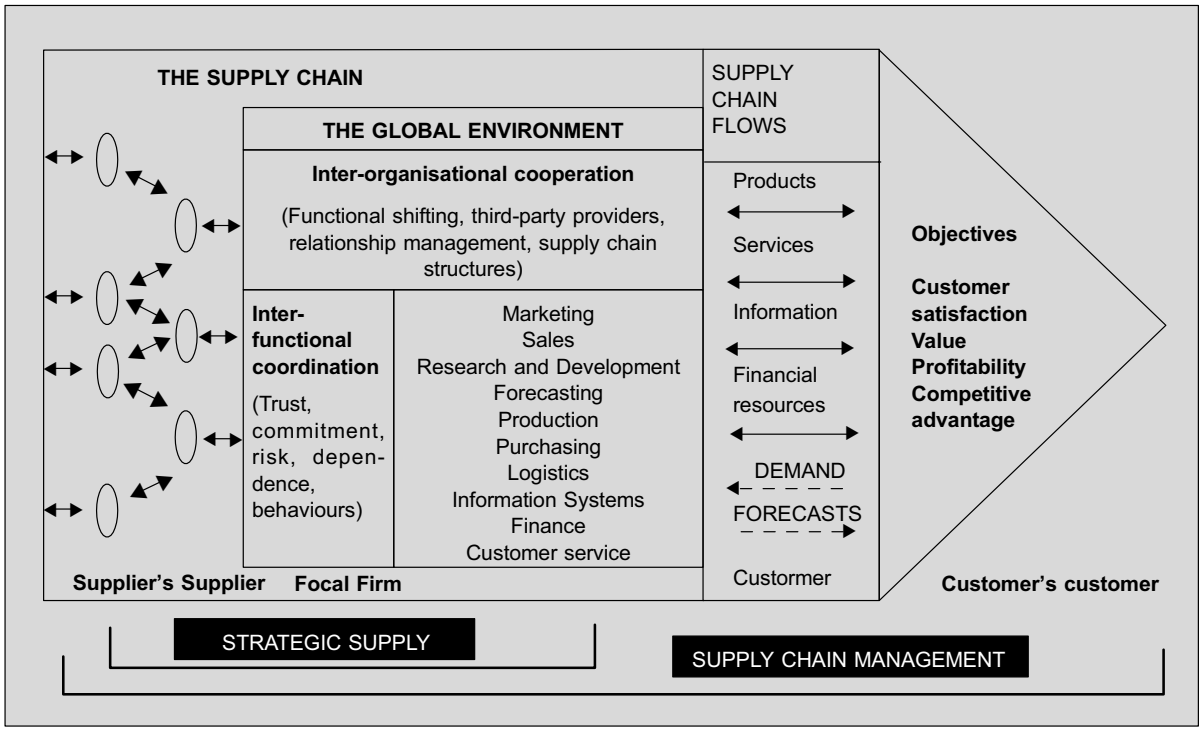
According to Ross (1997: 365), New (1997: 1), Copacino (1997: 1), Pickowitz & Reekers (2000: 1), Reeds (2000) and Wisner & Tan (2000: 1), 'supply

chain management' can be regarded as 'the sum of all value-adding activities', from the extraction of raw materials through the transformation processes and delivery to the end user, spanning organisational boundaries within the supply chain as a unified entity. Monczka et al. (2002: 5) view supply chain management as 'the integration of all activities' associated with the flow of goods from the raw materials stage through to end users, as well as the associated information flows both up and down the supply chain.

Mentzer, DeWitt, Keebler, Min, Nix, Smith & Zacharia (2001: 6) studied the various dimensions of the supply chain management concept and concluded that supply chain management can be defined as ''the systematic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purpose of improving the long-term performance of the individual companies and the supply chain as a whole''. They developed a supply chain management model in order to illustrate their view of the concept. The model is depicted in Figure 2.

Figure 2 focuses on two aspects of managing a supply chain. Firstly, inter-functional coordination of the focal firm (and its suppliers and customers respectively) is emphasised. This entails shifting the focus from a functional approach to establishing processes managed by cross-functional teams to incorporate the marketing, sales, research and development, forecasting, production, purchasing, logistics, information systems, finance and customer service tasks. To achieve this, organisations must have cross-functional trust, commitment, a sharing of risks and behaviour, and established interdependence. Secondly, the model highlights the boundary-spanning coordination between organisations. This entails functional shifting, third-party service providers, intense management of relationships and the development of definite supply chain structures. Once the respective organisations in the supply chain have achieved interfunctional and intercorporate coordination, different supply chain flows are experienced. This entails the secure upstream and downstream flow of information on supply and demand in a particular supply chain, as well as the flow of materials, products, services and financial resources.

According to Fawcett & Magnan (2002: 7), organisations need to possess several essential characteristics if they want to successfully integrate supply chain management as an enabler to form part of their value-adding processes. Organisations must be relentlessly customer centric; driven to improve asset efficiency; recognise interbusiness collaboration as critical; focus on processes rather



Source: Adapted from Mentzer et al. (2001: 19)

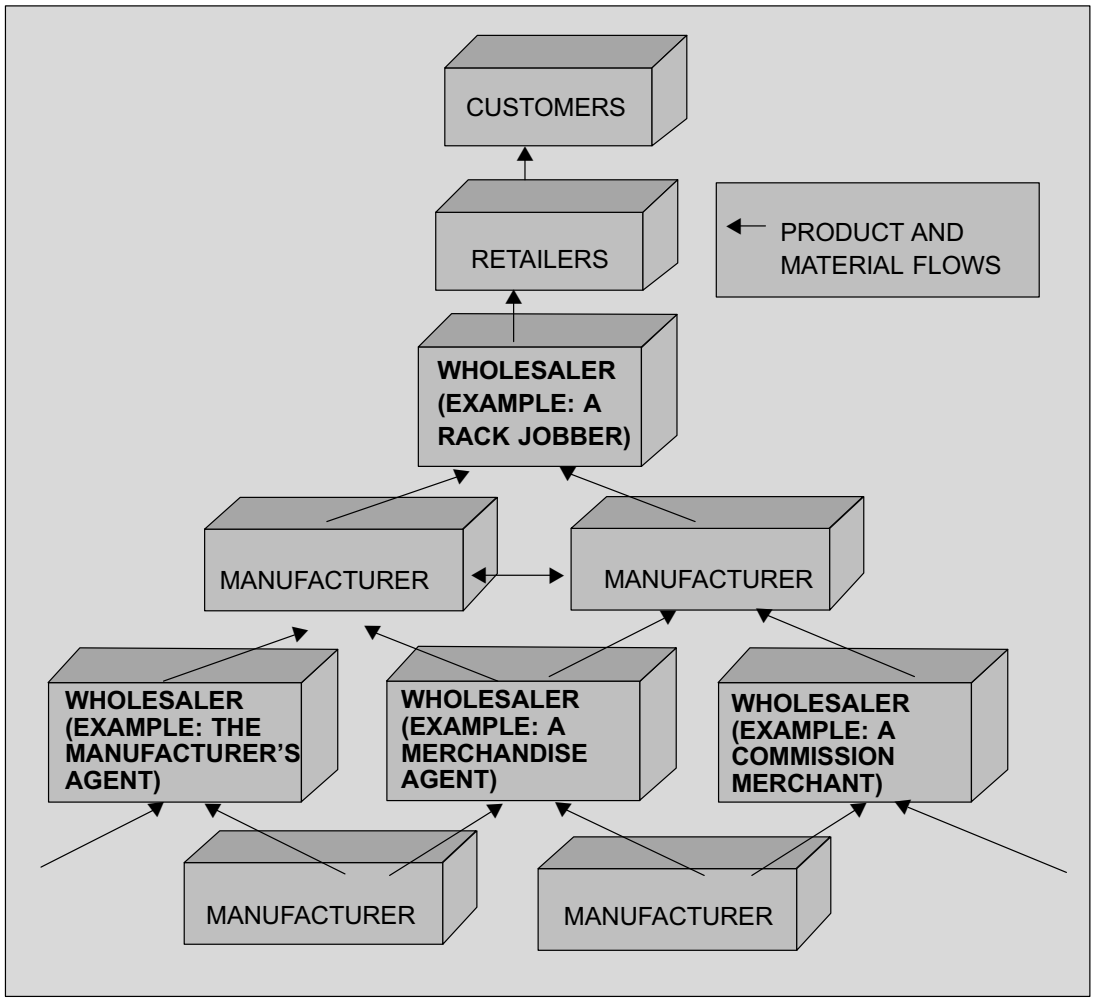
Figure 2: Strategic supply management as part of supply chain management

than functions; view open communication as a must; factor people into every decision; invest in information technology as an enabler; and be obsessed with performance measurement. In addition to these essential characteristics, certain implementation practices for supply chain management were identified in the literature study. They are depicted in Figure 1 under the heading 'Development of supply chain management'.

From the foregoing discussion, it is clear that the purchasing function developed from a clerical function to strategic supply management, which in turn became part of the broader supply chain management approach, as illustrated in Figure 2. It is also clear that if organisations wish to benefit from the overwhelming advantages of the supply chain management approach, a paradigm shift and change in the management of resources should be made.

Wholesaling

Wholesaling operations, commonly referred to as 'wholesalers', can be defined as consolidators in the supply channel, providing more than half of their purchases to other business organisations (Stern, El-Ansery & Brown (1989: 97), Ross (1998: 155), Strydom, Cant & Jooste (2000: 274) and Pride & Ferrell (2003: 420)). From another perspective, Semenik & Bamossy (1995: 501) and Kotler (2000) define 'wholesaling' as the process of pushing manufactured products through the supply channel to users, or pulling products from the manufacturers in response to the other business organisations, for industrial, institutional and commercial purposes. Wholesalers supply goods and services to retailers and institutions such as hospitals and schools to be used in the normal operation of the institution and to perform basic functions (Lamb et al. 2002). The position of wholesalers in supply chains is illustrated in Figure 3.



Source: Adapted from Handfield & Nicholas (1999: 5)

Figure 3: Position of wholesalers in a supply chain

Wholesalers exist because of the functions they perform for suppliers and customers in various stages of the supply chain. Their most important activities include buying and selling, negotiating, bulk breaking, risk bearing, financing, warehousing, transportation and assistance to suppliers and clients (Stern et al. 1989: 97). This clearly implies that (1) the purchasing function is prominent in the reason for the existence of a wholesaler, and is therefore one of the primary functions to manage; (2) it is of utmost importance to a wholesaler to source goods and services from, and maintain relationships with, the right suppliers; and (3) the wholesaler has a vital role to play in supply chains or distribution channels (which can be regarded as the downstream side of the supply chain).

Wholesaling organisations continue to exist and expand, despite evolving technology and business models that change the ways in which companies make, sell and move products (Democker 2000: 141). This is because of the vital role wholesalers play between transformation (production) and consumption. Products are rarely consumed at the same place, and at the specific rate, at which they are produced (Semenik & Bamossy 1995: 502). Wholesaling activities therefore ensure that the required assortment of products is at the place where and when it is needed (Strydom et al. 2000: 273). The objective is to bridge the time and space gap between the manufacturer and the industrial user or retailer responsible for selling a final product to the ultimate consumer.

These wholesaling activities do not have to be performed by a wholesale institution, but can be executed by the manufacturers or retailers themselves (Pride & Ferrell 2003). However, in most instances, manufacturers cannot afford to deal directly with the thousands of small retailers, because the quantities purchased and resultant manufacturer profits are too small (Lamb et al. 2002). The existence and development of wholesaling can therefore be justified if the wholesaler performs the needed activities in a more cost-effective way than any available alternative (Hoover 1990: 236). The way in which wholesalers may justify their existence and even continued development can be understood by investigating their activities (Semenik & Bamossy 1995: 502; Lamb et al. 2002; Pride & Ferrell 2003), which are summarised as follows:

- *Buying and selling:* The core business of a wholesaler is typically to buy from manufacturers and sell to retailers (Hoover 1990: 236). Wholesalers accumulate the goods of several manufacturers at a single location, and re-sort the goods to fill orders from retailers (or manufacturers that further transform the products). This activity vastly reduces the number of transactions associated with the movement of goods (Semenik & Bamossy 1998: 502), thereby enhancing economic value for both the manufacturer (by voiding the sales function) and the retailer (by largely eliminating or simplifying the buying function) (Hoover 1990: 236).
- *Negotiation:* Wholesalers generally bring together an assortment of products by negotiating with a number of different sources (Stern et al. 1989: 98). Wholesalers therefore serve as the purchasing agent for retailers and industrial users (Pride & Ferrell 2003). Over the years, the growth of nationally distributed manufacturers and retail brands, the massive size of manufacturing and retail operations, and the lack of innovation at wholesale level have eroded the power base of the wholesaler, leading to degradation of the wholesaling operation as a successful negotiator between sources. This degradation, however, is countered by the consistent and intimate relationship that wholesalers have with local markets, the potential that they represent with regard to the local availability of stocks, and a salesforce in touch with local customers' needs (Lamb et al. 2002).
- *Bulk breaking:* Wholesalers provide a maximum degree of market coverage of all types of retailers. Most manufacturers cannot afford the time and expense related to developing and maintaining an entire salesforce to sell a single or a few product lines to retailers only (Semenik & Bamossy 1998: 503). Wholesalers thus provide retailers with an assortment of goods after breaking the bulk bought from various manufacturers. The efficiency of a wholesaler's operation in bulk breaking would be difficult for a manufacturer to match. Retailers order an allotment of merchandise from wholesalers, consisting of a vast variety of volumes of different product ranges (Semenik & Bamossy 1998: 503). In this way, wholesalers help manufacturers to reach many small retailers at low cost (Kotler 2000).
- *Warehousing:* A wholesale warehouse is a stock reservoir from which retailers can draw the required merchandise, considerably reducing the need for their own large inventories to maintain adequate supply (Semenik & Bamossy 1998: 504). Manufacturers can hold stock or arrange for storage near retailers, but this is

more costly than the specialisation of a wholesaler's operation (Semenik & Bamossy 1998: 504). Warehousing performs a wide spectrum of varied materials-flow activities, thereby providing a smooth flow of merchandise from the suppliers to the next point of sale. This includes (1) receiving goods into the warehouse, (2) identifying, sorting and labelling the goods, (3) despatching the goods into a temporary storage area, and (4) recalling, selecting or picking the goods for shipment (Lamb et al. 2002).

- *Risk bearing:* Wholesalers hold inventories, thereby reducing the risks of manufacturers and retailers. This includes taking ownership of products that can deteriorate or become obsolete, and bearing the cost of thefts and all the costs involved in safeguarding the merchandise (Kotler 2000). Wholesalers can also help manufacturers to reduce risk by providing objective information to suppliers and customers, including technical features, appropriate usage, availability, product quality and competitive conditions (Stern et al. 1989: 98).
- *Financing:* Wholesalers finance their suppliers (manufacturers) by ordering early, and paying their bills before the merchandise has been resold (Kotler 2000). Often wholesalers may make merchandise advances to new retailers or carry a running credit for others. This allows retailers to spend more funds on activities that may stimulate demand and potentially increase sales. Manufacturers will not easily perform this credit function because they are far removed from the retailer's activities. For the wholesaler, correct credit administration can ultimately reward the wholesaler with greater revenue (Semenik & Bamossy 1998: 505).
- *Transportation:* Transportation is costly because it reflects the investment in equipment, human resources, fuel, taxes, insurance and maintenance (Hoover 1990: 236). Wholesalers thus play a vital part in the transportation of goods from manufacturers to retailers (Semenik & Bamossy 1998: 503). A single manufacturer may ship enough of its entire product range to serve several hundred retailers. Retailers, of necessity, require products from a variety of manufacturers to serve their customers. Wholesalers are able to re-sort merchandise into an assortment, ordered by each retailer from the stock of different manufacturers, and provide quicker delivery because they are closer to the retailers (Kotler 2000). A smaller number of large volume (bulk) shipments of merchandise are able to move from the manufacturer to wholesalers, in comparison with the large number of shipments that would be required to transport smaller volumes to retailers. This reduces the transportation cost per unit and significantly improves efficiency (Semenik & Bamossy 1998: 503).
- *Assistance to suppliers and clients:* Wholesalers also provide their suppliers and clients with management services and advice. This includes assistance to their suppliers in the form of considerate credit arrangements and advice on new product development. Service to clients entails advice to the retailer on the training of their sales clerks, improving their store layouts and displays and implementing accounting and inventory control systems. Wholesalers further provide market information on competitors, new products and price developments (Kotler 2000). Wholesalers thus perform vital activities that are part and parcel of supply chain management (buying, selling, negotiation, risk-bearing, financing, warehousing, transportation and assistance to clients).

It is clear from the foregoing discussion that wholesalers perform a vital role in supply chains. Furthermore, the nature of wholesaling activities fits well into the whole philosophy of supply chain management and associated concepts, such as value adding, cost effectiveness in the supply chain (distribution), outsourcing of activities, concentration on core business activities and close coordination (often seen as integration) of parties in the supply chain. Wholesalers thus represent an important function or link in the supply chain, according to the supply chain management approach.

Findings of the empirical study

Profile of the responding wholesalers

This study aimed to determine the purchasing and supply management approaches applied by wholesalers across South Africa. It was therefore fortuitous that the respondents to the study were from all nine provinces of the country.

The Standard Industrial Classification of wholesale organisations includes the type of trade categories regarded by respondents as either primary or secondary activity classifications. Most of the responding wholesalers (16.5%) are classified as wholesalers whose primary activity relates to the category 'Machinery, equipment and implements for industrial and business purposes' (SIC code:

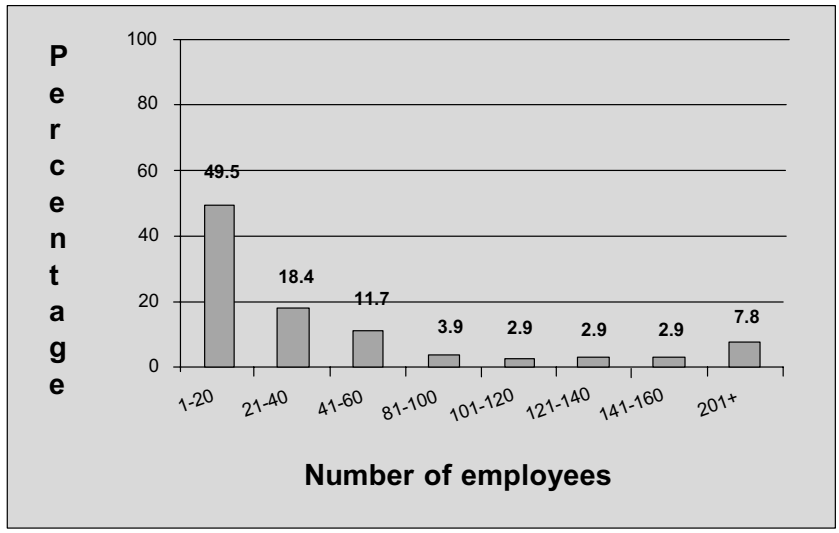


Figure 4: Distribution of the number of employees per wholesaler (N = 103)

61509). This correlates well with the population, in which the largest number of wholesalers (1 107 out of 5 104, or 21.7%) was also classified in this category. Secondly, 13.6% of the responding wholesalers regard their primary type of trade to be related to 'Foodstuffs' (SIC code: 61221) and 'Construction materials, hardware, plumbing and supplies' (SIC code: 61430), respectively. The percentage of the wholesalers (13.6%) classified by this type of trade is more than that reflected by the 7.8% of wholesalers in the 'Foodstuffs' category, and less than the 15.5% in the 'Construction materials, hardware, plumbing and supplies' category. Thirdly, general dealers (SIC code: 61901) encompass 10.7% of the responding wholesalers, correlating well with the 6.7% in the total population of the research study. The only category with a relatively high occurrence as a secondary type of trade, in comparison with its status as a primary type of trade, was the 'Metal and metal ores' category (SIC code: 61420). Overall, the average percentage of the respondents in the various categories compares well with that of the total population, and the respondents were spread among the various types of trade, thereby ensuring that this study does not focus on just one portion of the wholesale sector in South Africa.

The size of the wholesalers, measured in terms of number of employees, showed that approximately 80% of all the responding wholesalers had fewer than 60 employees in their organisations. It is thus clear that this study focuses largely on small and medium-sized wholesalers. However, 7.8% of the wholesalers had more than 200 employees, which made it impossible to generalise the findings only to small and medium-sized wholesalers, as illustrated in Figure 4.

The wholesalers were also grouped according to their status, as either head offices, holding companies, branches, subsidiaries or independent units. Most respondents were either head offices (41.3%) or independent units (40.4%). (The status of the wholesalers may have an impact on the approach they implement towards their purchasing and supply activities.)

Wholesaling functions performed

For the purpose of this article, the most important aspect regarding the findings on the profile of the wholesalers was the data pertaining to the wholesale functions performed by the wholesalers, as shown in Table 1. The wholesale functions performed by most of the responding wholesale organisations in the supply chain were the buying and selling of goods (92.3%). Among the responding wholesalers, 54.4% negotiate with suppliers/ manufacturers of various products; 51.5% own and hold inventories at own risk; and 46.6% provide credit facilities to retailers/users. More than 20% of the responding wholesalers also transport bulk to customers; increase market coverage of manufacturers; break bulk in different assortments; perform warehousing functions in the supply chain; transport bulk from suppliers; and provide training assistance to clients. Responding wholesalers relatively seldom provide management assistance to clients and management and training assistance to suppliers, as seen in Table 1.

Table 1: Wholesale functions performed by wholesale organisations in the supply chain (N = 104)

	FREQUENCY	PERCENTAGE
Buys and sells goods	96	92.31
Negotiates with suppliers/manufacturers of various products	56	54.37
Owns and holds inventories at own risk	53	51.46
Provides credit facilities to retailers/users	48	46.60
Transports bulk to customers	33	31.73
Increases market coverage of manufacturers	30	29.13
Breaks bulk in different assortments	28	27.18
Performs warehousing functions in the supply chain	27	26.21
Transports bulk from suppliers	25	24.27
Provides training assistance to clients	21	20.39
Provides management assistance to clients	11	10.68
Provides management assistance to suppliers	6	5.83
Provides training assistance to suppliers	4	3.85
Other	4	3.85

Table 2 reflects the difference between the wholesale functions performed by the wholesalers grouped by status when a Chi-square test was applied. It is clear that there is a difference between these status groups and the functions they perform. The responses on the status of each wholesale operation were examined to determine where these statistically significant differences exist, between either head offices, holding companies, branches, subsidiaries or independent units, on each of the

Table 2: Comparison of wholesalers grouped by status and the wholesale functions performed in the supply chain

	CHI-SQUARE	SIGNIFICANT DIFFERENCE
Buys and sells goods	1.53	0.674
Negotiates with suppliers/manufacturers of various products	3	0.392
Increases market coverage of manufacturers	5.04	0.168
Performs warehousing functions in the supply chain	6.60	0.086
Owns and holds inventories at own risk	1.53	0.675
Provides credit facilities to retailers/users	9.15	0.027
Transports bulk from suppliers	0.94	0.814
Transports bulk to customers	0.80	0.823
Provides management assistance to suppliers	13.56	0.004
Provides management assistance to clients	12.05	0.007
Provides training assistance to suppliers	5	0.171
Provides training assistance to clients	7.33	0.062
Breaks bulk in different assortments	8.88	0.032

significant wholesale functions. It is obvious that the different status groups of wholesalers vary significantly in executing the following activities: providing credit facilities to retailers and users; providing management assistance to suppliers and clients, and breaking bulk in different assortments.

These items were nonparametric in nature, as two measurement levels were included, namely, no = 0 and yes = 1. It was therefore possible to do an analysis of variance (ANOVA) test to establish statistically significant differences, although the Chi-square test is the most technically correct. However, the ANOVA function does allow for a *post hoc* comparison to help identify between which of the groups (the head offices, holding companies, branches, subsidiaries or independent units) the differences actually exist.

With the application of a *post hoc* Bonferoni test, the following interesting findings emerged (see Table 3):

- All the wholesalers (grouped according to status) primarily buy and sell goods, with the exception of the subsidiary category – they primarily negotiate with suppliers/manufacturers of various products.
- Branches are more likely than any other group of wholesalers (grouped according to status) to increase market coverage for manufacturers, perform warehousing functions in the supply chain and give credit facilities to retailers or other users.
- All the different groups of wholesalers (grouped according to status) own and hold inventory at own risk.
- Branches and subsidiaries are more likely than any other group of wholesalers (grouped according to status) to transport bulk from suppliers and to clients.
- Branches are more focused on management and training assistance to clients, and holding companies are more likely to provide management and training assistance to suppliers.
- Independent units are more likely to break bulk than head offices.

Table 3: Percentage of the wholesalers grouped according to status and the wholesale functions the group performs

	Head office	Holding company	Branch	Subsidiary	Independent unit
	%	%	%	%	%
Buys and sells goods	95	86	89	33	98
Negotiates with suppliers/manufacturers of various products	53	57	78	100	46
Increases market coverage of manufacturers	35	0	44	33	24
Performs warehousing functions in supply chain	35	14	44	33	15
Owns and holds inventories at own risk	53	43	67	67	46
Provides credit facilities to retailers/users	49	43	89	67	34
Transports bulk from suppliers	26	14	33	33	22
Transports bulk to customers	30	29	44	67	29
Provides management assistance to suppliers	0	1	2	3	4
Provides management assistance to clients	9	14	44	0	5
Provides training assistance to suppliers	7	14	0	0	0
Provides training assistance to clients	28	0	33	67	10
Breaks bulk in different assortments	14	14	33	33	41

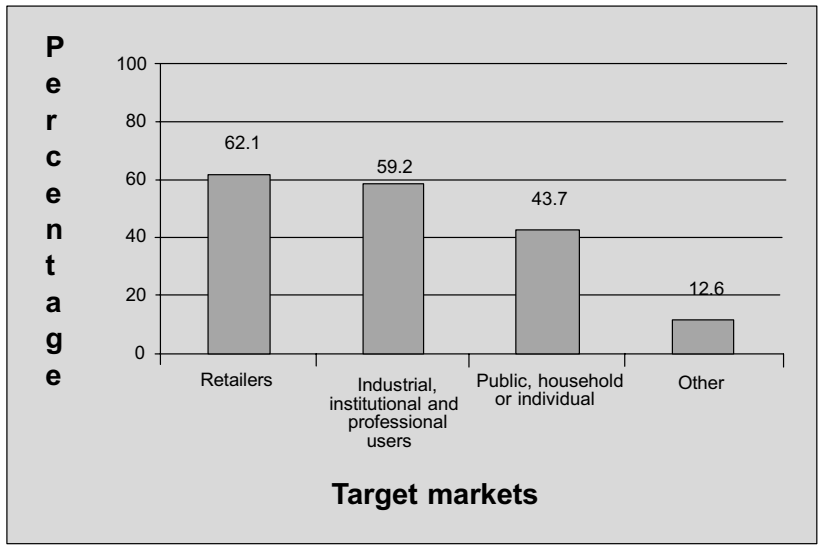


Figure 5: Target markets

Respondents were further asked to indicate which descriptions best suit their organisation, based on the wholesale functions it performs. The respondents were allowed to indicate more than one description. Of the respondents in this study, 35.92% comprised industrial distributors and manufacturer's agents respectively, 27.18% selling agents, 21.36% importers and exporters and 18.45% cash-and-carry wholesalers. In this respect, the sample was not representative of the population.

In response to the question on target markets, the wholesalers could indicate more than one option, resulting in the percentages provided in Figure 5 not adding up to 100%. Most respondents (62.1%) provide products to retailers, while 59.2% of them trade with industrial, institutional and professional users.

The results pertaining to the wholesaler's target markets again emphasise the vital role wholesalers play in the supply chain (see Figure 2), especially as a link between retailers and manufacturers, as well as the role of consolidator between manufacturers and the public.

Wholesalers' adoption of strategic supply management and supply management

To determine whether wholesalers have adopted the contemporary management approaches of strategic supply management and supply chain management, respondents were asked to indicate the activities they perform, the practices they implement, and their approach to certain issues related to purchasing, strategic supply management and supply chain management. These individual items in the questionnaire can be linked to the development stages and practices indicated in Figure 1.

The items of the questionnaire were then categorised (as in Table 4) into the three management approaches. Each category showed high and satisfactory internal consistency reliability, with the Cronbach's alpha values being between 0.84 and 0.91. Table 5 shows that the tactical purchasing management approach had the highest mean score of the three categories (1.70). This indicates that the responding wholesale operations in South Africa clearly perform the activities associated with the traditional approach to a greater extent than that of strategic supply management (mean = 0.98) or supply chain management (mean = 1.05) approaches.

The three categories (purchasing management, strategic supply management and supply chain management) correlate positively with one another, with supply chain management showing a particularly high correlation with strategic supply management (Pearson coefficient of 0.86). This again emphasises the fact that strategic supply management forms an integral part of the supply chain management approach.

The positive correlations indicate that when one of the categories (purchasing management, strategic supply management and supply chain management) tends to be high, the others also tend to be high. This correlation makes sense, because a wholesale operation that adopts strategic supply

Table 4: Categorising the items of the questionnaire under the different management approaches to the purchasing and supply function: purchasing management, strategic supply management and supply chain management

Purchasing	Strategic supply management	Supply chain management
Preparing, placing, issuing and following up purchase orders	Concluding long-term contracts	Evaluating the current situation (status quo) of the supply chain
Receiving purchase orders	Managing the administration of contracts	Synchronising the processes of suppliers and customers with the processes of the organisation
Inspecting purchase orders	Managing the implementation of contracts	Integrating suppliers and customers with regard to information and materials flow
Distributing purchase orders	Using electronic data interchange (EDI)	Identifying and evaluating sourcing opportunities for the supply chain
Supervising faulty consignments and rejections	Using the Internet	Assessing the value of sourcing opportunities to the long-term goals of the supply chain
Making transporting decisions	Using e-procurement	Identifying cost reduction opportunities
Documenting transactions	Establishing cross-functional teams	Focusing on satisfying customer needs rather than short-term profit
Conducting purchasing research	Conducting strategic sourcing research	Making outsourcing decisions
	Developing cross-functional teams	Creating a supplier portfolio for each organisation involved in the supply chain
	Managing cross-functional teams	Applying continuous tracking and performance management of the partners in the supply chain
	Establishing strategic alliances with suppliers	Identifying total cost opportunities for the supply chain
	Developing strategic alliances with suppliers	Managing reverse logistics
	Managing strategic alliances with suppliers	
	Using long-term contracts with current suppliers	
	Analysing the total supply market	
	Reducing the supplier base	
	Formulating strategies for critical commodities	
	Having a strategic focus	
	Managing relationships	
	Analysing arrangements with suppliers of the various requirements	
	Analysing total procurement spending	
	Categorising products/services with regard to the importance and complexity of the market	
	Establishing appropriate relationships with suppliers of various categories	
	Applying 'best practices' in the management of suppliers	

Table 5: Descriptive information on the different management approaches to the purchasing and supply function: purchasing management, strategic supply management and supply chain management

Factor	N	Minimum	Maximum	Mean	Std. Deviation
Purchasing management	103	0	3.00	1.70	0.75
Strategic supply management	103	0	2.89	0.98	0.71
Supply chain management	103	0	2.92	1.05	0.72

management will also do tactical purchasing. (Tactical purchasing will always be used in certain circumstances and for certain purchases, such as for low value standarised items).

An analysis of variance (ANOVA) was also performed to compare the differences between the wholesalers, grouped according to the size of the company, and significant differences were found (see Table 6). Large wholesale organisations appeared to score significantly higher on all three categories than small wholesale organisations with fewer than 20 employees, indicating that the purchasing function is more often part of larger wholesalers' activities or services offered in the supply chain.

From the foregoing findings, it can be concluded that South African wholesalers still focus significantly on the more tactical purchasing management approach. However, some strategic aspects of the approach are employed. It is also clear that the purchasing function forms an important part of the role that wholesalers play in supply chains.

Implications of this article for researchers and practitioners

Few South African, or even international, empirical studies have been done to establish the extent to which organisations incorporate strategic supply management and supply chain management approaches in their operations, especially studies focusing on the intermediaries in the supply chain. This article therefore attempts to fill the existing gap in research by establishing the manner in which wholesale organisations respond to the challenges presented by the new order of business. Further studies using the same methodology, but focusing on other participants of the supply chain, will go far in ascertaining if new demands and developments such as strategic supply management and supply chain management are an implemented truth or a theoretically reasoned assumption.

Practitioners can use this information to benchmark the development of their own organisations in this regard. Once they have established their current position, they will be able to develop and perfect their own strategies to deal with pressures, from more developed organisations upstream and downstream in the supply chains in which they are involved, to conform to the new approaches.

Conclusion

The literature research established that the new demands and developments facing wholesalers in managing their purchasing and supply function are a reality. Wholesalers are confronted with a variety of challenges concerning these demands and developments that are jeopardising their vital role in the supply chain. They therefore need to adopt a more sophisticated method of managing these activities. By embracing contemporary approaches,

Table 6: Differences between the size of the wholesalers and the categories: purchasing management, strategic supply management and supply chain management

	F	Sig.
Purchasing management	4.51	0.005
Strategic supply management	7.63	0.000
Supply chain management	4.23	0.007

they decrease their costs, add value in the supply chain and ultimately assure their continued existence in the supply chain.

This empirical study clearly indicates, however, that South African wholesalers are still significantly focused on the tactical aspects of purchasing, and incorporate only a few aspects of strategic supply management and supply chain management. Therefore, the overall conclusion that can be made from this study is that South African wholesalers find themselves at a level between the mechanical and proactive stages (that is, between stages 2 and 3) (see Figure 1) with regard to the recognition and management of their purchasing function. It is thus clear that South African wholesalers have not adapted to the strategic supply and supply chain management approaches, and need to prepare themselves for this change – or risk elimination in supply chains.

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Identifying situational inhibitors regarding the Aardklop National Arts Festival

C. van Zyl

The research on which this article is based was undertaken in Potchefstroom, where the Aardklop National Arts Festival, one of the largest and most popular of the more than 85 annual festivals in South Africa, takes place. The first festival in 1998 attracted 25 000 visitors, increasing to over 100 000 by 2004. Local residents may be motivated to attend a festival, but situational inhibitors could prevent them from attending. As little research has been done on situational inhibitors in the South African festival context, the aim was to identify and investigate the situational inhibitors that might discourage local residents in Potchefstroom from attending the festival. The biggest overall inhibitors of festival attendees are lack of time and money.

Introduction

Festivals and such events are among the major components of the tourism industry in South Africa and are a growing phenomenon, with new ones being added to the events calendar almost weekly. There has been considerable growth in the late 1990s and 2000s since the first festival was established in Grahamstown in 1974 (Hauptfleisch 2001). Research needs to be done on why people attend such festivals, or what inhibits them from attending.

The Aardklop Festival, one of more than 85 festivals hosted annually in South Africa, was a response to the need for an arts festival in the northern parts of South Africa. The Grahamstown National Arts Festival and the Klein Karoo National Arts Festival (KKNK) are held in the southern parts of South Africa. Potchefstroom was selected as host city because of its good infrastructure and country atmosphere, which are essential for the success of an arts festival. The festival was initiated in 1998 with the aim of preserving and enhancing the Afrikaans language and culture (Van Zyl G. 2002).

Research on this specific aspect of the tourism industry in South Africa is limited. Examples of research being done on festivals in South Africa include economic impact studies of arts festivals by Saayman (2004), Van Heerden (2003), Snowball & Antrobus (2003) and Williams (1997), and on the participation of the host community in arts festivals by Van Zyl (2002). Witepski (2002) noted that the growth experienced by festivals in South Africa might threaten their future, while Hauptfleisch (2001) reported on the 'eventification' of the Afrikaans culture by referring to the KKNK. Although the organisers of the festival are aware of the need to research the factors influencing the sustainability of the festival, they have downplayed the role of the host community, and more specifically that of local residents, as an element integral to the future success of the festival (Ryke 2002; Van Zyl 2002). Various studies (Allen, O'Toole & McDonnell 2002; Fredline Bowdin, McDonnell, Allen Getz 1997) claim that local residents are significant stakeholders in the continuation of a festival. In addition to the continuation of festivals, the local community of Potchefstroom provides many of the amenities that festival attendees use. Since the benefits of cultural and arts-related tourism are often expressed in economic terms, there is a strong likelihood that these will contribute to the prosperity of the host community (Backman, Backman, Uysal & Sunshine 1995; Getz 1991). If the local residents feel that the festival does not enhance their lifestyle, or that it impinges on their quality of life, they may react negatively, thereby jeopardising the sustainability of the festival (Getz 1997; Gorney & Busser 1996; Delamere & Hinch 1994).

The management of the Aardklop Festival asserts that approximately 15% of the local residents are unhappy about the hosting of the event in Potchefstroom (Van Zyl 2002). Ignoring research in this regard might therefore jeopardise the sustainability of the festival. Getz (1997) noted that the local residents usually dominate festival attendance, with

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tourists forming an important existing or a potential market segment. An impact study conducted by Scribe Communications (2001) at the time of the study indicated that almost 30% of the people attending the festival comprised local residents from Potchefstroom.

It is clear that research regarding the role of local residents in the Aardklop Festival is long overdue. By understanding what discourages their attendance and participation, the organisers of the festival could gain greater insight into a strategy to turn non-attendees into attendees. This could constitute a competitive advantage *vis-à-vis* other arts festivals (competitors) in South Africa, adding to the financial success and overall sustainability of the Aardklop Festival. No such research on the Aardklop Festival had been conducted in South Africa at the time of this study.

The purpose of the present research was therefore to fill the gap in previous research by determining what inhibits local residents of Potchefstroom from attending the Aardklop Festival and participating in it. The secondary research objectives of the study were:

- To construct the situational inhibitors relevant in the decision-making process of attending arts festivals
- To identify the dimensions or domains of situational inhibitors that can be applied to festivals
- To identify the most and least important situational inhibitors likely to affect the local residents
- To identify whether situational inhibitors differ with respect to low and high socio-economic areas, male and female groups and various age groups.

Situational inhibitors: scenario sketch and literature review

Scenario sketch

It is important to understand how internal psychological processes influence individuals to choose a particular type of tourism product, such as attending a festival (Gilbert & Hudson 2000: 137). A new understanding is necessary of the tourist as a consumer who demonstrates particular actions or behaviour (Woodside, Crouch, Mazanec, Opperman & Sakai 2000). The study of consumer behaviour should not only seek to understand the choice process of tourists (or local residents), but should also endeavour to comprehend the range of situational inhibitors preventing non-attendees from becoming attendees. During the individual's decision-making process to undertake leisure activities, various vacation or recreation activities are considered. In order to simplify this rather complex issue, the present study used the following hypothetical scenario to illustrate this complex issue:

> The atmosphere in Potchefstroom is becoming magical as excitement builds over the eighth Aardklop Festival, which is only a few weeks away. Mr and Mrs Botha, two local residents of Potchefstroom, have to decide whether or not to attend this year's Aardklop Festival. They have known about the festival since its inception six years ago. They learned of this year's festival from the local newspaper, the *Potchefstroom Herald*, as well as all the banners and posters in town advertising the Aardklop Festival (initial consideration of the decision-making process). Previous time and leisure constraints have prevented the Botha couple from attending the festival in the past, but they may decide to attend this year (2005), because their busy time schedules are more flexible. Eventually, they agree that they would prefer to avoid the possible challenges of the huge crowds and lack of parking by visiting their relatives in Cape Town instead.

This scenario outlines the important influences that situational inhibitors might have on the Botha's decision not to attend the Aardklop Festival. Although a preliminary search indicated limited research findings on situational inhibitors for festivals, various authors (Gilbert & Hudson 2000; Botha 1998) acknowledge the importance of inhibitors when people make decisions about attending a festival. It is evident that the process of choosing one leisure activity rather than another entails a series of decisions involving an individual's motivations, preferences, knowledge, cognitive processes, resources and inhibitors. It is vital for tourism researchers and stakeholders to understand why people do not attend festivals, although they are motivated to do so.

Literature review

Preliminary research revealed that most studies emphasise the tourist (festival visitor) rather than the permanent residents of the area where tourism (for instance, the arts festival) takes place (Belisle & Hoy 1980: 84). However, Getz (1997) notes that if

there were no host community, there could be no festival. This article therefore focuses on local residents, as they may have an influence on the sustainability of subsequent festivals. It is crucial to understand what motivates these people to attend festivals and to participate in these, and to identify the situational inhibitors that discourage participation in the festival. If this market segment does not perceive any benefits or motivations, or is somewhat inhibited from attending the festival, they will probably spend their money elsewhere (Hughes 2000: 173).

There is, however, a lack of research into understanding inhibitors from a tourist's perspective (Pennington-Gray & Kerstetter 2002; Gilbert & Hudson 2000). This article attempts to determine what exactly it is that inhibits local residents from participating in arts festivals. In terms of arts festivals, situational inhibitors can be seen as barriers or constraints, which prevent individuals from attending these festivals.

Such barriers that prevent individuals from attending festivals might include insufficient leisure time and money (Getz 1997). According to Rusk (1974), it is highly probable that most individuals are potential prospects for various types of tourism activities. The same person might therefore be a prospect for a seaside holiday, a mega event such as the Grand Prix or an arts festival. It is also highly probable that the motivations will vary considerably according to the type of tourism activity being considered.

Research regarding inhibitors is limited, although such inhibitors are vital for the selection of tourism attractions. Situational factors are of primary importance during the individual's final decision about whether or not to engage in specific tourism attractions. Research in this regard is likely to perform three functions, namely:

- To give a better understanding of the phenomenon and complexity of inhibitors
- To provide new insights into the understanding of leisure aspects such as participation, motivation and satisfaction
- To serve as a device for aiding perceptions of probable linkages among discrete leisure activities, thereby facilitating communication among researchers interested in different aspects of leisure phenomena.

Jackson (1990: 273, 280) defines 'situational inhibitors' as the overt and covert barriers (or perceptions of such barriers) that people are likely to consider when making decisions about leisure activities. These decisions steer or direct individuals towards avoiding a specific tourist activity or participating in it. Crawford & Godbey (1987: 119) distinguish three types of situational inhibitors, namely intrapersonal, interpersonal and structural:

- Intrapersonal inhibitors embrace psychological states, which interact with festival preference, rather than intervening between preferences and participation.
- Interpersonal inhibitors refer to the relationships between the characteristics of local residents, which are influenced by personal interactions.
- Structural constraints recognise constraints as intermediary factors between preference for a festival and participation.

According to the negotiation model of Crawford, Jackson & Godbey (1991), there are psychological orientations that will probably prevent individuals from experiencing higher-level constraints or inhibitors. Local residents who are most affected by intrapersonal constraints are less likely to participate in a festival and therefore do not reach higher-order constraints (interpersonal and structural constraints).

A conceptual framework that may help in understanding why individuals do not participate in specific tourism activities is that regarding situational inhibitors (Nyaupane, Morais & Graefe 2004). During the last two decades, researchers have extensively examined barriers to participation in a variety of leisure activities. Until very recently, however, few studies have explored the usefulness of the situational inhibitors framework in the tourism context (Hinch & Jackson 2000). Since the early 1980s, considerable research has been conducted on constraints to leisure.

Contemporary research has produced some noteworthy contributions to the understanding of inhibitors to participation in tourism activities. Most inhibitor research was conducted on visiting parks (attractions and destinations) and nature-based activities, and none was specifically directed at visiting arts festivals. A summary of the findings of the latest or most recent inhibitor research applicable to the current article revealed some interesting findings:

- A study by Fleischer & Pizam (2002) on Israeli senior citizens reported that inhibitors to taking vacations were very homogeneous across various age subgroups, and the findings served to reinforce previous leisure inhibitor literature

dealing with leisure constraints of American senior citizens (McGuire, Dottavio & O'Leary 1986; McGuire 1984).

- Another study by Gilbert & Hudson (2000) examined both the inhibitors of non-participants in a nature-based tourism activity (skiing) and those participating in it. The survey data revealed that non-participants reported higher levels of all types of inhibitors, and that non-skiers were particularly challenged by personal fears about the activity, whereas skiers were especially challenged by a lack of time and spending money.
- A study by Pennington-Gray & Kerstetter (2002), also regarding nature-based tourism, investigated the factors that prevent individuals from taking pleasure trips away from home for the purpose of engaging in outdoor recreation. Their findings revealed that the most important inhibitor was money, followed by time (structural) with interpersonal (influence of friends) and intrapersonal factors as least important. It seems that older individuals and those with children have more inhibitors to deal with than younger or single individuals. In contrast with Gilbert & Hudson's (2000) study, such respondents were not challenged by personal fears but rather by constraints in terms of money and time.

Various authors (Backman 1991; Backman & Wright 1990; Jackson & Dunn 1987; McGuire 1984) have documented that inhibitors are interrelated and should be evaluated in the context of underlying dimensions. Within this context, Jackson (1993) identified six dimensions of inhibitors that appear to be common across settings:

- Social isolation
- Accessibility
- Personal reasons
- Cost
- Time
- Facility offered.

The author conceptualises the most common situational inhibitors in a festival context, derived from tourism research studies such as Gilbert & Hudson (2000), Hughes (2000), Getz (1997), Van Harssel (1994) and Jackson (1993). The author also lists additional perceived inhibitors in the South African situation, derived from recent factual in-

Table 1: Situational inhibitors in an arts festival context

Situational inhibitor (constraint)	Key characteristic (meaning)
Time and money	Insufficient time and financial resources to attend festivals. Costs too much.
Willingness to pay	Socio-economic status and willingness to pay for activities at arts festival.
Crime rate	South Africa's high crime rate causes fear of crime and hijacking.
Poor service	Unfriendly and poor service at festival venues.
Family	The family life-cycle complicates attendance (for example, small children or elderly people).
Knowledge and information	Not enough marketing and information prior to festival.
Quality and variety	Not enough things to do – perceived as a generally low standard.
Common social factors	Too much drinking, noise, rowdy behaviour, traffic congestion.
Accessibility	Distance from festival, insufficient transport to get there and limited parking.
Awareness	Not accustomed to attending festivals, reinforced by fear of the unknown, are major barriers to enjoying the excitement of new experiences such as festivals.
Health	Physical limitations, poor health and advanced age are barriers preventing participation in or attendance of festivals.

Sources: Hughes 2000; Botha 1998; Getz 1997; Van Harssel 1994; Jackson 1993; Crawford et al. 1991

formation (Botha 1998). Table 1 summarises all these situational inhibitors derived and borrowed from other tourism literature and applied to a festival context.

These situational inhibitors hold significance for the management team of the Aardklop Festival, since it is important to determine the factors that prevent local residents from attending the festival. Research on situational inhibitors in a festival context is limited, expensive to undertake and difficult to conduct. It may be of some value to understand why certain local residents do not attend, or never return to, the Aardklop Festival.

Research methodolgy

The target population consisted of local residents with a street address in Potchefstroom. For the purpose of this study, a 'user' is defined as a local resident who, as an individual, attended the festival during either or both of the years 2000 and 2001 (bearing in mind that the survey was conducted in 2002). A 'non-user' is defined as an individual who attended the festival during the first or second year it was held (1998 or 1999) or both festivals during the first two years. An individual who had never attended the festival was also classified as a non-user. The sample element included the male and female members residing or staying in the survey area. The sample unit referred to households residing in the survey area of Potchefstroom.

To determine the sampling frame, a map of Potchefstroom was obtained from the City Council and all the residential areas were identified. A name list of all the typical residential areas was sent to ten independent local residents of Potchefstroom. Each had to rank the areas (based on type of dwelling) from the higher to the lower socio-economic areas. All the higher socio-economic areas were written on separate pieces of paper, which were put into a hat. Two areas were randomly drawn from the hat to represent the higher socio-economic areas, and the same procedure followed for the lower socio-economic areas.

A non-probability sampling technique was used. More specifically, an interlocking quota sampling method was used, with socio-economic area, gender and age as variables. Each specific sample element had to comply with these characteristics. The only requirement was that the elements selected had to fit the control characteristics.

A total sample size of 160 respondents was achieved, comprising 120 users and 40 non-users.

A self-completion questionnaire was used for collecting data. The questionnaire was designed and pre-tested in the pilot stage. Only minor modifications were made. The questionnaire consisted of 27 items on a Likert-type scale, asking each respondent to indicate how important each statement (situational inhibitor) was in his/her decision whether or not to take part in the festival. The items used for measuring the situational inhibitors were derived from a combination of previous inhibitor research (such as Gilbert & Hudson [2000] and others) as well as qualitative interviews conducted with local residents (Du Preez 2002; Hefer 2002; Ryke 2002). The list of 27 inhibitor items was included in the questionnaire that respondents had to complete (see Table 2). Each of these was grouped into five domains or dimensions: 'time and money', 'synchronising with others', 'accessibility/transport', 'social problems' and 'fear'.

The data for this article were collected by means of a combination of interviewing and self-completion questionnaires. The interviews were conducted with local residents of Potchefstroom, chosen by means of probability and non-probability sampling. The households were selected at random. Both interviews and questionnaires were necessary, because fieldworkers first had to ask the screening questions and then assisted respondents, where necessary, in completing the questionnaire. Each interview lasted approximately 30–40 minutes. The author briefed and trained the fieldworkers (all of whom had a background in tourism and also had previous experience with interviewing) in how to assist respondents to complete the questionnaires, if necessary. The interviewers were then each allocated a number of interviews (quotas) with specific types of respondents.

The data were then coded, captured and cleaned.

Findings

The situational inhibitors used are shown in Table 2.

The alphas for these situational inhibitors ranged from 0.48 to 0.80. Almost all exceeded Nunnally's (1978) 0.60 minimum criterion. The inhibitor items 'time and money' and 'accessibility/transport' showed a relatively low internal consistency under the criteria, yet are considered acceptable. The alpha of 0.48 for 'time and money' might indicate that the respondents regarded the items grouped together as relating to other items as well. In the case of 'accessibility/transport', the alpha value of

Table 2: Reliability of and items in each situational inhibitor factor

	Time and money	Synchronising	Accessibility/ transport	Social problems	Fear
Items used to construct a factor	1 Not enough money	12 Too difficult to arrange free time that suits others going with me	3 Lack of transport to get there	8 Too much noise	4 Fear of crime
	2 Lack of time to attend the festival	15 Need to suit my preferences to the preferences of others accompanying me	7 Lack of parking facilities	10 Traffic congestion in streets, crowded restaurants and shopping centres	5 Crowds are too big
	6 Tickets for shows cost too much	16 Influence of friends/family	14 Too far from home	11 Disrupts life	13 Lack of information
	9 Higher prices in shops and restaurants	20 Difficult because of stage in family life-cycle		17 Too much effort	18 Lack of self-confidence
	22 Willingness to pay for arts			19 Poor service at arts festival	21 Causes stress
	23 No value for money at arts and crafts stalls			24 People who drink too much at festival	26 Stalls might evolve into a flea market
	27 High cost of attractions and entertainment			25 Too many tourists/visitors	
Chronbach alpha	**0.48**	**0.77**	**0.56**	**0.80**	**0.76**

Total reliability Cronbach alpha for Aardklop instrument: 0.848

0.56 is marginally lower than Nunnally's norm of 0.60. The other three factors all have high reliabilities of above 0.70. The overall Cronbach alpha is 0.848.

Table 3 gives the descriptive statistics of the situational inhibitors.

'Time and money' and 'accessibility/transport' seemed to be the biggest obstacles to the respondents' attendance of the festival. The domain 'time and money' contains key items that respondents rated as being major barriers, namely 'not enough money' (mean of 3.31); 'tickets for shows cost too much' (mean of 3.43); 'higher prices in shops and restaurants' (mean of 3.23) and 'high cost of attractions and entertainment' (mean of 3.56). Figure 1 indicates the mean importance of the situational inhibitors rated by respondents.

Table 3: Descriptive statistics of the inhibitors (N = 120)

Strongest inhibitor

Inhibitors	Mean	Std deviation	Items
Time and money	3.07	0.748	1, 2, 6, 9, 22, 23, 27
Synchronising with others	2.45	0.847	12, 15, 16, 20
Accessibility/Transport	2.67	0.842	3, 7, 14
Social problems	2.50	0.793	8, 10, 11, 17, 19, 24, 25
Fear	2.40	0.781	4, 5, 13, 18, 21, 26
Total scale	**2.63**	**0.668**	

The scale indicates 5 = Very important and 1 = Very unimportant

The key items of the domain 'accessibility/transport' were 'lack of parking facilities' (mean of 3.61) or 'lack of transport to get there' (mean of 2.28). These might also have inhibited the respondents from attending, especially in the younger age group (aged 18–30). The assumption can also be made that various members of the same community might feel differently about the same variable. The domain 'fear' had the lowest overall mean score, and the items in this domain that had the lowest scores were 'causes stress' (mean of 1.92) and 'lack of self-confidence' (mean of 1.93.

Table 4 gives the Pearson correlation between the inhibitor 'time and money' and 'spending at the festival'. Various tests were done to determine whether there were any significant results linking situational inhibitors and other factors. Significant results were obtained only from the latter correlation, and these results are therefore included. This correlation was done to determine the relation between the inhibitors of 'time and money' and 'spending at the festival'.

The greater the importance of time and money to a respondent, the smaller the amount spent on tickets and craft stalls. Spending on food and beverages does not seem to be affected by this inhibitor.

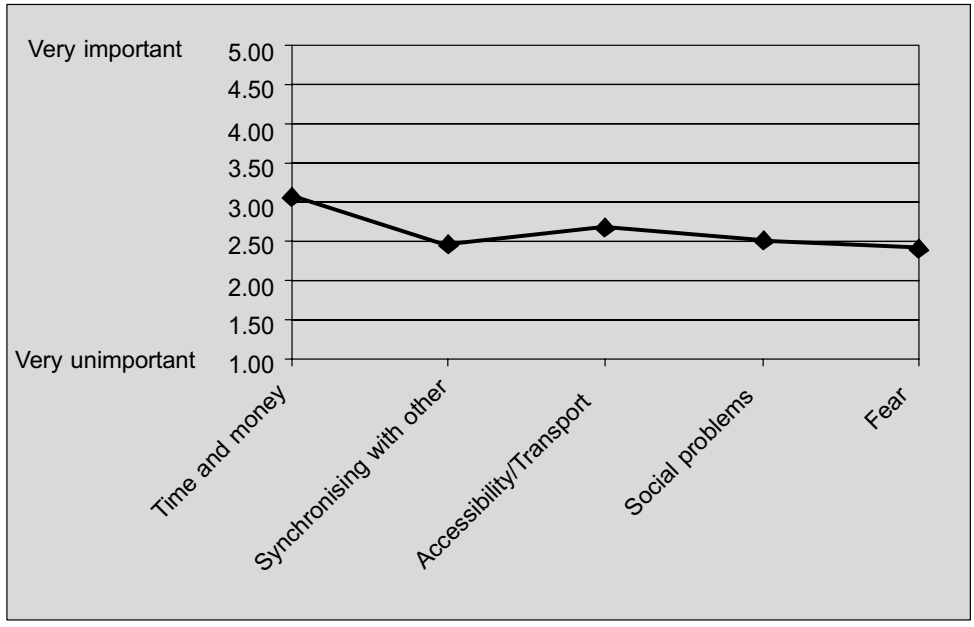

Figure 1: Mean importance scores of the situational inhibitors

Table 4: Correlation between the situational inhibitor 'time and money' and 'spending at the festival'

		Money on tickets	Money on craft stalls	Money on food and beverages
Time and money	Pearson correlation	-0.18	-0.26	-0.12
	Sig. (2-tailed)	0.045	0.004	0.203
	N	120	120	120

Table 5: Comparison of the respondents in low and high socio-economic areas for the situational inhibitors; independent t-test for significant differences

	Area	Mean	Standard deviation	t-value	p-value
Time and money	Low High	3.25 2.89	0.60 0.84	2.719	0.008
Synchronising with others	Low High	2.57 2.34	0.79 0.89	1.526	0.130
Accessibility/Transport	Low High	2.78 2.56	0.81 0.87	1.434	0.154
Social problems	Low High	2.73 2.28	0.79 0.74	3.162	0.002
Fear	Low	2.59 2.22	0.80 0.72	2.653	0.009

Spending money on tickets and craft stalls might be a luxury item for respondents, whereas food and beverages satisfy a basic physiological need.

Table 5 lists the differences between the importance of certain situational inhibitors for high and low socio-economic groups.

The mean score for the importance that the low socio-economic group attached to the 'time and money' inhibitor is higher (3.25) than that for the high socio-economic group (2.89). This difference is significant at the 0.05 level (p = 0.008). Respondents in the low socio-economic group rated time and money as a greater concern than those in the high socio-economic group, which possibly reflects the disparities in the two group's disposable income. However, the items that had the highest score for all the respondents at the festival were: 'not having enough money' (mean of 3.3), 'lack of time to attend the festival' (mean of 3.09), 'high cost of attractions and entertainment' (mean of 3.56) and 'the tickets for shows cost too much' (mean of 3.43).

The low socio-economic group was also more inhibited by social problems and fear. However, the key items of 'social problems', which might inhibit the entire sample of respondents, were 'traffic congestion in streets', 'crowded restaurants and shopping centres' (mean of 3.33), 'disrupt their lives' (mean of 2.18) and 'poor service at arts festival' (mean of 2.69). The 'fear' items that had the highest scores among all the respondents (from both high and low socio-economic groups) included 'fear of crime' (mean of 2.78) and 'stalls might evolve into a flea market' (mean of 2.62). Finally, respondents in the low socio-economic groups were more inhibited by time and money, social problems and fear than respondents in the high socio-economic group. This phenomenon may hold some significance for the management of the Aardklop Festival when formulating marketing strategies to target the lower socio-economic group.

No significant differences were found between age and gender groups in terms of what inhibits them from attending arts festivals.

Conclusion

Based on the findings, the following conclusions can be drawn from survey respondents:

- 'Time and money' is the biggest overall situational inhibitor preventing respondents from attending the festival. 'Accessibility/transport' and 'social problems' also appear to be strong inhibitors. These findings are similar to the findings of the research conducted by Getz (1997: 275) as well as those of Pennington-Gray & Kerstetter (2002). The latter research reported situational factors for a different situation. There seems to be a lack of research information about the factors that inhibit respondents from attending arts festivals.
- The single least important situational inhibitor preventing respondents from attending the festival is 'fear', with items such as those that 'cause stress' and 'lack of self-confidence'. These findings are similar to the findings of research conducted by Pennington-Gray & Kerstetter (2002) that the least important inhibitors were interpersonal (influence of friends) and intrapersonal (stress, fear).
- The single most important situational inhibitor item indicated by all the respondents was 'lack of parking facilities', and the least important was the item 'cause stress'.
- The item 'time and money' was a stronger inhibitor for respondents from the low socio-economic area than for respondents from the high socio-economic area ($p = 0.008$). This seems logical, as people with a lower socio-economic status would be more likely to have less disposable income than those with a higher socio-economic status. Consequently, high prices and a lack of money may be more inhibiting and may prevent lower income families from attending the festival.
- The situational inhibitors 'time and money' ($p = 0.008$), 'social problems' ($p = 0.002$) and 'fear' ($p = 0.009$) were stronger inhibitors for respondents from the low socio-economic areas than for those from the high socio-economic areas.
- The inhibitors 'social problems' ($p = 0.002$) and 'synchronising with significant others' ($p = 0.130$) were more significant for older respondents (45+ years old). Older people seem to have a greater dislike of overcrowding, too much noise and excessive drinking. This is substantiated by Pennington-Gray & Kerstetter's (2002) findings in the leisure literature that older individuals and those with young children are likely to face more constraints than those living alone.
- Non-users were more inhibited by 'accessibility/transport', 'social problems' and 'fear' than users. This indicates that these factors were the main reasons for non-attendance. The location of the event might be inconvenient and therefore might make accessibility difficult. 'Non-users' also seemed less interested in the arts than 'users'.

Based on the findings of this article, the following recommendations are made:

- Festival attendees should be informed about the safe environment at the festival in order to combat fear, which might inhibit people from attending the festival. The management of the Aardklop Festival should note the significant difference between the high and low socio-economic groups in terms of the situational inhibitors.
- A shuttle service for transporting festival attendees should be provided between certain venues, as this would counteract the inhibitor 'accessibility/transport', especially in the case of older people.
- The management of the Aardklop Festival should not ignore the non-user or non-customer. It is recommended that management should actively investigate the reasons for non-attendance, because local residents could be perceived as a 'captive audience'. The festival management should do further market research on this issue.
- It is recommended that the situational inhibitors identified should be applied to a broader audience or area to include other similar festivals in the South African context. There is therefore an opportunity for market development by broadening the customer profile and by attracting more potential customers.
- It is recommended that further research on situational inhibitors should be aimed at analysing and understanding the factors assumed by researchers and perceived by tourists as inhibiting the selection of a particular festival.

This article strives to contribute to the understanding of inhibitor research from a festival attendee perspective. It also confirms the importance of local residents and the role they play in the sustainability of a festival in the future. However, situational inhibitor studies that focus on particular tourism activities are scarce, and this article therefore concentrates specifically on arts festivals. A valuable contribution has thus been made by the construction of situational inhibitors for festivals derived from tourism literature and the empirical research of this study. In conclusion, by studying the findings of this article, festival management