

**AN ASSESSMENT OF STRATEGIES WHICH INFLUENCE THE  
PROFITABILITY OF RETAIL PHARMACIES IN SOUTH AFRICA**

by

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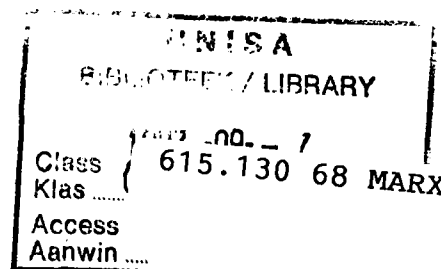
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### ABSTRACT

The objective of this study is to assess the functional strategies of retail pharmacies in South Africa with a view to identify and evaluate variables which universally and significantly influence their profitability. The study devoted attention to both external, uncontrollable variables and internal, controllable variables.

The functional strategies were assessed by means of management audit criteria. A sample of 800 retail pharmacies was selected from the 2 755 retail pharmacies in South Africa at the time of the study. A response rate of 32% was achieved. Multiple regression analysis was used in this study and the influences identified may be summarised as follows:

	Positive influences	Negative influences
Functional strategy	Variables	Variables
General management	Written mission statement Strength and weaknesses analysed	Lack of a written mission statement
Marketing management	Location in a medical centre Trading hours Number of prescriptions dispensed	Location in a shopping centre Location on the street front Pricing by means of percentage mark-up*
Personnel	Number of management courses attended	-
Purchasing	Purchase ratio	-
Financial management	Single proprietorship Partnership	Discounts afforded to medical schemes Close corporation

\* Pricing may be regarded as a variable related to both marketing and financial management.

In order to enhance and improve their profitability, retail pharmacists should capitalise on those variables which influence profitability positively and modify those variables which were found to influence profitability negatively. Recommendations are made on how the above variables should be used to influence the profitability of retail pharmacies positively.

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## CHAPTER 1

### INTRODUCTION

#### 1.1 BACKGROUND

Retail pharmacies exist primarily to provide pharmaceutical preparations and advice related to pharmaceutical preparations which is aimed at preventing or curing illness and contributing to the maintenance of human health.

The existence of South African retail pharmacies is threatened by a competitive and dynamic environment in which pharmacies are exposed to variables which are beyond the control of the pharmacist. These uncontrollable variables are:

1. An increase in the number of dispensing doctors.

The number of dispensing doctors registered with the South African Medical and Dental Council increased from 3 594 in 1985 to 6 879 in 1991 - an increase of 91,4%. The biggest increase occurred in the Transvaal where registered dispensing doctors increased from 1 345 in 1985 to 3 016 in 1991 - an increase of 124,24% since 1985<sup>1</sup> (South African Medical and Dental Council, 1992).

Prescribed medicines dispensed by doctors are estimated to have increased from 5% of all prescribed medicines dispensed in 1981 to 22% in 1987 (*Finansies & Tegniek*, 1988: 12). In addition, there is the public perception that medicines sold by pharmacists are expensive (Rumney, 1988: 14). The implication of this perception is that consumers think medicines are cheaper and more conveniently dispensed by doctors, compounding the problems already faced by the retail pharmacist.

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<sup>1</sup> More detailed figures are provided in chapter 3.

## 2. An increase in the number of retail pharmacies.

The number of retail pharmacies in South Africa increased from 2 465 in 1985 to 2 843 in 1991 - an increase of 15%. The biggest increase in retail pharmacies occurred in Natal where an increase of 27% was witnessed during the period under review<sup>2</sup> (South African Pharmacy Council, 1992).

## 3. The introduction of legislation to stimulate competition.

New legislation aimed at increasing competition was introduced in 1986 by the Minister of Trade and Industry. Horizontal collusion on prices, horizontal collusion on conditions of supply, market sharing and tendering practices, and resale price maintenance were prohibited in the Government Gazette of 2 May 1986 (Notice no. 801).

This prohibition means that pharmacists can no longer agree to charge a particular price, or the same minimum price, for their products. Horizontal conditions of supply refer to any agreement among suppliers of substantially similar commodities to supply such commodities only on particular conditions or terms, or on a recommended term or condition. The prohibition was extended to the use of an association, company, close corporation or other juristic person in which suppliers have an interest to effect horizontal collusion on conditions of supply in any way.

Pharmacists may also not enter into agreements or continue existing agreements to share the market they serve in any particular way. The prohibition further means that a pharmaceutical wholesaler may not enter into an agreement or force a retail pharmacist to charge a particular price for any product. The wholesaler may, however, recommend a resale price as a guide for the convenience of the pharmacist.

The prohibition did, however, provide for applications for exemption from the prohibition. The promotional chains - Plus Promotions (Pty) Ltd, Family Circle and Bonus pharmacies - applied for and were granted permanent exemption from the prohibition on horizontal collusion with regard to prices and conditions of supply (South Africa, 1986a: 13-14).

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<sup>2</sup> More detailed figures are provided in chapter 3.

These pharmacies are, however, subject to the other provisions of the prohibition. Pharmacies which are not members of the above-mentioned promotional chains are subject to all the provisions of the prohibition.

4. Discounts required by medical schemes on prescribed medicines dispensed by retail pharmacists.

Medical schemes also play a role in the profitability of South African retail pharmacies. Medical aid schemes require discounts ranging between 15 and 25% on prescribed medicines purchased from retail pharmacies. This aggravates the already difficult situation in which the pharmacist finds himself and influences the profitability of his pharmacy negatively.

As a result of the above-mentioned changes in the environment and the subsequent increase in competition, the profitability and survival of the retail pharmacies are threatened. In order to ensure the continued existence of a retail pharmacy in a free enterprise system, the pharmacist has to pursue the profitability of his/her<sup>3</sup> pharmacy (Futter, 1990: 16).

The profitability of retail pharmacies may be influenced positively if a strategic management approach is adopted in order to cope with the dynamic environment which currently prevails in the pharmaceutical industry. This is based on several studies conducted in the United States of America concerning improved profitability as a result of the implementation of a strategic management approach (Justis, Judd & Stephens, 1985: 13-14; Pearce & Robinson, 1988: 17-19; Byars, 1987: 6; 8). The conclusion reached is that organisations with formal strategic management systems outperformed others on earnings per share, return on assets and return on equity. A comparison was also made of the performance of organisations with formal systems from the time they initiated the system to their performance over an equal period of time prior to the initiation of the formal system (Byars, 1987: 8). After the initiation the companies surpassed their performance over prior years. Consequently, the prudent retail pharmacist has to adopt a strategic management approach in order to ensure the survival of his pharmacy.

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<sup>3</sup> The remainder of the study uses "him", "he" or "his" (gender) to refer to the retail pharmacist. This is done for the sake of easy reading and each such reference applies equally to female pharmacists.

The significance of a strategic management approach is that it addresses the core responsibility of the retail pharmacist, that is, to ensure the profitability of the pharmacy today and in the future. The retail pharmacist must continuously survey the environment, determining the nature of the pharmacy, setting goals for it, devising policies and strategies to achieve objectives, and assuring that actions are such that the policies and strategies decided upon result in the achievement of set objectives (Steiner, Miner & Gray, 1986: 242).

The strategic management approach requires the formulation of global and functional strategies. The global strategy gives general direction to the management of a firm, while the functional strategy spells out what specific results should be achieved. The global and functional strategies are designed to take advantage of market opportunities and neutralise adverse environmental impacts. At the same time they reinforce the internal strengths of the pharmacy and improve its perceived weaknesses relative to its competition (Byars, 1987: 92).

In general terms it is the aim of this study to assess prevailing management strategies or the lack thereof in retail pharmacies and to propose that the retail pharmacist can survive in the rapidly changing environment outlined above only if he adopts an integrated strategic management approach. The specific objectives of this research are outlined in the following sections.

## **1.2 OBJECTIVE, RESEARCH HYPOTHESES AND GOALS OF THE STUDY**

### **1.2.1 Objective of the study**

*The objective of this study is to assess the functional strategies of retail pharmacies in South Africa with a view to identify and evaluate variables which universally and significantly influence their profitability.*

### **1.2.2 Research hypotheses**

The research hypotheses are:

1. The profitability of South African retail pharmacies is influenced by both external, uncontrollable variables and internal, controllable variables.
2. There are particular internal and controllable variables related to functional management strategies which universally and significantly influence the profitability of South African retail pharmacies.

### **1.2.3 Goals of the study**

The following goals have been derived from the objective and research hypotheses of the study:

1. To study literature on internal, controllable variables which influence the profitability of retail pharmacies. In this regard, the emphasis will be placed on strategic management models and functional management strategies.
2. To identify external, uncontrollable variables which influence the profitability of retail pharmacies. Here the emphasis will be placed on groups and organisations associated with the distribution of pharmaceutical products.
3. To assess the functional management strategies of retail pharmacies.
4. To assess the relationship between functional management strategies and the profitability of South African retail pharmacies.
5. To describe the results and findings of the analyses which have been performed to assess the said relationship.

### **1.3 IMPORTANCE OF THE RESEARCH**

The literature study revealed that several academic studies have been undertaken on aspects of distinct functional management strategies of South African retail pharmacies. However, none of these studies<sup>4</sup> had as its objective the identification and evaluation of the variables which universally and significantly influence the profitability of South African retail pharmacies. This study therefore aims to contribute to the management of retail pharmacies by identifying and evaluating variables which universally and significantly influence the profitability of retail pharmacies.

### **1.4 RESEARCH METHOD**

The research consists of a study of secondary and primary data.

The secondary data was obtained from a literature study, a review of which has been included in chapters 2 to 4.

The primary data was obtained by means of a structured questionnaire, copies of which were sent to a selected sample of retail pharmacists. A structured questionnaire was used for the following reasons:

1. Structured questionnaires are self-explanatory.
2. They can be completed relatively faster than unstructured questionnaires.
3. Relatively few instructions are required.

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<sup>4</sup> The findings of academic studies on pharmacy management in South Africa will be discussed in chapter 4.

Copies of the questionnaire were mailed to pharmacies which had been selected by means of a sample. At the time the sample was selected, there were 2 775 retail pharmacies throughout the Republic of South Africa. In order to ensure representativeness, a stratified random sample (consisting of 800 pharmacies) was selected according to the area<sup>5</sup> and type of pharmacy<sup>6</sup>.

The study required a procedure to assess the relationship/association of several independent variables to/with a single continuous dependent variable. Such a procedure is multiple regression analysis. Models built by means of this technique not only describe relationships, but can also be used for prediction purposes. The independent variables are therefore also known as predictors or explanatory variables. In this study the emphasis is placed on the determination of associations. The independent variables included in the models are therefore used for explanatory purposes and not for prediction purposes.

## **1.5 LIMITATIONS OF THE STUDY**

### **1.5.1 The literature study**

As far as the literature study is concerned only a restricted number of academic studies were found, each focusing on specialised aspects of the management of South African retail pharmacies. The comparison of research findings was limited by this factor.

### **1.5.2 The questionnaire**

The more complex and longer a questionnaire is perceived to be by would-be respondents, the lower the response rate can be expected to be. A multitude of questions could have been formulated and included in the questionnaire used in

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5 Area here means province and whether the pharmacy is located in a metropolitan area, city or town.

6 Bonus, Family Circle, Link, Plus pharmacy or other.

this study. However, in order to comply with the requirements for an effective questionnaire, a limited number of questions relating to the functional management strategies of retail pharmacies had to be formulated for inclusion.

### **1.5.3 The analysis of the data**

The analysis of the data collected required that the number of variables be limited. In order to achieve this, quantitative data collected by questions consisting of subsections were added to each other and the total figures used in the analyses.

The analysis of the data also required a statistical technique with the ability to consider the concurrent relationship of a number of independent variables to a particular dependent variable. Statisticians of the Human Sciences Research Council (HSRC) recommended the use of multiple regression analysis. The point of departure adopted for this study was that the profitability of a pharmacy was the result of functional strategies employed by the pharmacist. The financial data provided by respondents were correspondingly regarded as dependent variables and not as independent variables.

## **1.6 OUTLINE OF THE STUDY**

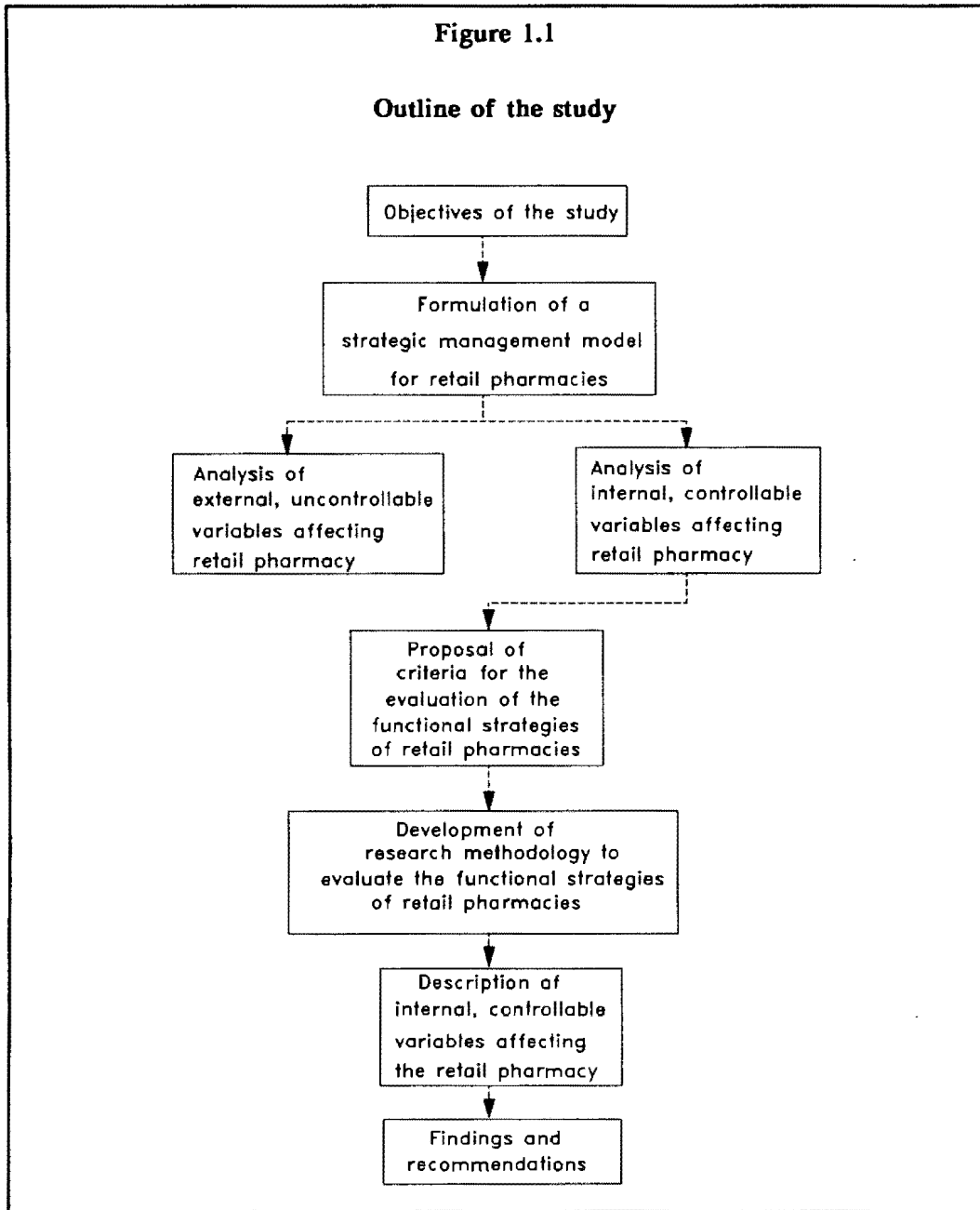
The outline of the study is graphically presented in figure 1.1.

Chapter 1 stated the overall objective, hypotheses and goals of the study. The importance of the research and the limitations of the study were explained.

The first goal of the study is addressed in chapter 2. This chapter studies strategic management models with a view to developing a strategic management model for South African retail pharmacies.

The purpose of chapter 3 is to explain the influences exerted on the profitability of retail pharmacy by groups and organisations involved in the distribution channel for pharmaceutical products. The importance of this discussion lies in the fact that the retail pharmacist has little, if any, control over the decisions and actions of these groups and organisations.





Chapter 4 is devoted to functional management strategies that retail pharmacies may apply. This chapter also serves as the basis for chapter 5 in that it explains the role of critical success variables of retail pharmacies.

Chapter 5 studies management audit criteria which may be used to assess the functional management strategies of retail pharmacies. The purpose of this chapter is to identify criteria to assess the general and functional management strategies of pharmacies and the use of management audit criteria is proposed. A management audit is a systematic analysis and evaluation of the performance of an organisation's management (Byars, 1987: 179). The focus in this chapter is on the functional strategies as internal, controllable variables which influence the profitability of South African retail pharmacies. Accordingly, management audit criteria that may be used to assess the functional strategies of retail pharmacies will receive attention. The evaluation of general management is, however, also discussed in this chapter.

Chapter 6 describes the methodology used in this study to assess the relationship between internal, controllable variables and the profitability of South African retail pharmacies. The primary and secondary sources of data which were consulted are discussed. The population and sample size are described, as is the method used to distribute the questionnaire. The response rate obtained and the way in which the primary data were analysed are also described in chapter 6.

The purpose of chapter 7 is, firstly, to explore the data obtained from the questionnaire, and secondly, to study the results of multiple regression models and to offer possible explanations for the findings on the relationships between internal, controllable variables and the profitability of retail pharmacies.

Chapter 8 concludes the study by covering the findings and recommendations. Since the research process is cyclical (Leedy, 1985: 8), the final chapter will also indicate further research which may be undertaken on pharmacy management.

## CHAPTER 2

### THE DEVELOPMENT OF A STRATEGIC MANAGEMENT MODEL FOR RETAIL PHARMACIES

#### 2.1 INTRODUCTION

The purpose of this chapter is to develop a strategic management model - based on the literature on strategic management - for retail pharmacies. The first step is therefore to review strategic management models. Numerous strategic management models are described in the literature, but it was decided to study three particular models, namely those of Byars (1987: 16), Harvey (1988: 19) and Pearce and Robinson (1991: 12). These models were selected for the following reasons:

1. The models are representative of general thinking on strategic management.
2. The steps involved in each of the models are set out logically and emphasise planning, implementation and control.
3. The models provide an exposition of the relationship between the principal components of the strategic management process.

The reasons for studying these strategic management models are:

1. to put the discussion on external, uncontrollable variables in chapter 3 into perspective
2. to serve as a basis for the functional strategies which will be discussed in chapter 4
3. to illustrate the value of a strategic management approach for a retail pharmacist who has to manage in a dynamic and competitive environment

## **2.2 AN OVERVIEW OF STRATEGIC MANAGEMENT MODELS**

Each of the strategic management models will be discussed in terms of their main components. The models are discussed in alphabetical order of the proponents' surnames, starting with Byars' model.

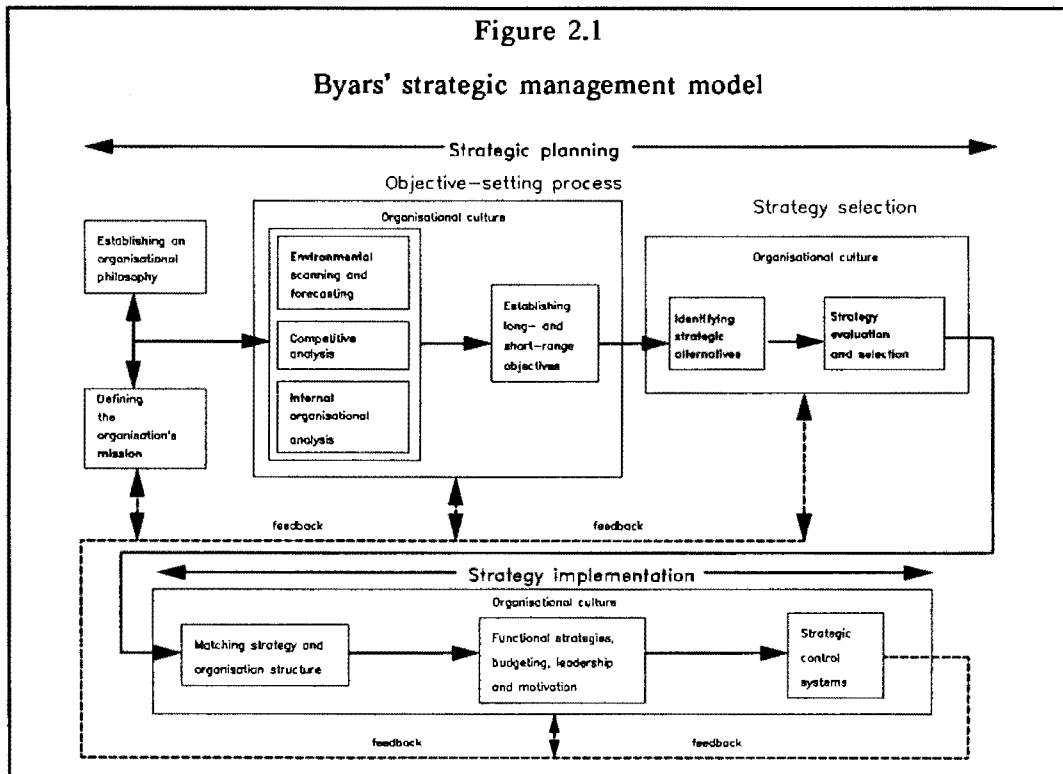
### **2.2.1 Byars' strategic management model**

The strategic management model of Byars (1987: 16) is presented in figure 2.1.

According to Byars (1987: 16) the word strategy comes from the Greek word "strategos", which means "a general". Originally, strategy literally meant the art and science of directing military forces. Today, the term is used in business to describe the process implemented by an organisation to achieve its objectives and mission. The main components of the strategic management process described by Byars are strategic planning and strategy implementation.

Strategic planning involves:

- establishing an organisational philosophy
- defining the organisation's mission
- an objective-setting process
- strategy selection



Source: Byars (1987: 16)

Strategy implementation involves:

- matching strategy and organisational structure
- the use of functional strategies, budgeting, leadership and motivation
- the use of strategic control systems

Aspects of strategic planning will be considered first.

## **1. Establishing an organisational philosophy**

An organisational philosophy establishes the values and beliefs of the organisation, and guidelines for the manner in which it is going to conduct its business. It establishes the relationship between the organisation and its stakeholders.<sup>1</sup>

Examples of organisational philosophy are the following:

- a respect for people as individuals
- a belief in being the best
- a belief in superior quality and service
- a belief in informality to enhance communication

If an organisation's philosophy is to have any meaning it must be adhered to in all situations. The organisational philosophy is a valuable guideline for the management of any organisation during decision making in crisis situations. It is either confirmed and strengthened by the day-to-day decisions and actions of management or becomes meaningless words on paper (Byars, 1987: 11).

The organisational philosophy provides the general framework for the establishment of organisational policies, which in turn provide guides to action for employees of the organisation. Policies help ensure that all units of an organisation operate within the overall philosophy in an attempt to achieve the mission.

## **2. Defining the organisation's mission**

The mission statement is a written statement that defines the nature of a firm's current and future business activities, including a clarification of its products, markets and geographical coverage. According to Byars (1987: 12) the establishment of a firm's mission is critical; without a concrete

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<sup>1</sup> Stakeholders refer to individuals or groups of people who have or believe they have a stake in the functioning of a particular organisation as a result of the deeds or neglect of the organisation (Steiner et al., 1986: 31-32). Examples of stakeholders are customers, employees, suppliers, shareholders, creditors, government, political groups, and the public at large.

statement of mission it is virtually impossible to develop clear objectives and strategies. It also provides a unifying force, a sense of direction and a guide to decision making for all levels of management.

An organisation's mission must not only be defined at its inception, but must also be re-examined regularly. A change in organisational mission may be brought about by profitability considerations. Declining profits force an organisation to consider a change in its business activities (Byars, 1987: 12-13).

### **3. An objective-setting process**

The objective-setting process involves:

1. environmental scanning and forecasting with a view to identifying opportunities and threats that are external to and not under direct control of the organisation or its industry
2. competitive analysis in order to identify the strengths, weaknesses, opportunities and threats of the organisation relative to competitors in the same industry
3. an internal analysis, which evaluates all relevant factors within an organisation in order to determine its strengths and weaknesses
4. the formulation of long- and short-term objectives

### **4. Strategy selection**

Strategy selection consists of identifying strategic alternatives and the evaluation and selection of strategy.

The identification of strategic alternatives may be done at three levels, namely at corporate strategy level, business strategy level and functional strategy level (Byars, 1987: 62). Corporate strategies<sup>2</sup> involve a long-range time horizon and deal with the questions of which portfolio of businesses a multi-business will be in and how resources will be allocated among those businesses. Business strategies focus on how to compete in a given business unit. The scope of business strategies is narrower than that of a corporate

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<sup>2</sup> Corporate strategies are also referred to as global, master or grand strategies.

strategy and they generally apply to a single business unit or strategic business unit (SBU). Functional strategies are narrower in scope than business strategies and are concerned with functional areas such as marketing, finance, personnel and production.

Byars (1987: 62-63) identifies the corporate and business level strategies indicated in table 2.1.

**Table 2.1**  
**Corporate and business level strategies**

<p><b>Corporate strategies:</b></p> <ul style="list-style-type: none"> <li>- Stable growth</li> <li>- Growth               <ul style="list-style-type: none"> <li>Concentration on a single product</li> <li>Concentric diversification</li> <li>Vertical integration</li> <li>Horizontal diversification</li> <li>Conglomerate diversification</li> </ul> </li> <li>- Endgame strategies</li> <li>- Retrenchment               <ul style="list-style-type: none"> <li>Turnaround</li> <li>Divestment</li> <li>Liquidation</li> </ul> </li> <li>- A combination of the above-mentioned strategies</li> </ul>
<p><b>Business strategies:</b></p> <ul style="list-style-type: none"> <li>Overall cost leadership</li> <li>Differentiation of product or service</li> <li>Focus strategy</li> </ul>

Source: Byars (1987: 62-63).

Each of the corporate and business strategies listed in table 2.1 will now be explained, starting with the stable growth strategy.

### **The stable growth strategy**

A stable growth strategy can be characterised as follows:

1. The firm is satisfied with its past performance and decides to continue to pursue the same or similar objectives.



2. Each year the expected level of achievement is increased by approximately the same level.
3. The firm continues to serve its customers with basically the same products or services.

A stable growth strategy is a relatively low-risk strategy and is quite effective for a successful firm if the industry is growing and the environment is not volatile.

Some of the reasons for the use of a stable growth strategy are:

1. Management may not wish to take the risk of modifying the present strategy, and assumes that successful strategies of the past will continue to be successful in the future.
2. Changes in strategy require changes in resource allocations, which can be time-consuming and expensive.
3. Too rapid growth can lead to situations in which the firm's scale of operations outpaces its administrative resources, leading to inefficiencies.
4. Management may not be aware of changes that may affect the firm's products and markets.

### **The aggressive growth strategy**

A firm pursuing an aggressive growth strategy is described as follows:

1. It does not necessarily grow faster than the economy as a whole but does grow faster than the markets in which its products are sold. It chooses rapidly expanding market segments or general fields of business.
2. It tends to have larger than average profit margins.
3. It attempts to postpone or even eliminate the danger of price competition.

4. It regularly develops new products, new markets, new processes, and new uses for old products. It also uses mergers and acquisitions to achieve growth.
5. Instead of adapting to changes in the outside world, it tends to adapt the outside world to itself by creating a demand for something that did not exist before.

One of the reasons for pursuing an aggressive growth strategy is the values held by top management. They regard the growth of the firm as an indication of their effectiveness. If the directors each have shares in the firm, they will realise that the growth of the firm leads to growth in the value of their shares and that they will benefit directly by an increase in their personal net worth.

The aggressive growth strategy alternatives are concentration on a single product or service, concentric diversification, vertical integration, horizontal integration or diversification and conglomerate diversification.

Concentration on a single product or service entails increasing a firm's sales, profits, or market share of its current product or service faster than they have increased in the past. This may be achieved by increasing present customers' rate of use, attracting competitors' customers and/or attracting non-users to buy the product.

Concentric diversification is a growth strategy that involves adding new products or services that are similar to the firm's present products or services. In order for the strategy to be considered concentric diversification, the products or services that are added must utilise the firm's know-how and experience in technology, product line, distribution channels or customer base.

Vertical integration is a growth strategy that involves extending a firm's present business in two possible directions. Forward integration moves the organisation into distributing its own products or services. Backward integration moves the organisation into supplying some or all of the products or services that are used in producing its present products or services.

Horizontal integration or diversification is a growth strategy that involves buying one of the firm's competitors. The main advantage is that it eliminates the competition that has existed between the firms. This strategy could, however, be demanding on the managerial abilities and finances of the buyer of the other firm.

Conglomerate diversification involves adding new products or services that are significantly different from the firm's present products or services.<sup>3</sup>

### **Endgame strategies**

Endgame strategies are used by organisations in an environment of declining product demand in which it is unlikely that all the capacity and competitors put in place during an industry's heyday will ever be needed again.

Basically, four strategic alternatives exist for an organisation in a declining industry. These are the leadership, niche, harvest and quick divestment strategies (Byars, 1987: 73).

An organisation using a leadership strategy tries to achieve above-average profitability by becoming one of the few companies remaining in the industry.

The niche strategy attempts to identify a segment of the declining industry that will either maintain stable demand or decline slowly and that has favourable industry characteristics.

Under a harvest strategy management reduces investments, cuts maintenance and reduces advertising and research in order to cut costs and improve cash flow. Sales volume and/or market share are expected to decline, but the lost revenue is anticipated to be more than offset by reduced costs. Organisations following a harvest strategy ultimately sell or liquidate the business.

Quick divestment involves selling the firm in the early stages of the decline rather than harvesting and selling it later. Figure 2.2 classifies the strategies that can be used by declining firms according to industry conditions and competitive strengths.

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<sup>3</sup> Mergers and acquisitions are ways of achieving diversification.

**Figure 2.2**  
**Strategies for declining firms**

Favourable industry conditions	Leadership or niche	Harvest or divest quickly
Unfavourable industry conditions	Niche or harvest	Divest quickly
	Has competitive strengths	Lacks competitive strengths

Source: Harrigan and Porter (1983: 119).

### **Retrenchment strategies**

Retrenchment strategies are used most frequently during economic recessions and during periods of poor financial performance. The basic purpose is to enable the organisation to weather the storm and then return to another strategic alternative once conditions have improved. There are three retrenchment strategies, namely turnaround, divestment and liquidation.

Turnaround is an attempt to improve the efficiency of operations during a decline in an organisation's financial situation. Actions that can be taken are to cut back on capital expenditure, sell off some assets, tighten inventory control and improve accounts receivable.

Divestment is used when either turnaround or endgame is not successful. This can be done by selling a major part of the firm, for example a product line or a division.

Liquidation involves terminating the organisation's existence by selling off its assets completely. This is done when all else fails.

### **Combination of strategies**

Certain types of strategies lend themselves to combination in an organisation that offers different products or services to various markets. The strategies can either be combined simultaneously or sequentially. Using an endgame strategy on certain products and growth strategies on other products is an example of simultaneous strategies. A turnaround strategy which is followed by a growth strategy when conditions improve is an example of sequential combination.

The strategic alternatives discussed thus far are corporate or global strategies. Attention will now be given to the business strategies listed in table 2.1, namely overall cost leadership, differentiation of the product or service and focus of the organisation.

### **Overall cost leadership**

The overall cost leadership strategy emphasises producing and delivering the product or service at a low cost relative to competitors while not neglecting quality and service. This strategy requires the construction of efficient-scale facilities, vigorous pursuit of cost reductions, avoidance of marginal customer accounts and cost minimisation in areas such as research and development (R&D), service, sales force and advertising.

### **Differentiation strategy**

A differentiation strategy requires that an organisation create a product or service that is recognised industry-wide as unique, thus permitting the organisation to charge higher than average prices.

### **Focus strategy**

A focus strategy involves concentrating on a particular group of customers, geographic markets, or product line segments in order to serve a well-defined but narrow market better than competitors who serve a broader market.

Organisations have the above-mentioned corporate and business strategy alternatives available to them. Strategy planning is concerned with deciding which alternative is to be used following an evaluation of alternatives available to an organisation in achieving its objectives and mission.

Strategy evaluation and selection may be accomplished by using one of several techniques (Byars, 1987: 91-115). These techniques include:

- business portfolio analysis
- competitive strategy analysis
- cluster analysis
- profit impact of market strategies (PIMS) analysis

Thus far attention has been devoted to strategic planning. The focus will now turn to aspects related to strategy implementation. As mentioned earlier, strategy implementation involves:

### **1. Matching strategy and organisational structure**

A chosen strategy cannot be effectively implemented without developing an organisational structure that complements and supports it (Byars, 1987: 122). In this respect, a simple but lean organisational structure allows an organisation to adjust to a fast-changing environment and is conducive to innovation (Byars, 1987: 129).

### **2. Functional strategies,<sup>4</sup> budgeting, leadership and motivation**

According to Byars (1987: 144) functional strategies differ from corporate strategies in the following respects:

1. Functional strategies are more specific and action-orientated than corporate strategies. The corporate strategy is designed to give general direction, while the functional strategy spells out what specific results are to be achieved.

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<sup>4</sup> Functional strategies will be explained in greater detail in chapter 4.

2. Functional strategies cover a shorter time span than corporate strategies. Functional strategies identify and co-ordinate short-term actions, usually undertaken in a year or less. Functional strategies focus the attention of management on what needs to be done *now* in order to make the corporate strategy work. The shorter time horizon allows management to recognise current conditions and to adjust to changing conditions in developing functional strategies.
  
3. Functional strategy also requires active participation by lower management and employees. Through the participation of these people the chances of successful implementation is improved because of a better understanding of what needs to be done and by increasing commitment among them.

According to Byars (1987: 144 -145) functional strategies can be developed for any unit within an organisation. Functional strategies involve:

- marketing
- finance
- production/operations
- human resources/personnel
- research and development

Closely associated with the above-mentioned functional strategies is the question of how the organisation should employ its resources. The employment of resources involves the use of budgets for planning and control purposes. According to Gray (1986: 95) the strategic management approach cannot achieve its full potential until it is integrated with other control systems such as budgets, information systems and reward systems.

The mobilisation of resources is brought about through leadership. Byars (1987: 160) regards leadership and the level of motivation demonstrated by employees in an organisation as complementary - a highly motivated management team in combination with highly motivated employees can bring about substantial increases in performance and can significantly

increase the likelihood of organisational objectives being achieved. Leadership is the ability to influence the attitudes and opinions of others within the organisation (Byars, 1987: 159).

### **3. Strategic control systems**

According to Boyle and Desai (1991: 39-40) most of the causes of business failures are internal to firms and can be ascribed to a lack of strategic planning and internal control. Byars (1987: 176-181) suggests the use of budgets, audits, time-related controls (such as the critical path method and the program and evaluation review technique) and management by objectives as ways of obtaining feedback on the success or failure of strategy.

#### **2.2.2 Harvey's strategic management model**

Harvey (1988: 9) suggests that there are four main reasons for the use of a strategic management approach, namely:

1. A strategic management approach provides the members of the organisation with long-term direction and clear objectives.
2. The strategic management approach assists in adaptation to an increasing rate of change. Organisations are in continuous interaction with external forces (such as changes in legislation, consumer attitudes, competition). The degree of change may vary from one organisation to another, but all face the need for adaptation to external forces. The adoption of a strategic management approach is one way of helping managers to deal with uncertainties resulting from rapid change.<sup>5</sup>
3. A strategic management approach allows the firm to identify and evaluate ways of gaining a competitive advantage. Many possible alternatives may be generated to develop a new strategic approach and gain a competitive advantage.

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<sup>5</sup> According to Zeithaml and Zeithaml (1984: 46-53) the need for sound strategies for either reacting to or managing environments becomes more apparent as environments for business become increasingly volatile and uncertain.

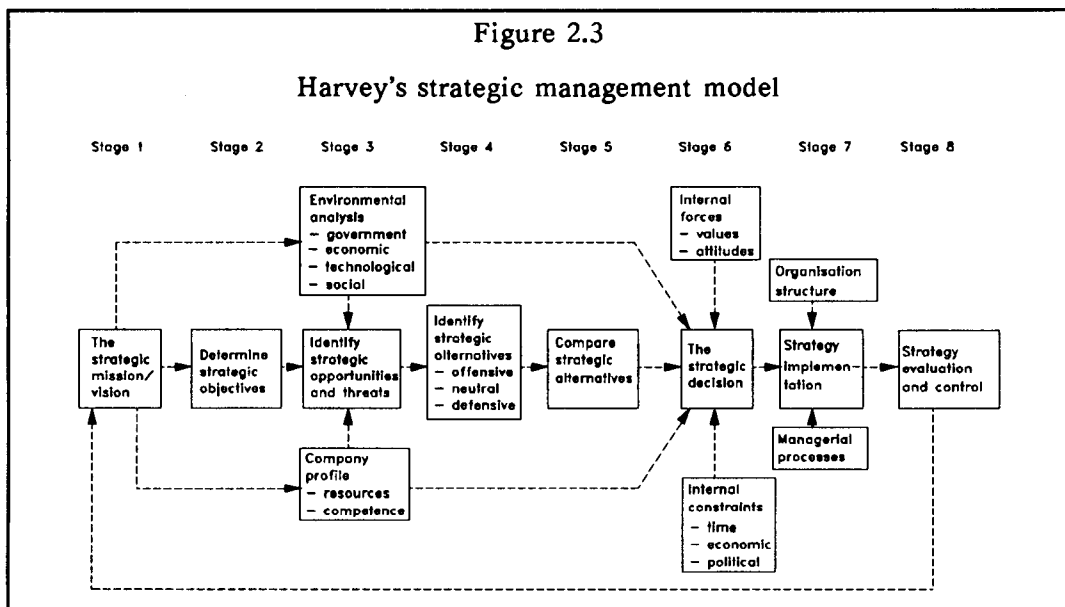


4. The adoption of a strategic management approach may assist in achieving a more effective organisation which uses reasoned decisions instead of intuitive kinds of decision making.

Harvey's strategic management model consists of eight stages as shown in figure 2.3. Strategic management is seen as a continuous process and the stages are parts of a whole system (Harvey, 1988: 18-21).

### Stage 1: Define the mission/vision

Organisations exist to accomplish a mission. The strategic management process consequently starts with the formulation of the mission or vision. The mission presents a long-term idea of what an organisation is striving to become in future. The strategic vision of what the organisation will be in the future provides the starting point for the mission, goals, and objectives. The strategic vision involves the general, abstract ideas that guide strategy formulation.



Source: Harvey (1988: 19).

**Stage 2: Determine strategic objectives**

Strategic objectives for achieving the strategic vision in a complex environment must be identified. Organisational objectives refer to the results an organisation seeks to achieve. An organisation may pursue many objectives, including primary (or strategic) objectives and secondary (or sub-unit) objectives.

**Stage 3: Identify strategic opportunities and threats**

In determining a strategy, external variables may be analysed to determine whether they are opportunities or threats that exist in the environment. The strategic decision maker evaluates options based on information about probable future situations that may influence the attainment of strategic objectives. This evaluation includes an analysis of economic, political, social and technological factors. The strategy must take into account both future opportunities and possible impediments to future actions.

The analysis of strengths, weaknesses, opportunities and threats is termed a SWOT analysis. The strategist attempts to identify key competitive advantages and disadvantages, seeking a fit between the organisation's competencies (what it can do) and its strategy (what it wants to do).

**Stage 4: Identify strategic alternatives**

There is rarely only one strategy to pursue and the next step is to identify and evaluate alternative strategies or options. The key here is to generate many possible strategies or options. Harvey (1988: 110-132) categorises the strategic alternatives as either growth strategies (aggressive-offensive), neutral strategies, defensive strategies or a combination of these strategic alternatives. A summary of the specific alternatives associated with each category of strategy is given in table 2.2.

**Table 2.2**  
**Strategic alternatives**

<p><b>1 Growth strategies:</b>          Concentration on a single product          Concentric diversification          Conglomerate diversification          Vertical integration</p> <p><b>2 Neutral strategies:</b>          Holding (stable growth)          Harvest</p> <p><b>3 Defensive strategies:</b>          Retrenchment          Turnaround          Divestment          Liquidation</p> <p><b>4 A combination of these strategies</b></p>
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Source: Harvey (1988: 112).

The definitions of the corporate strategy alternatives identified by Harvey and listed in table 2.2 are identical to those of Byars. However, Harvey regards the harvesting strategy as a neutral strategy while Byars considers it an endgame strategy. Despite these differing views they regard the main objective of the harvesting strategy to be the generation of cash by reducing investments and costs and/or improving cash flow when sales volume and/or market share are expected to decline.

Harvey (1988: 130) identifies the same business level strategies as Byars, namely cost leadership, differentiation of the product or service and focus of the organisation.<sup>6</sup>

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<sup>6</sup> Given the similarities between corporate and business level strategies as defined by the two said proponents of strategic management models, the definitions will not be repeated here.

**Stage 5: Compare strategic alternatives**

Once strategic alternatives and possible actions have been identified, the relative advantages and disadvantages of each may be compared against some set of criteria in order to isolate the more promising options from less likely alternatives. The alternatives may be examined to determine which strategy best matches the firm's resources and capabilities and which offers the best competitive advantage in terms of opportunities and threats.

Dilts and Prough (1989: 32) also indicate that the firm may face different strategic options. However, these authors point out that small firms operate under resource constraints and lack specialised managerial expertise. The range of strategic options is consequently narrowed by necessity, since small organisations must confine their focus to market opportunities in which they have sufficient resources to compete effectively.

**Stage 6: The strategic decision**

The strategic decision involves a choice between possible alternative strategies. The purpose of decision making is to direct resources toward objectives and a decision to pursue a strategy means that other actions will not be taken.

**Stage 7: Implementation of the strategy**

The strategic plan is worthless until it is implemented to achieve the future objectives. Translating strategies into action is the function of strategy implementation. The strategic decision is implemented by developing specific and detailed policies, plans, and action programmes aimed at attaining objectives. Implementation commits the resources of the firm to the desired goals. It includes both the fit between strategy and organisation structure and the fit with the corporate culture.

## **Stage 8: The evaluation of strategy**

The evaluation of strategy involves the continuous monitoring of organisational performance and results so that actual results can be compared with planned objectives. If actual results do not match planned results, changes to the strategy or the way in which it is implemented may be considered.

### **2.2.3 Pearce and Robinson's strategic management model**

The strategic management model of Pearce and Robinson (1991: 12) is presented in figure 2.4. Each of the components of the model will be briefly explained.

#### **The mission statement**

The mission of a firm is the unique purpose that sets it apart from other firms of its type and identifies the scope of its operations. The mission describes the firm's product, market and technological areas of emphasis in a way that reflects the values and priorities of the strategic decision makers.

#### **Company profile**

The company profile depicts the quantity and quality of the company's financial, human, and physical resources. It assesses the strengths and weaknesses of the firm's management and organisational structure. It also contrasts the firm's past successes and traditional concerns with the firm's current capabilities in an attempt to identify the firm's future capabilities.

#### **External environment**

A firm's external environment consists of the conditions and forces that affect its strategic options but are typically beyond its control. These external variables influence a firm's choice of direction, action and ultimately its organisational structure and internal processes. Various opportunities and threats emanate from variables in the three interactive segments of the external environment, namely the operating, industry and remote environments. Each of these segments of the external environment will now be briefly described.

The operating environment comprises variables in the competitive situation that affect a firm's success in acquiring needed resources or in profitably marketing its goods or services. Among the most important are the firm's competitive position, the composition of its customers,<sup>7</sup> its reputation among suppliers and creditors, and its ability to attract capable employees (Pearce & Robinson, 1991: 102).

The industry environment refers to the nature and degree of competition in a particular industry (for example the pharmaceutical industry), which is determined by the threat of new entrants, the bargaining power of customers, the bargaining power of suppliers, the threat of substitute products or services and jockeying among current contestants (Porter, 1979: 137-145).

The remote environment refers to variables that originate beyond any single firm's operating situation and include economic, social, political, technological and ecological variables (Pearce & Robinson, 1991: 76).

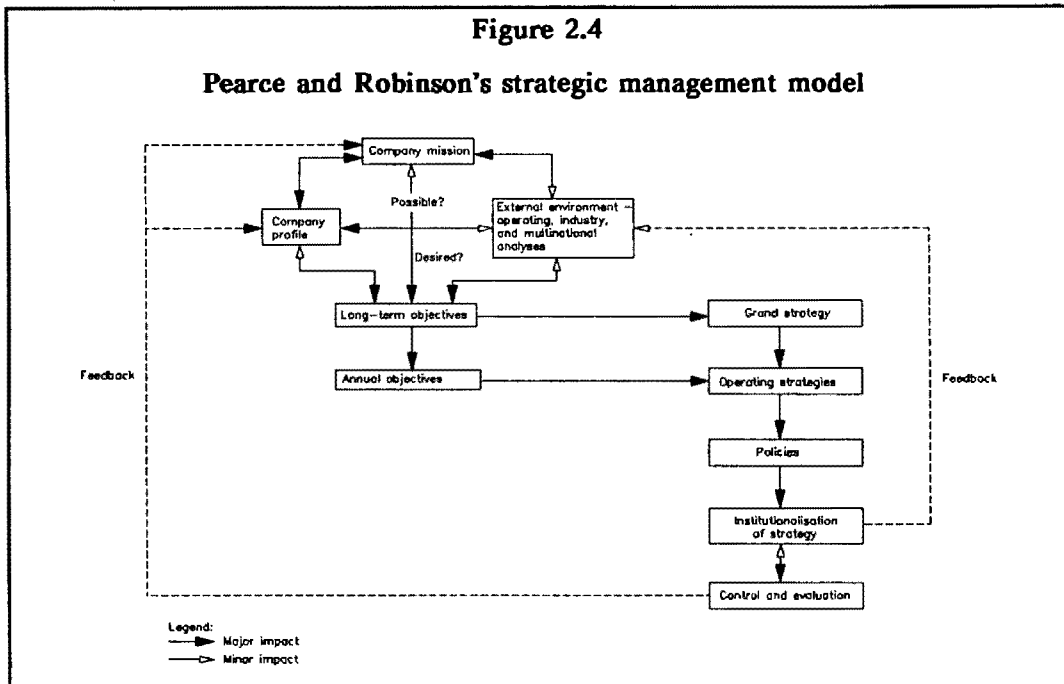
### **Strategic analysis and choice**

According to Murphy (1989: 105) strategic planning should assemble the variables of the strategic jigsaw puzzle. Innovative alternative strategies can be identified through interlocking identified opportunities and threats with the strengths and weaknesses of the firm.

Strategic analysis is a simultaneous assessment of the external environment and the company profile in order to identify a range of possibly attractive opportunities. These opportunities are possible avenues for investment. However, they must be screened against the criteria of the company mission to generate a set of possible and desired opportunities. This screening process results in the selection of options from which a strategic choice is made. The process is meant to provide that combination of long-term objectives and grand strategy that will achieve the company mission.

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<sup>7</sup> The composition of customers refers to such aspects as the influence of demographic and social changes on the size and sales potential of the firm's market.



Source: Pearce and Robinson (1991: 12)

### Long-term objectives

The results that an organisation seeks over a multi-year period are its long-term objectives. Such objectives typically involve some or all of the following areas: profitability, competitive position, technological leadership, productivity, employee relations, public responsibility, and employee development.

### Grand strategy

The grand strategy is the comprehensive, general plan of major actions through which a firm intends achieving its objectives in a dynamic environment. Pearce and Robinson identify the grand strategies listed in table 2.3.

**Table 2.3****Grand strategies**

concentrated growth<sup>8</sup>  
 market development (selling present products in new markets)\*  
 product development (developing new products for present markets)<sup>9</sup>  
 innovation\*  
 horizontal integration  
 vertical integration  
 joint venture\*  
 concentric diversification<sup>10</sup>  
 conglomerate diversification  
 retrenchment / turnaround  
 divestiture  
 liquidation

Source: Pearce and Robinson (1991: 227)

The definitions of the grand strategies identified by Pearce and Robinson and listed in table 2.3 correspond with those of Byars and Harvey. Pearce and Robinson (1991: 224) also identify the same business level strategies as Byars and Harvey, namely cost leadership, differentiation of the product or service, and focus of the organisation. However, Pearce and Robinson refer to these business strategies as generic strategies.

The grand strategies in table 2.3 which are marked with asterisks (\*) are strategies which are not identified and described by Byars or Harvey, namely market development, innovation, and joint ventures. These strategies will be therefore described here.

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8 Byars and Harvey refer to this strategy as concentration on a single product.

9 Byars and Harvey refer to product development as concentric diversification.

10 According to Pearce and Robinson (1991: 240) concentric diversification involves the acquisition or internal generation of a new business that is related to or compatible with the acquiring firm in terms of technology, markets, or products and whose acquisition results in synergies but not complete interdependence.



**Market development**

Market development consists of marketing present products or slightly modified products to customers in related market areas by adding channels of distribution, or by changing the content of advertising or promotion, or by advertising in other media. The underlying rationale of this strategy is to extend the life cycle of an existing product (Pearce & Robinson, 1991: 232).

**Innovation**

Innovation, as opposed to market development, has as its rationale the creation of a new product with a new product life cycle which makes similar products obsolete. A firm following this strategy seeks to reap the initially high profits associated with customer acceptance of a new product.

**Joint ventures**

Joint ventures may be considered when two or more firms lack a necessary component for success in a particular competitive environment. The purpose of the joint venture is to raise the required finances, set up production facilities and market the product in a way which is mutually beneficial to the participants in the joint venture (Pearce & Robinson, 1991: 238).

Pearce and Robinson (1991: 12) suggest that grand strategies should be translated into functional (operating) strategies aimed at achieving annual objectives. Annual objectives will therefore now receive attention.

**Annual objectives**

The results that an organisation seeks to achieve within a one year period are annual or short-term objectives. These objectives are more specific than long-term objectives.

**Functional/operating strategies**

Within the framework of the grand (corporate) strategy each business function or division needs a specific and integrative plan of action. Such strategies are developed

in key areas such as marketing, finance, production/operations, research and development and human resource development. Functional strategies identify and co-ordinate actions that support long-term objectives and the grand strategy.

### **Policies**

Policies are broad, precedent-setting decisions that guide or substitute for repetitive managerial decision making. They guide the thinking, decisions, and actions of managers and their subordinates in implementing the organisation's strategy. Policies may increase managerial effectiveness by standardising routine decisions and limit the discretion of managers and their sub-ordinates.

### **Institutionalisation of strategy**

The institutionalisation of strategy means that it should permeate the day-to-day life of the firm. Three organisational elements provide the fundamental, long-term means for institutionalising the strategy, namely organisational structure, leadership and culture.

### **Control and evaluation**

An implemented strategy must be monitored to determine to what extent its objectives are achieved. The first substantial test of a strategy comes only after implementation and management must watch for early signs of marketplace response to their strategies. They must also provide monitoring and controlling methods to ensure that their strategic plan is followed. Budgeting, scheduling and key success factors are means of controlling strategy implementation (Pearce & Robinson, 1991: 375).

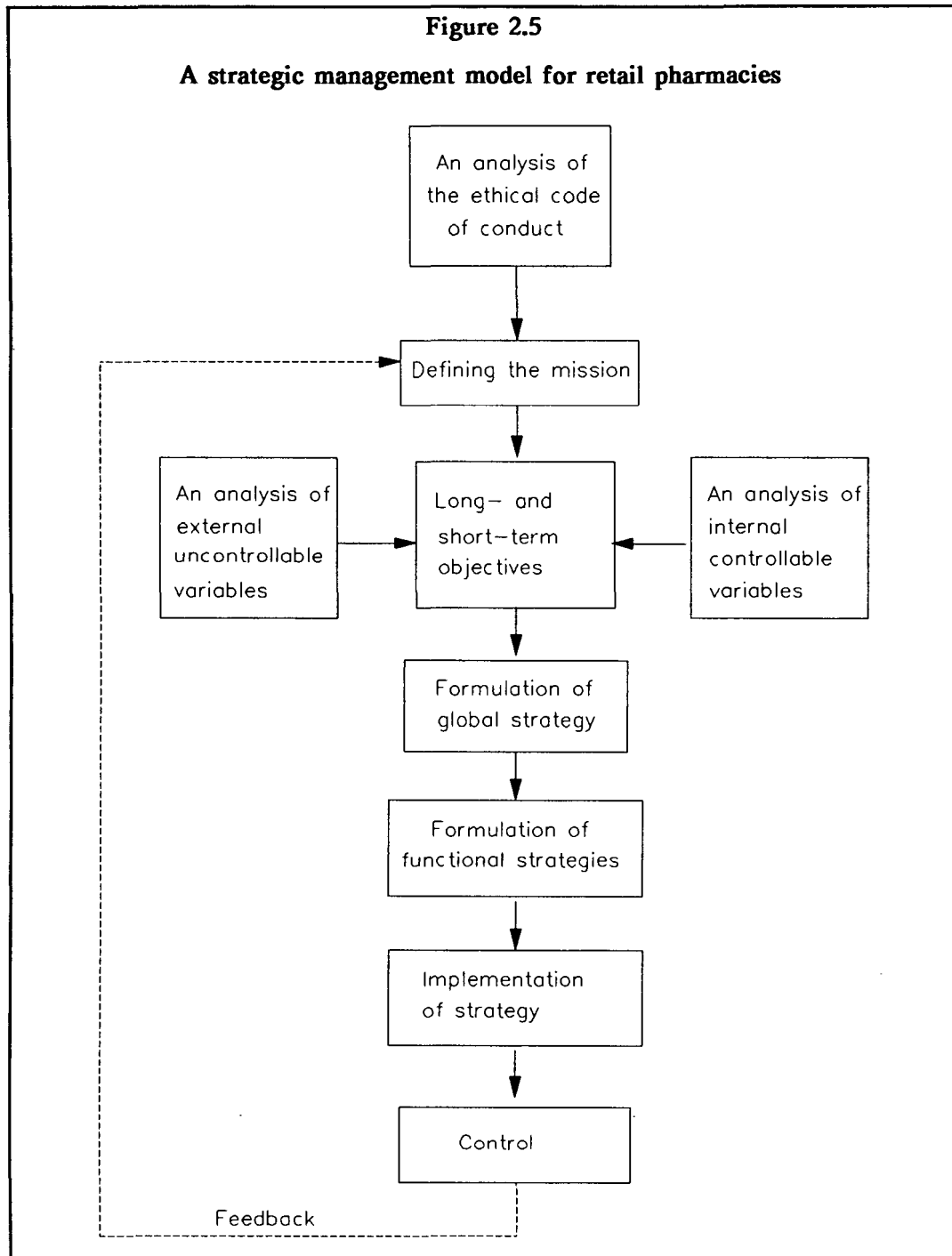
#### **2.2.4 A strategic management model for South African retail pharmacies**

Retail pharmacies require a specialised strategic management model for the following reasons:

1. The retail pharmacist is a professional and has to adhere to the ethical code of conduct of the South African Pharmacy Council.

2. The retail pharmacy in South Africa is a small business with a pharmacist as owner or manager and six members of staff (on average) (Pharmacy College of Pretoria, 1991: 6). According to Dilts and Prough (1989: 32) small firms are not simply smaller versions of large organisations because they tend to behave differently from the latter.
3. The absence of a strategic management approach and of strategic management skills among South African retail pharmacists as identified by Leibold and Van Deventer (1990: 22).

South African retail pharmacies are small businesses whereas the strategic management models of Byars, Harvey, and Pearce and Robinson apply to firms with multiple business divisions and management levels. A strategic management model appropriate for South African retail pharmacies has accordingly been derived from the literature. The model is presented in figure 2.5.



Source: Own composition

Each of the aspects involved in the strategic management model shown in figure 2.5 will now be considered.

#### **2.2.4.1 The ethical code of conduct and organisational philosophy**

The ethical code of conduct is published by the South African Pharmacy Council. The purpose of the ethical code of conduct is to express the norms according to which a retail pharmacist should conduct his pharmacy.<sup>11</sup>

In section 2.2.1 the concept of an organisational philosophy is discussed. It was stated that the organisational philosophy establishes the values, beliefs, and guidelines for how the organisation is going to conduct its business. Because of the basic values and norms contained in the ethical code of conduct it may serve as valuable input to the organisational philosophy of a retail pharmacy.

#### **2.2.4.2 Defining the mission**

The strategic management process requires that the retail pharmacist define the mission of his pharmacy. The mission statement describes the firm's products, markets, geographical coverage and philosophy and the way in which it will conduct its business.

The following mission statement for retail pharmacies is suggested by Futter (1990: 15):

"I am committed to the provision of a dynamic, cost effective and profitable pharmaceutical service to assist in the prevention and curing of disease.

My staff and I will do our very best to ensure:

- \* the maintenance of the highest degree of professional and ethical standards at all times
- \* the dissemination of a comprehensive, up-to-date drug information service to patients, fellow health care professionals and the community at large

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<sup>11</sup> The ethical code of conduct is reproduced in Appendix A to the study.

- \* the stocking and strict control of a range of drugs and health related products in surroundings designed to facilitate communication with customers."

This mission statement identifies the product or service (pharmaceutical service) and the philosophy according to which the pharmacy will be managed. However, to fully comply with the requirements for a mission statement the markets that the individual retail pharmacist serves or intends to serve and its geographical coverage should be described.

Having formulated a mission statement - and in an attempt to set as realistic as possible long- and short-term objectives - the retail pharmacist may consider variables which could influence the accomplishment of such objectives. In this regard he may distinguish between external, uncontrollable variables and internal, controllable variables.

#### **2.2.4.3 An analysis of external, uncontrollable variables**

The strategic management model requires an analysis of external, uncontrollable variables with a view to determining the opportunities and threats prevailing in the external environment. Examples of external, uncontrollable variables in the pharmaceutical industry will be discussed in chapter 3.

#### **2.2.4.4 An analysis of internal, controllable variables**

The strategic management model also requires an analysis of internal, controllable variables with a view to determining the strengths and weaknesses of the pharmacy. Examples of internal, controllable variables in the retail pharmacy will be discussed in chapters 4 and 5 of this study.

#### **2.2.4.5 Defining long- and short-term objectives**

The environmental investigation and internal organisational analysis make the formulation of realistic long- and short-term objectives possible. The short-term objectives may be used as milestones to be reached in accomplishing long-term objectives. Both the long- and short-term objectives should be measurable, realistic and internally consistent with each other (Ghosh, 1990: 131).

#### **2.2.4.6 The formulation of global strategy**

The formulation of global strategy is the process of matching opportunities and threats in the environment with the firm's strengths and weaknesses by making choices about products, markets, technologies and the investments necessary to pursue long- and short-term objectives. According to Hill and Jones (1989: 148) all firms from small single proprietorships to large corporations must identify, evaluate and select a global strategy if they are to compete effectively and maximise their long-term profitability.

The focus in this section will fall on the forms which global strategies may take in retail pharmacies. Since the most comprehensive variety of global strategies are identified by Pearce and Robinson the discussion will be based on their terminology and arrangement. The definitions of each of the global strategies will not be repeated here.

#### **Concentrated growth**

Concentrated growth may be achieved by increasing present customers' consumption (in the case of front-shop items such as multivitamin tablets and cosmetics), attracting competitors' customers by offering better discounts on prescribed medicines or using a particular product item (such as disposable nappies) as a loss leader (selling it at or below cost to attract customers in the hope that they will also be purchasing other more profitable products during their visit to the pharmacy).

**Market development**

Market development means the retail pharmacist has to sell present products in new markets. The retail pharmacist may market present products or slightly modified products to customers in related market areas by adding channels of distribution, by changing the content of advertising or promotion, or by advertising in other media. An example may be to operate a health shop with its own logo within close proximity or next to the pharmacy to sell vitamins, natural and other health products. Another example is Medipost pharmacy, which offers up to 30% discount on medicines for chronic diseases which are ordered by mail (Rademeyer, 1992: 6). The mail order system offers an opportunity to sell existing products in new markets.

**Product development**

Since retail pharmacists are not in research and development (R&D) and manufacturing, but in selling prepacked products, this strategy has limited possibilities for them. It may, for example, be applied by a retail pharmacist who is able to prepare a relatively more effective cough syrup and market it to his current customers at a higher profit than would be possible with other cough syrups.<sup>12</sup>

**Innovation**

As a strategy, innovation could perhaps be used by pharmaceutical manufacturers, but it has limited use among retail pharmacies.

**Horizontal integration**

Horizontal integration is a growth strategy that involves increasing sales and profitability by buying out a competing pharmacy. Sales may be increased as a result of eliminating the competition between two pharmacies. This strategy may, however, be demanding on the managerial abilities and finances of the buying pharmacist. The pharmacy which is bought may, therefore, be shut down or replaced by another type of business which is needed in the area and which may be managed by a hired manager.

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<sup>12</sup> Small-scale manufacturing is controlled by the Medicines Control Council and must be in accordance with its regulations.



**Vertical integration**

Since the retail pharmacist is at the end of the distribution channel for pharmaceuticals, forward integration is not possible. Backward integration moves the pharmacy into supplying some or all of the pharmaceutical products that are marketed.<sup>13</sup>

**Joint venture**

Since a joint venture aims to be mutually beneficial to the participants, it may, for example, involve the establishment of a promotional chain with a unique logo which undertakes joint purchasing, advertising and promotion campaigns.

**Concentric diversification**

Concentric diversification involves adding new products or services that are similar to the pharmacy's present products or services. An example may be a rural pharmacy which starts selling veterinary products to farmers at lower prices than those of the local co-operative.

**Conglomerate diversification**

Conglomerate diversification involves adding new products or services that are significantly different from the pharmacy's present products or services. A pharmacy in a medical centre may, for example, take over a coffee shop next door and add products such as caffeine-free coffee or multivitamin juice to the menu.

The following strategies - retrenchment, divestment and liquidation - may be regarded as strategies that force themselves on the pharmacist when some or all of the above-mentioned strategies fail and a decision concerning the continuance or discontinuance of the pharmacy has to be made. A retrenchment or turnaround strategy may be implemented as a last bid to avert divestment or liquidation.

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<sup>13</sup> See the joint venture and overall cost leadership strategies for more details.

**Retrenchment / turnaround**

Turnaround is an attempt to improve the pharmacy's financial position. Examples of actions that may be taken are:

1. retrenching some of the members of staff
2. postponing improvements to the layout and display shelving of the pharmacy
3. selling a delivery vehicle (if more than one has been in use)
4. reducing the carrying cost of stock by:
  - reducing the stock level of all or some items of stock
  - reducing the number of trade-marks offered per product line of front-shop items, for example, stocking three types of perfumes instead of the whole range
  - increasing the rate of turnover on certain products by means of special promotions
5. accelerating the collection of accounts receivable by means of discounts for early payment, charging interest on overdue accounts, shortening credit periods, posting account statements to reach clients earlier than most of the other account statements they will be receiving, and promoting cash sales by offering attractive discounts for cash purchases

**Divestment**

Divestment is used when retrenchment or turnaround is not successful. This may take the form of selling a major part of the pharmacy, for example the stock of the cosmetics department.

**Liquidation**

Liquidation involves terminating the pharmacy's existence by selling off its entire assets and is the strategy resorted to when all else fails.

Thus far, attention has been given to global strategies. However, the proponents of strategic management models - Byars, Harvey, and Pearce and Robinson - also identify the business level strategies (generic strategies) of cost leadership,

differentiation and focus. Each of these will now be considered, once again with a view to illustrating ways in which the retail pharmacist may adopt them in his pharmacy.

### **Overall cost leadership**

The overall cost leadership strategy requires that the retail pharmacist purchase and deliver pharmaceutical or front-shop products at a low cost relative to competitors, while not neglecting quality and service. It also requires the vigorous pursuit of cost reductions, avoidance of marginal customer accounts, and cost minimisation in areas such as service, sales force, and advertising.

The cost of purchasing pharmaceuticals may be reduced by buying in bulk and qualifying for quantity and promotional discounts. This may be achieved by the establishment of a joint purchasing organisation<sup>14</sup> by pharmacies in a particular geographical area and making collective purchases from pharmaceutical wholesalers. This means employing the cost leadership strategy in combination with the joint venture strategy.

The cost of providing a service such as a delivery service may be minimised by either selling on a cash-and-carry basis only or charging a service fee for deliveries. The cost of the sales force may be reduced by limiting the number of sales assistants and/or linking their remuneration with sales performance.

### **Differentiation strategy**

A differentiation strategy requires that the pharmacy create a product or service that is unique, thus permitting it to charge higher-than-average prices. Since the products sold by retail pharmacies are prepacked, differentiation in this respect is not attainable. However, features of the pharmacy such as its site, layout and atmosphere may be differentiated from those of other pharmacies.

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<sup>14</sup> Joint purchasing organisations are sometimes established in the form of so-called short-line wholesalers. The short-line wholesaler stocks a limited number of product lines and offers lower prices than wholesalers offering the full range of products.

**Focus strategy**

The retail pharmacist may concentrate on a particular group of customers (such as the elderly in a suburban area dominated by elderly people), geographic markets (a particular suburb), or product line segments (for example, selling only medicines and no other front-shop items as other pharmacies do). This should be done in order to serve a well-defined, narrow market better than competing pharmacies in the operating environment serving a broader market.

The above discussion gives an indication of how retail pharmacies may adopt global and business-level strategies. The selection of a global or business strategy depends on the particular circumstances of the retail pharmacy. Whatever global and/or business strategy or combination thereof is selected, the retail pharmacist should relate global strategies to the formulation of functional strategies.

**2.2.4.7 The formulation of functional strategies**

Functional strategies for a retail pharmacy concern marketing, purchasing, financial and personnel management (Mackintosh & Spiers, 1980: 11). These functional strategies will be discussed in chapter 4.

**2.2.4.8 The implementation of strategy**

From the discussion of the strategic management models it may be inferred that strategy may be implemented by using:

- scheduling
- budgeting
- an appropriate organisation structure
- leadership
- motivation

Each of these aspects will now be explained briefly.

### **Scheduling**

Scheduling provides a mechanism by which to plan and control activities and may be used in cases where timing and co-ordination are key factors in the success of a strategy. In this respect the retail pharmacist may, for example, schedule strategy implementation dates, strategy review sessions, the placement of advertisements for planned promotions of front-shop items, stock takes, the vacations of members of staff and training courses for sales personnel and the pharmacist himself.

### **Budgeting**

Budgeting may be used to compare planned income and expenditure with realised income and expenditure, as well as expected cash flow with actual cash flow; to determine deviances; and to consider corrective action if and where necessary.

### **An appropriate organisational structure**

The global, business and functional strategies which have been formulated should match the organisational structure (Mason & Mayer, 1990: 342). In this respect Thompson and Strickland (1989: 266) suggest the following guidelines:

1. The key functions and tasks required for successful strategy execution should be pin-pointed.
2. Strategy-critical business units and functions should be the main organisational building blocks.
3. The degree of authority needed to manage each organisational unit should be determined with due consideration of both the benefits and the costs involved in decentralised decision making.
4. Provision should be made for the co-ordination of the various business units (in the case of a retail pharmacy these business units may comprise, for example, the dispensary, health products, cosmetics, baby products, photographic products and services as well as a gifts section).

### **Leadership**

An appropriate organisational structure is not in itself sufficient to ensure the successful implementation of strategy (Pearce & Robinson, 1991: 340). Individuals

determine how successfully strategy is implemented and it is through leadership that individuals' effectiveness (doing the right things) and efficiency (doing things right) are either encouraged or discouraged. According to Sonnenberg (1991: 41) motivation by means of incentive programmes only satisfies employees long enough to achieve short-term goals, while leadership ensures that employees are committed to an organisation over the long term. Commitment may be achieved through leadership which inspires employees to believe in the organisation's mission and the importance of what they are contributing by being part of the organisation, and to be proud of the organisation's contribution to society. Employees want to work for an organisation that has values, viewpoints, morals and ethics that are compatible with their own because they recognise that such an organisation will also care about them. This suggests that there is a relationship between organisational philosophy and mission and employees' motivation.

### **Motivation**

As far as the motivation of employees is concerned, Loeb (1991: 157) believes that many companies fail to create excitement and a feeling of belonging for employees. Loeb (1991: 157) also identifies some reasons why employees in retail firms become disenchanted. These reasons include:

1. Inconvenient hours - working on Friday nights, Saturdays or Sundays. These hours may not correspond with the schedules of the employee's spouse, family or friends, yet customers want to shop at these hours.
2. The hours are long.
3. The pay is low and unattractive relative to other industries.
4. There are few stores that recognise a job well done.
5. Customers can be abusive even in the most friendly, non-hostile retail atmosphere.
6. Performance pressure can be counterproductive, causing employees to leave.

Employee motivation and satisfaction are the basis for customer satisfaction and retention (Schlesinger and Heskett, 1992: 149). According to these authors employee motivation and satisfaction have to come from employees themselves, rather than their being instructed to be courteous and customer responsive. Courtesy and customer responsiveness may be brought about by delegating responsibility and decision-making authority to employees. This is of importance to retail pharmacists

and their sales assistants who come into direct contact with customers and who have to successfully implement strategies which will satisfy and retain customers, in order to ensure the survival of the pharmacy.

Although there are a number of theories on employee motivation, Mol (1991: 12-27) identifies three significant factors that make an employee's task enjoyable and motivating, namely:

- a sense of achievement
- responsibility for decision making
- recognition for achievement

The successful implementation of strategy, therefore, requires leadership, a commitment by employees to the organisational philosophy and mission, employee satisfaction, responsibility for decision making and recognition for achievement.

#### **2.2.4.9 Control**

Control means the measurement of actual performance, and the comparison of performance with the goals, standards or norms which have been set in schedules or budgets.<sup>15</sup> If actual performance does not meet goals, standards or norms which have been set, corrective action should be planned on the basis of an analysis of the reasons for sub-performance. Achievement, on the other hand, should be rewarded (Mol, 1991: 21).

### **2.3 SUMMARY**

This chapter derives a strategic management model for retail pharmacies from an overview of the strategic management models of Byars, Harvey, and Pearce and Robinson. These strategic management models were chosen for their representativeness of strategic management thought and for their step-by-step, logical exposition of the steps involved in the strategic management process.

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<sup>15</sup> Some of the standards or norms which a retail pharmacist may apply will be discussed in chapter 5.

The strategic management models of Byars, Harvey, and Pearce and Robinson all emphasise the following aspects:

- strategy planning
- strategy implementation
- strategy control

The above-mentioned authors identify similar global strategies. However, the terminology used to identify these strategies does not correspond. Compare, for example, the use of global strategies with master, grand or corporate strategies, as well as stable growth strategies with neutral strategies. Pearce and Robinson's definition and interpretation of product development and concentric diversification also differ from those of the other authors. Pearce and Robinson describe strategies which are not identified and described by Byars or Harvey, namely market development, innovation, and joint ventures. The authors nevertheless have identical interpretations of cost leadership, differentiation and focus as business strategies. It would therefore appear that there is a need for the terminology used in strategic management theory and practice to be standardised.

The above-mentioned strategic management models do, however, have enough in common to serve as the basis for a strategic management model for retail pharmacies. The strategic management model for South African retail pharmacies contributed to this study by:

1. putting the following chapter (chapter 3) on external, uncontrollable variables into perspective
2. serving as a basis for the functional strategies discussed in chapter 4
3. illustrating the value of a strategic management approach for a retail pharmacist who has to maintain the profitability of his pharmacy in a dynamic and competitive environment

The strategic management model for retail pharmacies explicitly recognises the role of the ethical code of conduct and the pharmacist as a member of a profession. However, the retail pharmacist plays the dual role of professional and trader. The following aspects of the strategic management process were therefore considered:

1. the formulation of a mission statement



2. the analysis of external, uncontrollable variables in order to determine opportunities for and threats to the retail pharmacy
3. the analysis of internal, controllable variables in order to determine strengths and weaknesses of the pharmacy
4. the formulation of global strategy alternatives (illustrations of whether and how a retail pharmacist may adopt these global strategies were also provided)
5. the formulation of functional strategies (although this will be explained in greater detail in chapter 4)
6. the implementation of strategy
7. strategy control

As indicated in section 2.2.4.3 external uncontrollable variables are taken into consideration when using a strategic management approach. The following chapter examines external uncontrollable variables related to the pharmaceutical industry which influence the profitability of South African retail pharmacies.

## CHAPTER 3

### GROUPS AND ORGANISATIONS AFFECTING THE PROFITABILITY OF RETAIL PHARMACIES

#### 3.1 INTRODUCTION

Ensuring the survival of a firm in a rapidly changing external environment requires a strategic management approach (Kroon, 1986: 8). The profitability of retail pharmacies is affected by the decisions and actions of several groups and organisations in the external environment. These groups and organisations are:

- pharmaceutical manufacturers
- pharmaceutical wholesalers
- dispensing doctors
- competing retail pharmacies
- consumers
- clearing houses
- medical schemes
- regulatory bodies

These groups and organisations are associated with the distribution channel for pharmaceutical products and are graphically presented in figure 3.1.

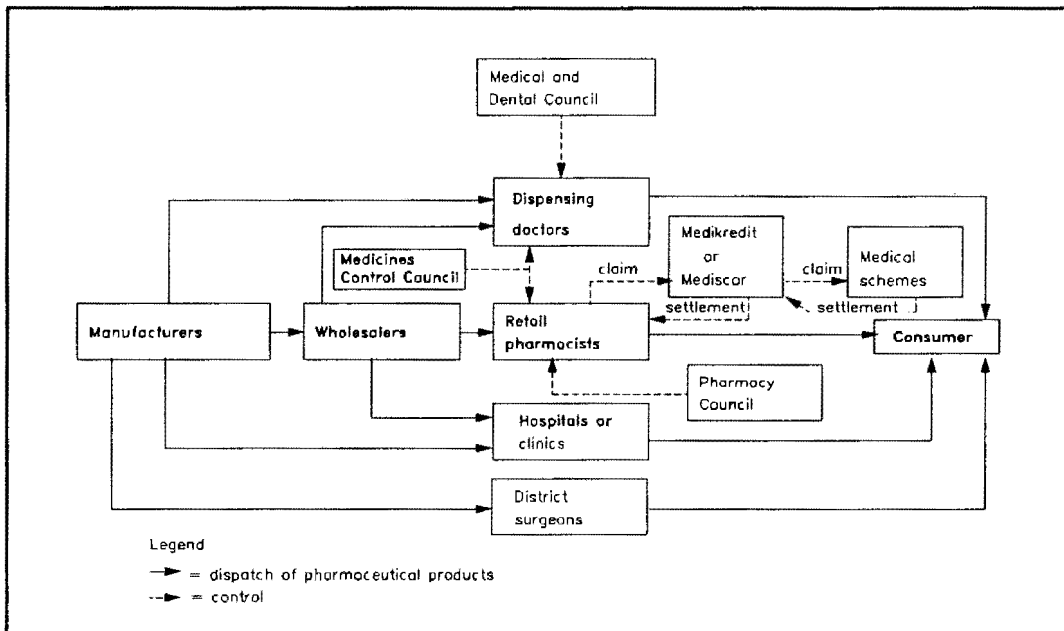
The distribution channel for pharmaceutical products comprises an association of people, groups and institutions<sup>1</sup> who are involved in dispatching pharmaceutical products from the manufacturer via intermediaries to the end consumer (Van Deventer, 1989: 82). Pharmaceutical products are marketed by manufacturers to pharmaceutical wholesalers, dispensing doctors, hospitals and clinics. According to Van Deventer (1989: 84) an unknown quantity of medicines are supplied to

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<sup>1</sup> These people and institutions are also known as marketing intermediaries.

wholesalers by doctors. The consumer can obtain pharmaceutical products from a retail pharmacy, a private or provincial hospital, a district surgeon, a dispensing doctor or an industrial clinic.

**Figure 3.1**  
**Groups associated with the distribution channel for pharmaceutical products**



Source: Own composition

To give order to the discussion in this chapter the groups affecting the profitability of retail pharmacies are classified according to whether or not they are members of the distribution channel for pharmaceutical products.

Groups and organisations who are members of the distribution channel include:

- pharmaceutical manufacturers
- pharmaceutical wholesalers
- dispensing doctors
- competing retail pharmacies
- consumers

Groups who are not members of the distribution channel are:

- clearing houses (Medikredit (Pty) Ltd and Mediscor CC)
- medical schemes
- regulatory bodies

Regulatory bodies are there to enforce certain legislation and consequently equally affect the profitability of all persons or organisations over which they have jurisdiction. This chapter will therefore concentrate on the influences of medical schemes and clearing houses as groups which are not members of the distribution channel.

The purpose of this chapter is to investigate and to explain the influence exerted by the above-mentioned groups on the profitability of retail pharmacies. The discussion will follow the above classification of groups. The approach followed will be to:

1. provide a description of each group or organisation
2. describe those features of the groups that are relevant to retail pharmacies
3. explain the implications for the profitability of retail pharmacies
4. explain the implications for this study

However, before discussing each of the groups a brief background discussion of the pharmaceutical industry is provided. This is necessary to explain some of the interrelationships between the groups affecting the profitability of South African retail pharmacies.

### **3.2 A BACKGROUND DISCUSSION OF THE PHARMACEUTICAL INDUSTRY**

The pharmaceutical industry is responsible for manufacturing, distributing and selling pharmaceutical products such as capsules, tablets, syrups, injectables and ointments in final form. The industry provides pharmaceutical products for use in the treatment of humans and animals (NPI, 1989: 6). This study is, however, concerned only with pharmaceutical products for human consumption.

Whilst the pharmaceutical industry's different market sectors - human and animal health products - are distinct from one another, in general pharmaceutical manufacturers require the same raw materials (NPI, 1989: 10). Pharmaceutical manufacturers use plant, animal and other biological products as raw materials, inorganic elements and compounds, and organic compounds. A distinction is also made between active and inactive ingredients. Active ingredients are those substances that effect the desired cure, that is they are active therapeutically. Inactive ingredients include preservatives, diluents and stabilisers. Other raw materials are used for packaging purposes (bottles, plastic containers, cartons, vials) (NPI, 1989: 10). The National Productivity Institute found that 80% of raw materials used by pharmaceutical manufacturers are imported.

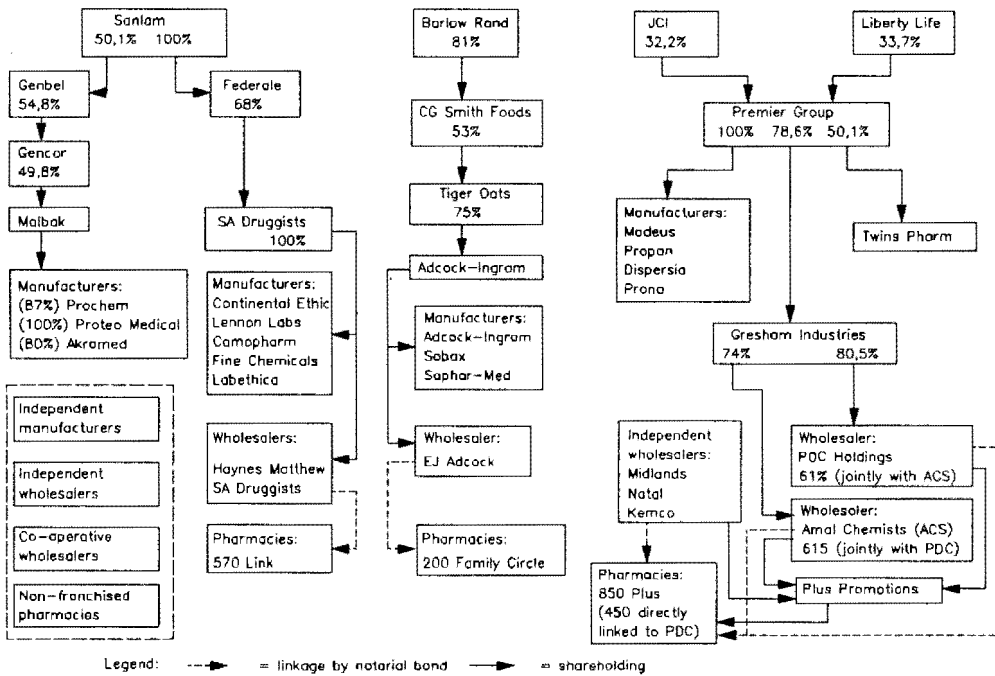
Pharmaceutical products for human consumption are classified by the Medicines Control Council in accordance with the Medicines and Related Substances Act (Act no. 101 of 1965). Medicines are categorised as either scheduled or unscheduled. Scheduled medicines are further divided into nine schedules. Schedule 1 and 2 medicines may be obtained without a doctor's prescription from a pharmacist or a dispensing doctor. Schedule 3 to 7 medicines requires a doctor's prescription, while schedule 8 and 9 medicines may be obtained only in exceptional cases (South Africa, 1986b: 7). Unscheduled medicines may be obtained from either a pharmacy or a general dealer licensed to sell medicines (NPI, 1989: 7).

Pharmaceutical products are distributed by manufacturers, wholesalers and retail pharmacies. There is vertical integration between pharmaceutical manufacturers, wholesalers and retail pharmacies in South Africa (South Africa, 1991b: 22). These vertical integrations in the pharmaceutical industry are shown in figure 3.2.

Despite the vertical integrations in the pharmaceutical industry, competition in the industry is much keener than its market structure suggests. The ability of the research-based firms to fix and maintain high prices for patented and trade name products is limited, first by the competition of generic products, which the Steenkamp Commission found to be on the increase because of public support for these preparations, and secondly by so-called innovatory or substitute competition. The Commission found that the rate of obsolescence in the medicines market is high (Steenkamp Commission, 1978: 63). The rate of obsolescence of branded prescription

medicine (also referred to as ethical medicines) is faster than that of unscheduled and schedule 1 and 2 medicines (also known as proprietary medicines<sup>2</sup>) (NPI, 1989: 20 & 21).

**Figure 3.2**  
**Vertical integrations in the pharmaceutical industry<sup>3</sup>**



Source: South Africa (1991b: 22)

2 Proprietary medicines are defined as prepackaged medicines intended for self-medication which are manufactured, packaged and labelled in accordance with the requirements of the registering authority of the country of distribution (NPI, 1989: 8).

3 In September 1991 Malbak Ltd acquired the 68% shareholding of Federale Volksbeleggings Ltd in SA Druggists Ltd (Malbak Ltd, 1992: 10-11). During 1992 this shareholding increased from 68% to 84%.

The consumption of pharmaceutical products in South Africa was estimated to be in excess of R2 000 million in 1988. Private consumption of medical and pharmaceutical products constituted 1,6% of the total private consumption expenditure in South Africa in 1986 (NPI, 1989: 11-12).

Next the specific groups that are members of the distribution channel for pharmaceutical products will be discussed.

### **3.3 GROUPS THAT ARE MEMBERS OF THE DISTRIBUTION CHANNEL FOR PHARMACEUTICAL PRODUCTS**

#### **3.3.1 Pharmaceutical manufacturers**

##### **3.3.1.1 A description of the pharmaceutical manufacturing industry**

The pharmaceutical manufacturing industry is essentially a part of the chemical industry, which can be subdivided into the heavy and fine chemical industries. The heavy chemical industry produces large tonnages of products. The fine chemical industry produces smaller volumes of higher priced products, mainly pharmaceuticals and dyes (NPI, 1989: 6).

The pharmaceutical manufacturing industry performs the following manufacturing and processing activities (NPI, 1989: 8):

1. the bulk manufacture of synthetic organic chemicals such as vitamins and antihistamines
2. the bulk manufacture of antibiotics by fermentation, synthesis or both
3. the preparation of sera and vaccines by micro-organism culture and the extraction and purification of the antibodies or antigens which are formed
4. the production of medicines such as insulin, hormones and morphines from naturally occurring animal or vegetable sources
5. the processing of bulk medicines into finished forms such as tablets, capsules and ointments

### 3.3.1.2 Features of pharmaceutical manufacturers

There are almost 80 pharmaceutical manufacturers in South Africa. Some of these manufacturers import pharmaceutical products or do packaging under licence from foreign companies (South Africa, 1986b: 8).

The pharmaceutical manufacturing industry has a pronounced transnational character in the sense that the production and distribution of modern prescription medicines in countries outside the former Iron Curtain countries and China are wholly dominated by a relatively small number of research-based firms operating from the developed economies of the West and Japan (Steenkamp Commission, 1978: 62).

The Steenkamp Commission (1978: 63) and the NPI (1989: 12) both found that the majority of pharmaceutical firms in South Africa are foreign owned, though some of the largest are South African owned. The individual share of the five leading research-based companies varied from 3,6% to 7% of the total market in 1975. There was therefore a far smaller degree of concentration in the pharmaceutical industry than in most other South African industries.

Structurally, the market for pharmaceuticals has an oligopolistic and even monopolistic character (Steenkamp Commission, 1978: 63). The 50 leading firms in each of the countries of Western Europe and the United States of America control from 62 to 95 per cent of the total output of pharmaceutical products in their domestic markets.

The pharmaceutical industry is more highly criticised for its practices in both the developed world and the Third World than most other industries (Smith and Quelch, 1991: 114). These researchers identified and compared some of the criticism of the promotional practices of pharmaceutical companies in developed countries and Third World countries. Criticism in developed countries focused on the role of pharmaceutical sales representatives and their attempts to influence the prescribing habits of doctors; gifts and expenses-paid trips to conventions for doctors; misleading or incomplete promotional materials that do not disclose adverse effects; the supply of branded pharmaceuticals rather than generics; and the costs of the aforementioned activities. Similar charges were also made against pharmaceutical companies for their promotional practices in the Third World. One cause for concern was the promotion of medicines for a wider range of indications in the Third World than



the developed world and with less disclosure of contra-indications and side effects. Concern was also expressed about the availability of medicines in the Third World that are not available in the developed world, higher dosages being prescribed in the Third World, and the promotion of medicines that are available only on prescription in the developed world as over-the-counter (OTC) products in the Third World.

In South Africa the Steenkamp Commission examined the promotional practices of pharmaceutical companies. The Steenkamp Commission (1978: 80) identified wasteful and objectionable promotional practices such as free gift advertising,<sup>4</sup> "bonussing"<sup>5</sup> to pharmacists, doctors or dentists and the provision of abnormal quantities of samples to doctors. The Steenkamp Commission considered measures to combat abuse and objectionable practices. The principal issues regarding prices were regarded as the possible abuse of monopoly power<sup>6</sup> and market transparency.<sup>7</sup> The need to create greater market transparency arose mainly from the proliferation of medicines and the over-promotion of these (Steenkamp Commission, 1978: 64). The number of medicaments on the South African market were said to be 16 000, including 6 000 ethicals. In evidence before the Steenkamp Commission (1978: 64) a leading pharmacologist stated that the market in South Africa has about five times too many medicines.

The Steenkamp Commission (1978: 63) also examined the profits earned in the manufacturing industry. Available profit figures were regarded as very unreliable, because of, *inter alia*, the prevalence of transfer pricing. The profits of pharmaceutical industries were regarded as high on average, though not higher than those of a number of other industries. The high profits were ultimately explained by extensive research and development.

The profitability of pharmaceutical manufacturers is determined by, *inter alia*, their pricing policy (NPI, 1989: 78). Price is determined by factors such as demand, competition, product life cycle, cost and price elasticity. As far as demand is

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4 Free gift advertising in the form of all types of gifts, including motor cars and air tickets.

5 The provision of up to 100% bonus supplies.

6 The possible abuse of monopoly power was investigated by the Board of Trade and Industry.

7 The Competition Board in its memorandum on the dispensing of prescribed medicines also made recommendations to improve market transparency.

concerned, the Government and other statutory bodies purchase approximately 80% of the industry's production volume. These purchases are done by means of tenders. The tender prices are allegedly subsidised by prices in the private market (sales to wholesalers, dispensing doctors and retail pharmacies). Fifty percent of pharmaceutical manufacturers involved in a NPI (1989: 78) study admitted that such subsidisation took place, 17% disagreed and the remaining 33% did not comment.

### **3.3.1.3 Implications for the profitability of retail pharmacies**

The subsidisation of tender prices by sales to the private market means that medicines purchased by retail pharmacists cost more than they cost the institutional market. Depending on the competition faced by the pharmacist and whether he uses a sound pricing and discounting policy, this could negatively influence the profitability of his pharmacy.

### **3.3.1.4 Implications for this study**

From the above discussion it may be inferred that the purchasing function of the retail pharmacist will have to receive attention in this study.

The purchasing function of a retail pharmacy involves the procurement of supplies, either directly from manufacturers or from wholesalers. The profitability of the retail pharmacy may be influenced by the prices charged by manufacturers of medicines, especially in view of the oligopolistic and monopolistic character of the manufacturing industry and its ability to apply transfer pricing. Under uncompetitive circumstances the retail pharmacist may pass high prices for medicines on to the consumer. However, price competition among retail pharmacies and the threat of competition from dispensing doctors may restrict the extent to which purchasing costs can be passed on to consumers. This may influence the profitability of the retail pharmacy negatively. A response to such a situation may be to reconsider the purchasing strategy of the pharmacy.<sup>8</sup>

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<sup>8</sup> Purchasing strategy will be discussed in chapter 4.

### **3.3.2 Pharmaceutical wholesalers**

#### **3.3.2.1 A description of pharmaceutical wholesalers**

Retail pharmacies need the wholesaler to sell them small quantities of both pharmaceutical products (dispensary products) and non-pharmaceutical (or "front-shop" goods) for space and inventory-carrying cost considerations. Since the demand for particular medicines is unpredictable, retail pharmacists require that products be delivered to them promptly. The pharmaceutical wholesaler therefore has to carry a full range of products to cater for the prescribing doctors in the areas it serves.

#### **3.3.2.2 Features of pharmaceutical wholesalers**

There are 42 pharmaceutical wholesalers operating in South Africa (Van Deventer, 1989: 95).

Two main types of pharmaceutical wholesalers can be distinguished (Merryweather, 1986: ii). The first is the group consisting of South African Druggists Ltd, EJ Adcock Ltd and PDC Trading Ltd, all of which are subsidiaries of large corporations listed on the Johannesburg Stock Exchange.<sup>9</sup> The other is the group of co-operative wholesalers which are wholly owned by the retailers themselves and which redistribute their profit back to the retailer.

The wholesalers South African Druggists Ltd, EJ Adcock Ltd, PDC Trading Ltd and East Cape Pharmaceuticals Ltd each operate a promotional chain. The latter is a network of retail pharmacies using the same logo to promote and facilitate the distribution of the wholesaler's pharmaceutical and non-pharmaceutical products. The association of promotional chains with wholesalers is summarised in table 3.1.

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<sup>9</sup> These wholesalers and their vertical integrations have been illustrated in figure 3.2.

**Table 3.1**  
**Promotional chains associated with wholesalers**

Wholesaler	Promotional chain
East Cape Pharmaceuticals	Bonus <sup>10</sup>
EJ Adcock	Family Circle
South African Druggists	Link
Allied Pharmaceuticals/Kemco	Plus

The majority of member pharmacies of promotional chains are owned by individual pharmacists (South Africa, 1991b: 22). The loan facilities that are made available to member pharmacies are covered by a notarial covering bond in favour of the wholesaler which, *inter alia*, hypothecates the assets of the member pharmacy.

Wholesalers, through their promotional chains, offer the following services to member retail pharmacies (Merryweather, 1986: 30-31):

1. financial assistance in purchasing an existing pharmacy or establishing a new pharmacy
2. promotional chain facilities to enable the retail pharmacy to compete price-wise with supermarkets and other chains for front-shop products
3. financial and management advice
4. training facilities for pharmacy staff
5. assistance with the choice and installation of computer systems for pharmacies
6. merchandising services including in-store advertising material
7. an ordering service by means of computer terminal or telephone
8. an annual gift and cosmetic show
9. advice on and the drawing up of plans for store design or alterations to the store layout
10. continuing education programmes for the pharmacist
11. credit facilities, which enable the retail pharmacist to pay his account over 30, 60 or 90 days

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<sup>10</sup> Bonus pharmacies operate in the Eastern Cape only.

### **3.3.2.3 Implications for the profitability of retail pharmacies**

The above-mentioned services can be used by the retail pharmacist to positively influence the profitability of his pharmacy by enhancing his marketing, purchasing and financial strategies.<sup>11</sup>

The reported benefits of wholesalers' promotional chains for member pharmacies are enhanced discounts, volume discounts, joint national advertising campaigns, and assistance with store design and computer systems (South Africa, 1991b: 23).

### **3.3.2.4 Implications for this study**

From the above discussion it can be inferred that the marketing, purchasing and financial functions of the retail pharmacist are influenced by the above groups and organisations. This will have to receive attention in chapter 4 of this study.

## **3.3.3 Doctors**

### **3.3.3.1 The role of doctors**

A doctor's prescription is required for a schedule 3 or higher scheduled medication. The demand for medication is caused by an external factor - illness - and the patient (consumer) has to be examined by a doctor before a prescription is issued. Based on this examination the doctor may decide to prescribe medication. This prescription initiates the dispensing action.

The dispensing can be done by either a retail pharmacist, a dispensing doctor or a nurse if there is no pharmaceutical service available (South Africa, 1986b: 8). The retail pharmacist benefits from patients who come to him to obtain the prescribed medicine. The dispensing doctor deprives the retail pharmacist of the opportunity of dispensing medicine to the patient. The influence of the dispensing doctor on the retail pharmacy is examined next.

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<sup>11</sup> These strategies will be explained in chapter 4.

### 3.3.3.2 The influence of dispensing doctors on retail pharmacies

Dispensing doctors can provide the consumer with a one-stop service and are able to dispense medicine at a lower cost than the pharmacist. Dispensing doctors are able to lower the cost of medicine by buying directly from the manufacturer and because they stock a smaller product range, which reduces the carrying cost of stock. The consumer's need for convenience and his perception that medicines are expensive (Rumney, 1988: 14) are the main reasons for the increase in the number of dispensing doctors.

The number of dispensing doctors registered with the South African Medical and Dental Council increased from 3 594 in 1985 to 6 879 in 1991 - an increase of 91,4%. The biggest increase occurred in the Transvaal where registered dispensing doctors have increased by 124,24 percent since 1985. More detailed figures are provided in table 3.2.

**Table 3.2**  
**Number of dispensing doctors**  
**registered with the South African Medical and Dental Council**

Province	1985	1986	1987	1988	1989	1990	1991	Growth rate <sup>12</sup> (%)
Cape Province	1 154	1 271	1 377	1 454	1 597	1 694	2 082	80,42
Natal	745	777	840	890	954	998	1 187	59,33
Orange Free State	244	285	307	325	354	386	424	73,77
Transvaal	1 345	1 529	1 781	1 926	2 197	2 476	3 016	124,24
Other	106	127	118	129	126	159	170	60,38
Total	3 594	3 989	4 423	4 724	5 228	5 713	6 879	91,40

Source: South African Medical and Dental Council (1992)

<sup>12</sup> The growth rate for the period 1985 to 1991.

The Pharmacy College of Pretoria made an assessment of the influence of dispensing doctors on retail pharmacies by means of a survey among retail pharmacies. Dispensing doctors enjoyed a 50% market share in 26,4% of respondents' trading areas. Retail pharmacists reported a 33,11% decrease in prescription work as a result of dispensing by doctors. The decrease in sales of a retail pharmacy affected by dispensing doctors was estimated to be as much as R245 400 per annum. Thirty percent of retail pharmacists indicated that they had to retrench two members of staff (on average) (Pharmacy College of Pretoria, 1991: 5-8).

### **3.3.3.3 Implications for the profitability of retail pharmacies**

The implication of this increase in dispensing doctors is that the market for pharmaceuticals at retail level is reduced even further.<sup>13</sup> It causes a decrease in the sales of retail pharmacies and could lead to the closure of those retail pharmacies which are no longer able to maintain profitability, liquidity and solvency.

### **3.3.3.4 Implications for this study**

The influence of dispensing doctors indicates that strategic management as part of the general management function, the marketing function and the influence of location should be investigated as part of the study. The retrenchment of members of staff has a bearing on the personnel function, and will also receive attention.

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<sup>13</sup> See sections 3.3.6.2 and 3.3.6.3. The majority of South Africans (79,9%) are dependent on the State (including provincial hospitals) for their medical needs. The market for pharmaceuticals at the retail level therefore constitutes only 20,1% of the total market for pharmaceuticals.

### 3.3.4 Competing retail pharmacies

#### 3.3.4.1 A description of competing pharmacies

It will be recalled from chapter 1 that there has been an increase in the number of retail pharmacies. In this section the figures reflecting this increase will be compared with the statistics for the number of beneficiaries of medical schemes over a comparable period,<sup>14</sup> that is, from 1985 to 1989.

#### 3.3.4.2 Features of competing pharmacies

The number of retail pharmacies in South Africa increased from 2 465 in 1985 to 2 708 in 1989 - an increase of 9,8% over the said period. The role of dispensing doctors should, however, also be taken into consideration when evaluating the increase in retail pharmacies.

**Table 3.3**  
**Number of retail pharmacies**  
**registered with the South African Pharmacy Council**

Province	1985	1986	1987	1988	1989	1990	1991	Growth rate <sup>15</sup> (%)
Cape Province	654	678	689	701	707	728	741	13,30
Natal	347	361	369	389	400	411	441	27,09
Orange Free State	162	163	166	170	170	174	178	9,88
Transvaal	1 302	1 337	1 347	1 384	1431	1 442	1 483	13,90
Total	2 465	2 539	2 571	2 644	2 708	2 755	2 843	15,33

Source: South African Pharmacy Council (1992)

<sup>14</sup> At the time of preparing this research report only the figures for beneficiaries of medical schemes from 1980 to 1989 were reported in the 1990 report of the Registrar of Medical Schemes (South Africa, 1991a).

<sup>15</sup> The growth rate for the period 1985 to 1991.



### **3.3.4.3 Implications for the profitability of retail pharmacies**

New entrants may erode the market share of existing firms and lead to their decline (Hill & Jones, 1989: 176-177). New retail pharmacy entrants lead to more intense competition, which affects the market share (measured by the number of prescriptions dispensed) and the profitability of retail pharmacies negatively (Pharmacy College of Pretoria, 1991: 8).

### **3.3.4.4 Implications for this study**

This study will consider the influence of the number of prescriptions dispensed on the profitability of retail pharmacies.

## **3.3.5 Medical treatment provided by the State**

### **3.3.5.1 Description of the provision of medicine by the State**

From the discussions of the consumer of pharmaceuticals and medical schemes it was inferred that the State provides medical treatment, including medicines, to as much as 79,9% of the South African population. Government and other statutory institutions are responsible for purchasing approximately 60% of the pharmaceutical industry's production volume (NPI, 1989: 80).

### **3.3.5.2 Features of the State in the provision of medicine**

It is frequently alleged in the pharmaceutical industry that, because of the volumes of pharmaceuticals purchased, the State is charged less for medicine than what the retail pharmacist has to pay for the same pharmaceuticals. The Browne Commission (South Africa, 1986d: 353) found that prices to the provincial administrations (the State) are lower than prices to wholesalers.

The Browne Commission (South Africa, 1986d: 305) also found that if the wholesale and retail margins are added to the manufactured price of medicines, the retail price is 2,6 times higher than the average manufactured price to the State.

In 1987 district surgeons started providing dispensing services on behalf of provincial administrations, with the result that pharmacists who had previously undertaken this dispensing were adversely affected (Spies, 1990: 61).

### **3.3.5.3 Implications for the profitability of retail pharmacies**

The above discussion suggests that price discrimination is applied by manufacturers. In this way sales to wholesalers and retail pharmacies are used to subsidise sales to the institutional market (the State and provincial administrations). The price of medicine available from retail pharmacies encourages patients to try to obtain medicine from the State. Alternatively consumers turn to dispensing doctors in an attempt to obtain cheaper medicines. In this way the sales and the profitability of retail pharmacies are influenced negatively. It also enhances the argument of medical schemes that they should be allowed to open their own dispensaries to perform dispensing for their members. This is a threat to the profitability of retail pharmacies.

As far as dispensing district surgeons are concerned, pharmacies in towns are more adversely affected than metropolitan pharmacies. This may be attributed to the fact that the ratio of district surgeons to the total number of pharmacies is smaller in metropolitan areas than in small towns (Spies, 1990: 235).

### **3.3.5.4 Implications for this study**

The implication for this study is that the pricing policy of retail pharmacies has to be studied. The influence of the district surgeon may be determined by evaluating the number of prescriptions dispensed by the retail pharmacist. These are aspects of the marketing and financial management functions of retail pharmacies. This study will therefore give attention to these management functions.

### **3.3.6 The consumer**

#### **3.3.6.1 A description of the consumer**

The consumer of medicines is the patient in need of treatment for an illness. It can be assumed that the consumer wants fast and effective relief from the symptoms of the illness, irrespective of the time of day. This is the primary motive of the consumer when going to either a (dispensing) doctor, a pharmacy, or a provincial hospital.

#### **3.3.6.2 Features of the consumer**

The consumer that resorts to a retail pharmacy wants convenience in the sense that the medicine should be available when and where treatment is needed. The accessibility of the pharmacy and the availability of the medicine from the pharmacist's stock in his dispensary could influence a consumer's purchasing decision. Other factors that could also play a role are the consumer's need for friendly, personal service and reasonably priced goods (Plus Promotions, 1989: 3).

The consumer's ability to buy pharmaceuticals from the retail pharmacist or to have them dispensed by a doctor for a fee depends on his ability to pay for the treatment and/or membership of a medical scheme.<sup>16</sup> The medical scheme enables its members to afford private medical treatment.

Alternatively the consumer has to acquire medicine from State hospitals or clinics, or use self-medication. An estimated 79,9% of the South African population (or 24 117 688 people) are dependent on the State for their medical needs (South Africa, 1991a: annexure 3). The other alternative, self-medication, can be applied only for minor illnesses that can be treated with medicines not requiring a prescription.

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<sup>16</sup> The types of medical schemes will be discussed later in this chapter under the heading "Medical schemes".

Self-medication is inhibited mainly by two factors:

1. The patient can apply self-medication with unscheduled, schedule 1 or schedule 2 medicines only.<sup>17</sup>
2. Medical schemes only refund members if the medicine had been obtained on a doctor's prescription.

Another feature of the consumer which is relevant to the rural retail pharmacist is the urbanisation of the South African population. It has been forecast that urbanisation will increase from 46,4% (13,7 million out of 29,5 million) in 1980 to 51,9% (27,8 million out of 53,5 million) by the year 2005 (Development Bank of Southern Africa, 1991: 9).

### **3.3.6.3 Implications for the profitability of retail pharmacies**

The implications of the above-mentioned aspects for the retail pharmacist are that attention should be given to the location and accessibility of the pharmacy, the trading hours of the pharmacy, the product range that is stocked in the dispensary, and stock control.

In view of the fact that the majority of South Africans (79,9%) are dependent on the State for their medical needs, it would appear that the market for pharmaceuticals at the retail level is relatively small compared with what it would be if a larger percentage of the population were members of medical schemes.

The urbanisation of the population influences the profitability of rural pharmacies negatively, while the profitability of urban retail pharmacies is positively influenced.

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<sup>17</sup> Medicines are scheduled in accordance with the Medicines and Related Substances Control Act (Act no. 101 of 1965).

#### **3.3.6.4 Implications for this study**

This study will devote attention to the location and accessibility of the pharmacy, the trading hours of the pharmacy and stock management. These factors form part of the marketing and financial functions.

### **3.4 GROUPS THAT ARE NOT MEMBERS OF THE DISTRIBUTION CHANNEL FOR PHARMACEUTICALS**

#### **3.4.1 Medical schemes**

##### **3.4.1.1 Description of medical schemes**

"Medical schemes" is a collective noun for two types of medical schemes, namely medical aid schemes and medical benefit schemes as described by the Competition Board (South Africa, 1986b: 14). A medical aid scheme provides for the rendering of medical, dental and pharmaceutical services to its members and their dependents by medical practitioners, dentists and pharmacists of their own choice. A medical benefit scheme provides for the treatment of its members and their dependents by a member or members of a panel of medical practitioners and dentists who have been appointed by the scheme.

##### **3.4.1.2 Features of medical schemes**

The total number of medical schemes has declined since 1980. In 1980 there were a total of 289 medical schemes compared with 250 in 1989 (South Africa, 1991a: annexure 8).<sup>18</sup> This represents a decline of 15,6%. In 1990 there were 240 medical schemes.<sup>19</sup> As indicated in table 3.4 the total number of medical schemes remained relatively constant between 1985 and 1989.

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18 The independence of Namibia meant that medical schemes that had previously been under the jurisdiction of the South African Registrar of Medical Schemes were no longer subject to such jurisdiction.

19 Since the 1991 report of the Registrar of Medical Schemes had not been completed at the time of writing, only the figures quoted in this chapter could be obtained.

The total number of beneficiaries of medical schemes increased by 15,3% over the period 1985 to 1989. The largest increase occurred among the Black population group (from 778 281 to 1 374 551 - an increase of 76,6%).

**Table 3.4**  
**Trends in the number of medical schemes**

Type of medical scheme	1985		1986		1987		1988		1989		1990	
		% of total		% of total		% of total		% of total		% of total		% of total
Aid scheme	191	76	192	76	188	76	188	75	189	76	179	75
Benefit scheme	18	7	18	7	18	7	19	8	18	7	21	8
Exempted schemes <sup>20</sup>	43	17	43	17	43	17	43	17	43	17	40	17
Total	252	100	253	100	249	100	250	100	250	100	240	100

Source: South Africa (1991a: replacement page, annexure 8)

**Table 3.5**  
**A comparison of beneficiaries of medical schemes: 1985 vs 1989**

Population group	1985		1989		Growth rate <sup>21</sup> %
		% of total		% of total	
Asians	249 893	4,7	313 544	5,2	25,5
Whites	3 448 684	65,5	3 452 420	56,8	0,11
Coloureds	791 719	15	934 797	15,4	18,1
Blacks	778 281	14,8	1 374 551	22,6	76,6
Total	5 268 577	100	6 075 312	100	15,3

Source: South Africa (1991a: annexure 8)

<sup>20</sup> These schemes are exempted from complying with certain provisions of the Medical Schemes Act (1967) and are controlled by other legislation administered by Government departments.

<sup>21</sup> The growth rate for the period 1985 to 1989.

The benefits paid by medical schemes (expressed as percentages) to their members remained relatively constant during the period 1985 to 1989. The benefits paid to the various medical professions (expressed as percentages) over the said period are shown in table 3.6.

The benefits paid on medicines are of interest to the retail pharmacist. Although these benefits are paid on all claims involving medicine (whether dispensed by a retail pharmacist or any of the other medical professions), the percentage of benefits on medicine remained at 26% throughout the period 1985 to 1989 (excluding 1987) (South Africa, 1991a: annexure 8). This is of significance if one considers that medical schemes require between 15% and 25% discount from retail pharmacists on prescribed medicine. By doing so the medical schemes probably prevented an increase in the percentage of benefits paid in respect of medicine bought from retail pharmacies. It would appear, however, that the required discounts did not lead to a decrease in the percentage benefits paid on medicine.

**Table 3.6**  
**Benefits paid by medical schemes: 1985 - 1989**

Benefits paid in respect of:	1985	1986	1987	1988	1989
General practitioners	16%	17%	16%	16%	16%
Specialists	20%	19%	18%	18%	18%
Dentists	13%	12%	12%	11%	11%
Hospitalisation	18%	20%	21%		
Provincial	-	-	-	6%	5%
Private	-	-	-	16%	16%
Medicine	26%	26%	27%	26%	26%
Other benefits	7%	6%	6%	6%	7%
Total amount (R'000)	R 1 600 433	R 2 049 757	R 2 434 674	R 3 041 463	R 3 885 055
As % of contributions	97%	98%	90%	88%	91%
As % of total income <sup>22</sup>	90%	93%	87%	84%	86%

Source: South Africa (1991a: annexure 8)

At the time of writing, amendments to the Medical Schemes Act were under consideration. These amendments will allow medical schemes to operate their own dispensaries (*Financial Mail*, 1991: 21-22).

### 3.4.1.3 Implications for the profitability of retail pharmacies

The increases in beneficiaries are a positive development for retail pharmacies and could be an opportunity to increase the sales of prescribed medicines and the profitability of retail pharmacies.

The discounts required by medical schemes nevertheless influence the profitability of retail pharmacies negatively.

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<sup>22</sup> Total income = total contributions by members plus investment income.



Although some medical benefit schemes, for example Transmed, already operate their own pharmacies the proposed amendments to the Medical Schemes Act could negatively influence the profitability of retail pharmacies if medical schemes opened their own dispensaries.

#### **3.4.1.4 Implications for this study**

For the purpose of this study attention will have to be given to discounting as part of the financial function of retail pharmacies.

### **3.4.2 Clearing houses**

#### **3.4.2.1 Description of clearing houses**

Medikredit (Pty) Ltd is a subsidiary company of the Pharmaceutical Society of South Africa (PSSA). Before it changed its name during the second half of 1990, it was known as PSSA Contracts (Pty) Ltd. It was incorporated by the PSSA with the objective of negotiating with medical schemes on behalf of the individual members of the Society to afford pharmacists the benefit of a central payment system, and to ensure that the so-called "open panel system" was maintained. The open panel system was designed to afford members of medical schemes a free choice of pharmacies. The exclusive right of Medikredit to tout for work was rescinded on 31 March 1989 when Mediscor CC entered the market. Mediscor basically uses the same contractual arrangements as Medikredit but, unlike the latter, has no formal ties with the pharmacy profession (South Africa, 1991b: 24).

#### **3.4.2.2 Features of clearing houses**

The clearing houses - Medikredit (Pty) Ltd and Mediscor CC - collect and consolidate claims from their respective member pharmacies in respect of amounts payable by medical schemes for prescriptions dispensed by retail pharmacists to members of such medical schemes; verify them for those medical schemes which require verification of tariffs and medical scheme exclusion categories; collect the amounts

owed by medical schemes and pay over the amounts claimed by the respective member pharmacies. The clearing houses charge both member pharmacies and the medical schemes an administration fee for this service.

At the time of its investigation the Competition Board found that Mediscor was able to offer participating medical schemes substantially better discounts than Medikredit. Mediscor requires that participating retail pharmacists afford the members of participating medical schemes at least 20% discount on the manufacturer's recommended retail price of the prescription medicine they purchase (South Africa, 1991b: 21).

#### **3.4.2.3 Implications for the profitability of retail pharmacies**

The discounts required by clearing houses (on behalf of medical schemes) influence the profitability of retail pharmacies negatively.

#### **3.4.2.4 Implications for this study**

For the purpose of this study discounting as part of the financial function of retail pharmacies will have to be examined.

### **3.5 SUMMARY**

The profitability of retail pharmacies is affected by several groups. Groups involved in the distribution channel of pharmaceutical products which affect the profitability of retail pharmacies are:

- pharmaceutical manufacturers
- wholesalers
- competing retail pharmacies
- dispensing doctors
- the State (including provincial hospitals)
- consumers

Other groups that are relevant and influence the profitability of retail pharmacies are:

- medical schemes
- clearing houses

The profitability of retail pharmacies is positively influenced by the establishment of joint wholesalers that buy in bulk or by joining a promotional chain that can provide financing, national advertising and other benefits, and by locating in an area that benefits from the urbanisation of the population. The increase in the beneficiaries of medical schemes is also a positive development for the profitability of retail pharmacies.

The profitability of retail pharmacies is negatively influenced by transfer pricing applied by pharmaceutical manufacturers; new retail pharmacy entrants; dispensing by district surgeons and dispensing doctors; and discounts allowed to clearing houses and medical schemes. The profitability of rural pharmacies is threatened by the urbanisation of the population.

The management functions of the retail pharmacy affected by the above-mentioned aspects are the general management, marketing, purchasing, personnel and financial functions. The following chapter will investigate how these management functions could play a role in maintaining and increasing the profitability of a retail pharmacy.

## CHAPTER 4

### THE INFLUENCE OF FUNCTIONAL MANAGEMENT STRATEGIES ON THE PROFITABILITY OF RETAIL PHARMACIES

#### 4.1 INTRODUCTION

The purpose of this chapter is to study the influence that functional management strategies may have on the profitability of South African retail pharmacies. Functional management strategies, similar to global and business strategies, are internal to the pharmacy and controllable as opposed to the aspects discussed in chapter 3, which are external and uncontrollable.

The contribution of this chapter to the study is:

1. To put functional management strategies into perspective. Chapter 2 studied the strategic management process and described, *inter alia*, global and business strategies. This chapter completes the discussion of the strategic management process by studying functional strategies as internal, controllable variables which may be used by retail pharmacists to influence the profitability of their pharmacies positively.
2. To serve as a basis for the study of criteria which may be used to evaluate the functional strategies of retail pharmacies. This chapter will study critical success factors at the functional level which are necessary for the successful planning and implementation of a strategic management approach. The chapter concludes with an overview of approaches which may be used to evaluate strategy, for example, budgets, time-related controls, management by objectives, and management audits. The specific criteria for the evaluation of functional management strategies will then be discussed in chapter 5.

For the purpose of this study the functional strategies will be discussed according to the functional areas encountered in the management of a retail pharmacy, namely

marketing, personnel, purchasing and financial management (Mackintosh & Spiers, 1980: 11).<sup>1</sup> However, in order to give recognition to the role of the general management function, it will be explained before the other management functions are studied. In both the sections - concerning general and functional management strategies - the approach will be to:

1. Study theoretical aspects relevant to the management of retail pharmacies.
2. Study research findings related to general management or the particular functional area.
3. Inferences will be made about functional management strategies which the retail pharmacist may implement in order to ensure the profitability of his pharmacy.

## **4.2 THE GENERAL MANAGEMENT FUNCTION**

### **4.2.1 Concise overview of the general management function**

The aim of the general management function is to ensure the profitability of a firm through a continuous process consisting of planning, organising, leading, and control.

**Planning** involves the formulation of feasible and acceptable goals and objectives, as well as the drafting of plans to reach the goals which have been set. **Organising** refers to the division of tasks, duties and responsibilities among employees, while **leading** refers to communication and the motivation of employees. **Control** means that standards or norms have to be set, performance measured and compared with standards, and corrective action taken if necessary (Newman, Warren & Schnee, 1982: 14-16).

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<sup>1</sup> Two other functional areas which are recognised by authors on management are production and public relations. Since at the time of writing, retail pharmacist were not permitted to manufacture medicines in their dispensaries, the production function has been excluded from the study. The public relations function has been treated as an integral part of the marketing function of retail pharmacies.

#### 4.2.2 Global strategy as part of the general management function

The focus in this section will fall on planning aspects with a view to explaining the global strategies which the pharmacist may consider part of his planning task.

The objective of the global strategy is to plan how a sustainable competitive advantage may be achieved (Aaker, 1988: 34). The implication of this is that a retail pharmacist may plan how to attain a sustainable competitive advantage in the retail market for pharmaceuticals, or how to avoid or neutralise the competitive advantages of competing retail pharmacies or of dispensing doctors.

The following global strategies for retail pharmacies have been identified:<sup>2</sup>

- concentrated growth
- market development (selling present products in new markets)
- product development (developing new products for present markets)
- horizontal integration
- vertical integration
- joint venture
- concentric diversification
- conglomerate diversification
- retrenchment/turnaround
- divestiture
- liquidation

Depending on the circumstances of the retail pharmacy, the pharmacist may use one or more of the above global strategies.

According to Chesney and Locke (1991: 420-424) strategy and the setting of challenging personal goals are positively related to performance. The implication for the retail pharmacist is that financial performance (profitability) may be enhanced by formulating a deliberate strategy and by setting challenging personal goals for his staff and himself.

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<sup>2</sup> These global strategies were discussed in chapter 2.

#### **4.2.3 Research on general management aspects of South African retail pharmacies**

Two research papers on general management aspects of South African retail pharmacies are discussed here, namely those of Du Preez (1973) and of Van Deventer (1989). These two research papers are referred to because of their relevance to this study. A summary of the findings of these research reports is provided below.

**Du Preez** (1973: 5) analysed the state of the retail pharmacy. The internal structure and activities of the retail pharmacy, as well as the structure and activities of the environment with which it interacts, were taken into account in an attempt to build a model of the profession.

Du Preez's research is related to the issue of a mission statement. The researcher identified a state of confusion among pharmacists regarding their professional role versus their retail role. The development of a dynamic pharmaceutical industry and an ever-increasing tendency among medical practitioners to prescribe "brand name" medicine has shifted the professional task from the retail pharmacist to the industry, leaving the former with only the distributing task.

Infiltration of the trading role of the retail pharmacist by chain stores and supermarkets poses another threat to the existence of a once viable and rewarding profession. Thus both aspects of the professional activity of retail pharmacy - compounding and distribution of medicine - have become problem areas for the profession.

Du Preez concluded that a decision to strive for professional status will be a traumatic one requiring the approval and co-operation of all pharmacists in order to succeed.

This research project contributes to the improvement of the general management of retail pharmacies mainly in the area of the formulation of a mission statement by the retail pharmacist. Deciding upon a basic mission is a fundamental step in planning. Without a concrete statement of mission, the development of attainable objectives and strategies is impossible. The mission statement provides a unifying drive, a knowledge of direction, and a guide to decision making for the pharmacist and his personnel.

**Van Deventer** (1989: 218) studied the role, position and managerial challenges facing the South African retail pharmacist and found that the economic wealth and survival of the pharmacy are threatened by external factors, such as dispensing by the State and doctors, the ethical code of conduct and restrictive control measures as far as generic substitution is concerned. The researcher also found that retail pharmacists did not have the necessary management training to perform strategic analysis and planning in an attempt to cope with the challenges and threats of the external environment.

The main difference in these two research projects is that Van Deventer accepted the dual role of pharmacist and trader, while Du Preez suggested that the pharmacist limit himself to his professional role. The issue of the role of the pharmacist is related to the formulation of a mission statement by him. If the mission statement of the pharmacist is limited to the custody of pharmaceuticals, advice and the dispensing of pharmaceuticals, then his role would be that of a professional person as envisaged by Du Preez. Any expansion of the mission statement to include any statement relating to serving broader community needs implies that the pharmacist will have a dual role as a pharmacist and a trader. Both studies nevertheless critically analysed the role of the retail pharmacist in South Africa.

#### **4.2.4 Implications for the profitable management of retail pharmacies**

The profitability of a retail pharmacy may be positively influenced by selecting and implementing a global strategy which is appropriate to the firm and by taking cognisance of the opportunities, threats, strengths and weaknesses of the pharmacy. However, the successful planning and implementation of global strategies require sound functional strategies.



### **4.3 FUNCTIONAL STRATEGIES**

The functional strategies will be discussed in the following order:

- marketing function strategies
- personnel function strategies
- purchasing function strategies
- financial management function strategies

#### **4.3.1 The marketing function**

##### **4.3.1.1 Concise overview of the marketing function**

The role of the marketing function is to get the firm's products and/or services sold in target markets in order to achieve the long- and short-term objectives of the firm (Pearce & Robinson, 1991: 310).

The marketing function is aimed at fulfilling the marketing concept. The marketing concept involves the following four principles (Marx & Van der Walt, 1989: 20-30):

1. Customer orientation, requiring that the retailer view his retail outlet from the customer's point of view. According to the above-mentioned authors the retailer should base his marketing decisions on the needs and desires of the customer.
2. Profitability, meaning sales should not be increased at the expense of profits.
3. Social responsibility, requiring an involvement with and concern for the society and environment in which the firm operates.
4. Organisational integration of marketing, purchasing, personnel and financial management functions. Customers wish to be treated courteously, get the product(s) they want when they need them at a price they are able and willing to pay, procure medicine or other products by prompt delivery, and receive accurate statements.

The marketing function strategies will be considered first.

### 4.3.1.2 Marketing function strategies

Marketing function strategies have four components, namely products, promotion, price and distribution (place) (Pearce & Robinson, 1991: 310). Each of these components will now be studied.

#### Product decisions

The **product decisions** of the retailer will be discussed according to:

1. The way in which the product is offered for sale. This aspect concerns the image and layout of the retail outlet.
2. The product mix.

The **image of the retail outlet** is influenced by its location, exterior and entrance. The atmosphere inside the retail outlet is created by lighting, music, air-conditioning, décor, layout and product organisation. According to Mason and Mayer (1990: 272) the image of the retail outlet should be compatible with the customer's perceived self-image.

The **layout** of the retail outlet aims to use space as productively as possible by apportioning it according to the profitability of the various product lines. Considerations to bear in mind are customer convenience and security (preventing losses of items of stock). The following layout patterns have been identified by Beisel (1987: 159-162) and Morgenstein and Stongin (1987: 220-221):

1. The grid pattern, which places shelves and fixtures in rows, creating aisles similar to those found in supermarkets. This layout utilises space more efficiently than any other layout pattern. It simplifies store organisation, security, stock control and shelf stocking. It is also conducive to self-service. It may, however, inhibit browsing and impulsive buying.
2. The free flow pattern requires that fixtures are arranged in an informal way, allowing the customer to establish his/her own traffic patterns, browsing and shopping in a more relaxed atmosphere than would be the case with a grid layout pattern.

3. The boutique pattern is used to create small speciality shops (for example a gift corner) within the selling area of the retail outlet. This helps the customer to find what is on offer more easily.

The entrance to the retail outlet experiences the most customer traffic and provides an opportunity to market products which are bought impulsively or that have high profit margins. The area at the back of the retail outlet may be used for products that the customer specifically comes into the retail outlet to buy. This placement forces the customer to walk through the retail outlet, and increases the probability of selling more items to the customer than he had initially intended buying (Beisel, 1987: 159-162).

The **product mix** refers to the set of all the product lines and items that the retail outlet offers for sale to customers (Berman & Evans, 1986: 294-295). The width of the product mix (the number of product lines) and the depth (the number of items per product line) will depend on the global strategy which is pursued. The width and depth of the product mix of a retailer pursuing a focus strategy will, for example, be relatively smaller than that of a retailer pursuing a growth strategy.

### **Promotion**

**Promotion** is defined as an integrated programme of communication means through which the need-satisfying properties of a product are impressed upon prospective customers with a view to promoting sales and thus ensuring the profitability of the retail outlet (Burnett, 1984: 15). The objectives of promotion are to inform customers in a specific target market about the retail outlet's offering, persuade them to buy it and keep on reminding them to continue buying it. Promotion may bring customers to the retail outlet and increase sales volume, contribute to the retail outlet's image, cultivate loyalty towards the retail outlet and differentiate it from other retail outlets.

Promotion elements which may be used by retailers to communicate with the target market are advertising, special sales promotions, publicity, store displays, personal selling and customer support services (Mason & Mayer, 1990: 521).

## **Pricing**

**Pricing** may be cost orientated, market orientated or competition orientated (Pearce & Robinson, 1991: 311). With a cost orientated approach, pricing decisions centre on the total cost and involve an acceptable mark-up or target price ranges. Percentage mark-up and the breakeven analysis method may be used in a cost orientated approach. Percentage mark-up means prices are set by adding a standard mark-up to the cost of the product (Mackintosh & Spiers, 1980: 93). The breakeven analysis method may be used to set prices to break even on the costs of buying and marketing a product, or alternatively, to earn a particular profit margin.

With a market orientated approach, pricing is based on consumer demand.

With a competition orientated approach, pricing decisions centre on those of the firm's competitors. Going-rate pricing may be used in a competition orientated approach. It bases prices largely on competitors' prices rather than on the firm's costs or on demand.

## **Physical distribution decisions**

The **physical distribution decisions** of the retailer involve deliveries to the right place, at the right time, and in good condition. Physical distribution concerns aspects such as location, deliveries and the mode of transport to be used.

### **4.3.1.3 Research on marketing function strategies**

Two researchers studied the marketing function strategies of South African retail pharmacies, namely Botha (1973) and Van Niekerk (1983). The findings of these research reports are summarised below.

**Botha** (1973: ii) provides a framework for the formulation of a marketing strategy for a retail pharmacy with four branches.<sup>3</sup> With the development of the pharmaceutical industry, the retail pharmacy no longer had to make pharmaceutical preparations itself and became a distributor of products. As the professional image of the pharmacist diminished, the retail pharmacy increasingly came into direct

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<sup>3</sup> The shareholders were pharmacists with no formal business training.

competition with supermarkets and speciality shops. Because of the high cost of medicine, the author anticipated competition in the area of prescribed ethical medicines in the future.

The central problem was identified as the lack of a marketing strategy, in spite of the environment in which pharmacies operate and which forces them to take strategic decisions. According to Botha (1973: iii) these decisions could determine the success or failure of the enterprise. The researcher found that pharmacies did not have the financial resources to imitate "Clicks" and other supermarkets. The pharmacists may also experience difficulty in managing large volumes of business.

The framework developed for the purpose of formulating a marketing strategy consists of the following elements:

1. The internal assessment, which showed that the product/market concentration was in ethical and patented medicines that may be sold exclusively by pharmacies. The largest proportion of the pharmacy's assets were, however, invested in non-medicinal products (Botha, 1973: 118). Most of the pharmacist's time was taken up by operational and management decision making.
2. Personal contact with clients, sales efficiency, delivery service and credit facilities were identified as competitive advantages.
3. From the external assessment it was established that service would play a more important role in the future than low prices. Marketing opportunities appeared to be in the field of surgical appliances, health foods, herbal products and swimming pool chemicals.
4. The domain of the pharmacy had to be formulated according to the strategic variables, such as the product policy, client policy, competitive advantages, distribution policy, promotion policy, purchasing and stock control, credit policy and personnel training and development policy.
5. The strategic plan, which had to define the proposed product/market range, competitive advantages, objectives and specifications, as well as the allotment of resources.

6. A feedback system was also suggested, with the frequency of feedback depending on the stability of the environment.

In the past the objectives of pharmacies were never defined explicitly and the personal values of the pharmacists determined what strategic decisions had to be made. Botha (1973: 116) believed that a marketing strategy would rectify this by providing clarity on the role of the pharmacy in the environment, the domain in which it wishes to operate, and its objectives. A carefully formulated marketing strategy would also provide evaluated alternatives when decisions have to be made regarding the actions of competitors or their market.

Considered in the light of this chapter, Botha's study made a contribution to the marketing strategy of retail pharmacy by pointing out key elements of a successful marketing strategy, such as personal contact between pharmacist and client, sales efficiency, delivery service and credit facilities. It also refers to financial management strategy, stating that the retail pharmacy does not have the financial resources to imitate "Clicks" and other supermarkets.

**Van Niekerk (1983: 1)** described the identification and creation of a retail pharmacy. The strengths, weaknesses, opportunities and threats of the pharmaceutical industry were investigated with special reference to retail pharmacy. Objectives were developed and alternative strategies related to key performance areas to improve the chances of success of a proposed pharmacy.

The researcher examined those elements in the system that may influence the retail pharmacy. He did not do a SWOT analysis for retail pharmacies, but identified the following key success factors for a new pharmacy:

- marketing
- products
- employees
- suppliers
- distribution
- physical facilities
- services
- financing
- research
- management

The above-mentioned factors were not categorised from a functional management point of view. Products, distribution and services form part of the marketing strategy of the retail pharmacy, while suppliers and employees are considered part of the purchasing and personnel management strategies respectively. Depending on the researcher's definition of "research",<sup>4</sup> it may form part of operational or general management. The researcher could therefore have enhanced the study by categorising each of the variables according to the relevant functional strategy and by putting it into perspective within the appropriate functional strategy. The study nevertheless suggests that the profitable management of a pharmacy depends on a combination of key aspects from the different functional management strategies.

Since the purpose of the study was to investigate the feasibility of a new pharmacy using breakeven and financial ratio analysis, it also contained aspects of financial management.

#### **4.3.1.4 Implications for the profitable management of retail pharmacies**

##### **Products**

A retail pharmacist may stock the following product lines:

- medicine, including prescribed medicines (schedule 3 to 7 items); over the counter medicines (schedules 1 and 2); patent and unscheduled medicines; and health products (vitamins, natural products)
- cosmetics<sup>5</sup>
- toiletries
- baby products (other than medicines)
- photographic products and services
- gifts

The pharmacist's decision on how many product lines (width of the mix) and product items per product line (depth) he is going to offer may be based on marketing and financial (profitability) considerations. From a marketing point of view it is

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4 Research refer to either market research and/or research into new medicines. It may also, in terms of this study, be interpreted as meaning an analysis of strengths, weaknesses, opportunities and threats.

5 In cases where the market justifies it, the cosmetics department is allocated additional space and staffed by beauticians to provide a comprehensive, professional service.

influenced by what customers want,<sup>6</sup> the actions of competitors, shelf space, as well as the global strategy or combination of global strategies used by the pharmacist.<sup>7</sup> The medicines dispensed and sold by retail pharmacists come prepacked and differentiation in respect of product brand names and packaging among pharmacies is not possible. The retail pharmacist interested in research may, however, develop a unique medicinal product, and patent and market it as part of a differentiation strategy.

Although the same medicinal products are offered by all retail pharmacies, differentiation may take the form of, *inter alia*, other product lines and items or by providing superior service. Other product lines which the pharmacist may stock - depending on the needs of the market in which the pharmacy is located - include homeopathic medicines, greeting cards, swimming pool chemicals and veterinary products.

Financial considerations are the profitability and stock turnover rate of product lines and items, as well as the availability of and the cost of financing the stock. If the retail pharmacy uses limited and/or costly financing, it might have to review the width and depth of product lines in an attempt to reduce the carrying cost of stock.

If the pharmacist pursues a focus strategy, the pharmacy may stock only prescribed medicines (schedule 3 to 7 items); over the counter medicines (schedules 1 and 2); patent and unscheduled medicines; and health products (vitamins, natural products etc.). The pharmacist may also use his intimate knowledge of pharmaceuticals extensively to advise customers on their correct use.

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6 In this respect an analysis of sales patterns for the various product lines and items may be worthwhile; a computer system is a prerequisite for such an analysis.

7 These strategies were discussed as part of general management. See differentiation, low cost, focus and other strategies.



## Promotion

The retail pharmacist may use the following specific types of promotion:

1. advertising front-shop products by means of advertisements outside the pharmacy or on the shop front; advertisements in newspapers, "knock-and-drop" newspapers and pamphlets; and advertisements mailed with account statements to existing customers
2. sales promotion by means of attractive displays, gifts and calenders displaying the name and particulars of the retail pharmacy, competitions, discount coupons, and sampling
3. publicity by means of sponsorships or organising special events<sup>8</sup>
4. personal selling

Any such promotion will, however, have to be consistent with the ethical rules of the Pharmacy Council.

## Physical distribution

In view of the marketing concept, the location of the pharmacy may be based primarily on customer service (convenience). A pharmacy located as near as possible to a medical centre or a concentration of medical practioners makes it possible for the customer to collect his/her prescribed medicine directly after an examination by a medical practitioner. Because of the relatively larger percentage of prescription medicines being collected from the dispensary, a reduction in the number of deliveries may be accomplished.

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<sup>8</sup> A special event may be a paper presented to a seminar on steroids or medicines which should be avoided by sportsmen; offering free treatment by a beautician for female reporters; free blood pressure measurement days or other diagnostic days.

Delivery is a service offered by virtually all retail pharmacies in South Africa. In order to maintain or increase profitability the pharmacist may have to make a decision about:

1. placing a limit on the areas to which deliveries are made
2. whether customers are to be charged separately for deliveries
3. whether a minimum size or value is required to justify deliveries

The decision to deliver is not taken at the time of opening of the pharmacy only, but also has to be reconsidered when changes to the marketing strategy are made or if certain adverse symptoms appear (for example too many small unprofitable orders have to be delivered).

The mode of transport depends on speed, cost, frequency and dependability considerations. Pharmacies in rural areas may perhaps rely on a bicycle as a mode of transport for deliveries, while pharmacies in cities would have to use motorcycles.

### **Pricing**

Despite the pricing approaches discussed earlier, Mackintosh and Spiers (1980: 93) are of the opinion that most pharmacists follow the recommended retail price approach. Recommended retail prices may be prices recommended by manufacturers, promotional chains or other wholesalers. This approach takes neither the profit margin required to cover overhead expenses and discounts nor the demand and competitive situation into account. A cost analysis and pricing with due cognisance of the purchasing and marketing costs of goods sold are required to achieve a particular return.

#### **4.3.2 The personnel function**

##### **4.3.2.1 Concise overview of the personnel function**

The role of the personnel function is to ensure the development of managerial talent and competent employees, and the effective utilisation of personnel in order to

achieve the long- and short-term objectives of the firm (Pearce & Robinson, 1991: 316). According to Kydd and Oppenheim (1990: 163-166) personnel strategies can effectively enhance a firm's competitiveness.

According to Mayhew (1990: 9), however, business strategy should not be formulated first and then be followed by personnel strategy - rather they should be planned simultaneously.

The personnel function concerns the following aspects (Gerber, Nel & Van Dyk, 1987: 12):

- manpower provisioning
- manpower development
- manpower maintenance<sup>9</sup>

#### **4.3.2.2 Personnel function strategy**

The firm's personnel help create and implement strategies and are a major dimension of the marketing and financial strategy (Davidson, Sweeney & Stampfl, 1988: 572). These authors suggest a management by objectives (MBO) approach to personnel management. The MBO approach focuses on the performance output to be achieved and works backwards to the personnel requirements and activities demanded rather than focusing primarily on the personnel activities and allowing output performance to be a residual. The following are the major components of the MBO approach:

1. A guideline statement of the firm's strategy, including a specification of critical problems and opportunities facing the firm, a forecast of economic conditions for the budget period, and a specification of the mission, objectives and goals.
2. Accountability statements which identify and establish target levels of performance and link each employee's performance with the firm's objectives. In this respect the MBO approach requires that subordinates actively contribute to defining accountability statements and develop their own performance standards and objectives.

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<sup>9</sup> Manpower provisioning, development and maintenance will be explained later.

3. An evaluation form to monitor performance on a continuous basis to ensure the achievement of target results. This takes the form of a face-to-face review of actual performance by an employee and his manager.

Once a full MBO approach is developed and installed, it must be supported by the effective execution of several traditional areas of the personnel management function (Davidson *et al.*, 1988: 553). These traditional areas of personnel management will now be briefly explained.

### **Manpower provisioning**

Manpower provisioning involves job analysis; job description; job specification and manpower forecasting, which has to be done and compiled in a manpower plan.

Firms with formalised personnel activities use job analysis, job description, job specification and manpower forecasting. Job analysis is a study of a job to determine what duties are performed, what responsibilities and organisational relationships are involved and what human traits and characteristics are required (Davidson *et al.*, 1988: 554). Job description refers to a summarised and organised statement containing the name of the job, its duties and responsibilities, as well as hours and wages. Job specification defines the qualifications, skills and characteristics an applicant must have to be selected for the job (Davidson *et al.*, 1988: 555).

Manpower provisioning also involves recruitment, selection, employment and induction in cases in which vacancies arise.

### **Manpower development**

Manpower development involves the training and development of employees in order to improve their competence, especially competence relating to selling skills and product knowledge (Ghosh, 1990: 534).

### **Manpower maintenance**

Manpower maintenance involves the compensation of employees, labour relations and personnel administration (Gerber *et al.*, 1987: 12).

#### 4.3.2.3 Research on personnel function strategy

**Goodall** (1986: abstract) examines the provisions of section 22 of the Pharmacy Act, 1974. Section 22 provides, *inter alia*, that a body corporate carrying on business as a pharmacy must have a pharmacist as managing director of its business and to actually manage the business.

Goodall hypothesises that in a significant proportion of pharmaceutical companies, the pharmacist designated as managing director does not in fact manage the business and therefore that the provisions of section 22 are neither in the public interest nor in the interests of the pharmaceutical profession since they cannot be implemented in practice.

Goodall's study (1986: abstract) revealed that at least 35% of incumbent managing directors do not in fact manage the business of their company. Goodall (1986: 90-92) proposes the abolition of the section 22 requirement and suggests certain principles as a basis for the professional management and control of the pharmaceutical and forensic aspects of pharmaceutical companies.

This study contributed to improved functional management of pharmaceutical companies and retail pharmacies by highlighting the lack of adequately trained personnel for managerial positions. From observation of the tasks of pharmacists, namely the professional and trading tasks, it is evident that the pharmacist has to have multi-disciplinary training and knowledge to be successful. This is of primary importance from a personnel management and, more specifically, from a training point of view.

Because of the purpose of the study, it gave no attention to the evaluation of the functional management of retail pharmacies.

**Van Deventer** (1989: 218) found that retail pharmacists did not have the necessary management training to perform strategic analysis and planning. This has implications for the profitable management of the retail pharmacy and the manpower development aspect of the personnel function strategy.

#### **4.3.2.4 Implications for the profitable management of retail pharmacies**

Retail pharmacies may have the following categories of personnel:

- the pharmacist or locums
- pharmacy interns
- sales personnel
- delivery personnel
- shop attendants, cleaners or a tea woman

The decisions and actions of personnel impact directly on the sales and profitability that are achieved (Davidson *et al.*, 1988: 572). Financial goals cannot be met with poorly trained or financially naive employees. The pharmacist should therefore manage his personnel in such a way that they are an integral part of the sustainable competitive advantage of the pharmacy and contribute to the profitability of the pharmacy.

However, according to Cooke and Armstrong (1990: 30-33), there is no easy way to formulate personnel strategies that are both business driven and recognise that ultimately it is people that implement strategies. To integrate its personnel and global strategies, a firm determines what needs to be done to achieve the mission, manages changes imposed by external and internal environments, capitalises on the distinctive competencies of the firm and adds value through the effective use of resources. According to these authors this will help give an overall sense of purpose to the firm's personnel strategy.

#### **Manpower provisioning**

As far as manpower provision is concerned, the pharmacist may review his current personnel situation and draw up a manpower plan. Pharmacies encountering financial difficulties may reconsider the number of employees. A reduction in the number of employees may reduce salary expenses and contribute to better profitability.

The recruitment and selection of sales people may require pertinent attention. These are the people with whom the customer will have contact upon entering the pharmacy and who may influence the customer's decision to keep on patronising the pharmacy.

### **Manpower development**

As part of the manpower development aspect, the pharmacist may improve his own managerial abilities by undergoing management training. If any serious and chronic management problems crop up, he may use the services of management consultants as a short-term solution. The long-term solution, however, lies in management training. Not all pharmacists can afford the luxury of attending full-time courses and seminars on management. In such cases the pharmacist may consider distance education which gives him the freedom of studying in his own time. Such management training should, ideally, form an integral part of the continued education programmes of pharmaceutical wholesale chains. Pharmacists who notice that their sales people lack marketing skills may be forced to address the problem by means of training and development. Promotional chains<sup>10</sup> may possibly assist their member pharmacies in this respect.

### **Manpower maintenance**

Depending on the needs of employees and the profitability of the pharmacy, indirect financial compensation may be considered, for example profit sharing, pension plans, paid vacations and a medical aid scheme.

The motivation of employees is a matter of leadership<sup>11</sup> and the attitude of the pharmacist towards employees, as well as the extent to which the needs of employees are satisfied. To some employees self-actualisation, recognition for their contribution to the success of the pharmacy or flexible working hours may be more important than remuneration. The pharmacist may get to know the needs and aspirations of his personnel and use this knowledge to motivate them.

The pharmacy is a small business and employees may be managed on a more personal basis than in large, corporate businesses. In this respect labour relations may be positively influenced by effective personal communication on matters concerning the need for co-operation and conflicting interests.

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<sup>10</sup> Plus, Family Circle, Link, etc.

<sup>11</sup> The matter of leadership has also been discussed in section 2.2.4.8

### 4.3.3 The purchasing function

#### 4.3.3.1 Concise overview of the purchasing function

The role of the purchasing function is the procurement of supplies needed by a firm (Van Rooyen & Hugo, 1983: 8). According to Pearson and Gritzmacher (1990: 98-99) a firm's ability to compete successfully requires the integration of a purchasing function into the strategic management process. The need for this integration stems from changes in the supply environment and increased intensity of competition.

The fundamentals of the purchasing function concern the following aspects:

- what to buy?
- how much to buy?
- from whom to buy?
- the conditions of payment

The question as to what to buy is determined by the needs of the firm's customers, as well as its marketing strategy.<sup>12</sup> The focus in this section will therefore be on the three remaining aspects of the purchasing function strategy.

#### 4.3.3.2 Purchasing function strategy

##### 1. How much to buy

According to Duncan and Hollander (1977: 263) the quantity to be purchased depends on four main factors. These factors are:

- the period for which purchasing is done
- estimated sales for the period
- goods on hand plus goods already ordered
- the desired stock at the end of the period

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<sup>12</sup> Marketing strategy has already been discussed and will not be repeated here.



If too small a quantity is purchased, the unit cost increases, shortages and expediting are likely to increase, and the relationship between purchaser and supplier may deteriorate. On the other hand, if too large a quantity is purchased, the unit cost decreases but the cost of carrying the stock increases, cash is tied up in stock, obsolescence may become a problem, and additional storage space may be required (Ghosh, 1990: 376-383).

### **The period for which purchasing is done**

The period for which purchasing is done depends on whether the firm uses hand-to-mouth buying or speculative buying.

Hand-to-mouth buying involves buying in small quantities at regular intervals. The purchasing period may be shortened by hand-to-mouth buying. The benefits of hand-to-mouth buying are rapid turnover, less storage space is required, lower cost of financing stock, and reduced risks associated with long-term commitments (Burstiner, 1986: 470).

Speculative buying may be pursued when rising prices are expected in the future, if sufficient financing is available and if the firm believes that profit will be more than sufficient to offset the opportunity cost of carrying the stock. Speculative buying involves placing large orders, in the hope of reselling the products at higher prices later and thus attaining a larger gross profit margin.

Other factors which influence the period for which purchasing is done are (Duncan & Hollander, 1977: 263-266):

- quantity discounts
- supply conditions
- the firm's storage facilities

### **Estimated sales for the period**

Estimated sales for the period under consideration may be based on historical sales. An analysis of past sales patterns for various product lines may nevertheless provide

valuable inputs for decisions concerning the estimated sales during each month of the year. The estimation of sales takes changes in the competitive situation and business conditions into consideration (Davidson *et al.*, 1988: 368-372).

### **Goods on hand plus goods already ordered**

In deciding on the quantity to be purchased for a given period, current stock levels and orders which have already been placed should also be taken into account. In this respect a computerised system may be used to good advantage as it requires less time and effort than observation or physical stock taking.

### **The desired stock at the end of the period**

The desired stock at the end of the period is influenced by factors such as sales trends, expected price increases, supply conditions, quantity discounts, as well as the amount and cost of financing available.

## **2. From whom to buy**

Retail pharmacists' sources of supply are either pharmaceutical manufacturers or wholesalers.

Some of the criteria for the selection of suppliers are the following (Wingate & Friedlander, 1978: 225):

- suitability of merchandise
- the cost and profitability of merchandise
- support services offered, for example computer-linked ordering facilities and regular daily deliveries
- reliability of the supplier
- financial stability of the supplier
- technical skills and sound management

### 3. The conditions of payment

The firm considers the conditions of payment, the prices of goods to be purchased and discounts which may be obtained. As far as the conditions of payment are concerned, the firm may benefit from the longest possible payment period (Gitman, 1991: 729). This affords the firm low interest or free short-term financing.

Forms of discounts from which the firm may benefit are the following (Hugo & Van Rooyen, 1990: 393-394):

1. Quantity discounts, which are granted for relatively large quantities purchased on any one occasion. Such an opportunity may possibly be best exploited by means of co-operative buying. The utilisation of quantity discounts may take the expected demand for the product into consideration.
2. Trade discounts are granted for marketing activities such as storage, rearrangement and financing carried out by the buyer on behalf of the supplier.
3. Seasonal discounts normally apply to off-season purchases. The opportunity cost associated with such discounts should be carefully considered.
4. Cash discounts normally apply when payments are made within a prescribed period and are granted by suppliers to expedite payment. Prompt payment may not only be financially attractive, but may also enhance the relationship with the supplier.
5. Promotional discounts, consisting of free samples, exhibits, point-of-sale promotional discounts and pamphlets.

#### 4.3.3.3 Research on the purchasing function strategy

Merryweather (1986) compared the services and financial benefits offered to retailers by pharmaceutical wholesalers in South Africa. The study considered, *inter alia*, the question of which wholesaler would best suit a retailer.

The profitable and well-managed pharmacy benefits from being a member of a co-operative wholesaler (Merryweather, 1986: 101). The co-operative wholesaler is wholly owned by retail pharmacies and is a non-profit making company in the sense that all profits are paid back to its retailer shareholders each year. High investment

returns are achieved which are higher than the discounts offered by the non-co-operatives. The service offered by most co-operatives was regarded as superior to that of non-co-operatives.

Merryweather (1986: 102) believes that the pharmacy that cannot pay the wholesaler within 30 days should select a wholesaler on the basis of considerations such as convenience, service and promotional chain preference.

In the case of a new pharmacy, the choice of a wholesaler is more difficult. The opening stock is usually sold to the pharmacy on lenient terms (for example, no interest for 6 months and 12 months to pay) by all of the wholesalers. The pharmacist usually has little capital and discounts offered by South African Druggists and EJ Adcock are tempting when compared with the long-term build up of a loan account in a co-operative.

#### **4.3.3.4 Implications for the profitable management of retail pharmacies**

Pharmacists buying directly from manufacturers eliminate intermediaries and may be able to negotiate lower prices. Manufacturers may, however, require that the pharmacist order larger quantities than if the pharmacist ordered from a wholesaler. In order to overcome the minimum required ordering quantity, pharmacists may either do their purchases in an informal syndicate or formally establish a joint-venture wholesale operation with other retail pharmacies in the area. The joint-venture wholesale operation may be operated on a low or non-profit basis, and even be used to supply dispensing doctors with their requirements.

The retail pharmacist does not have the same bargaining power as doctors in respect of scheduled medicines. The doctor may use his discretion in deciding what medicines to prescribe and may use this effectively to ensure bonussing and/or discounts on scheduled medicines. The pharmacist may, however, negotiate prices of over the counter medicines (OTCs). Discounts on the latter are usually promotional discounts, which are offered to the pharmacist for his willingness to promote sales of a product to the benefit of both the supplier and himself. Discounts may also be offered on co-operative promotions, where promotional expenditure is shared by the supplier and the retail pharmacist. Such discounts relate to, for example, the purchasing and marketing of cosmetics.

The retail pharmacist may apply hand-to-mouth purchasing for medicines if suppliers provide a reliable and regular daily delivery service in his area.

The payment period should, ideally, be as long as possible. Pharmacists normally have to settle their accounts within 30 days. Delivery costs are usually included in the invoice price of goods received. These two aspects of purchasing are not, therefore, negotiable with suppliers.

#### **4.3.4 The financial management function**

##### **4.3.4.1 Concise overview of the financial function**

The role of the financial function is capital acquisition and allocation in order to achieve the objectives of the firm (Pearce & Robinson, 1991: 312).

The main emphasis in the financial management function is on earning profit and on the magnitude and timing of cash inflows and outflows (Hampton, 1989: 2; 262). The retailer may define his profit objective in terms of, *inter alia*, return on assets (ROA). In order to generate a return on assets, the retailer must invest personal capital, loans and trade credit<sup>13</sup> in assets such as store facilities, merchandise inventories, working capital and other types of assets.<sup>14</sup> The combination of these assets together with the retailer's personnel represent the resources that constitute the firm's retail offer or marketing program. If the offer is effective, the store will attract customers, generate sales volume, and produce a net profit, which if retained is reflected in the capital structure of the business in the form of net worth (Davidson *et al.*, 1988: 162).

##### **4.3.4.2 Financial management strategy**

This section on financial management strategy for the retail firm focuses mainly on the management of current assets. According to Walker and Petty (1986: 117) the management of the current assets stock, accounts receivable and cash must be carefully planned and controlled if the firm is to optimise its return on investment.

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<sup>13</sup> The use of capital, loans and trade credit concern the financing decisions of the firm.

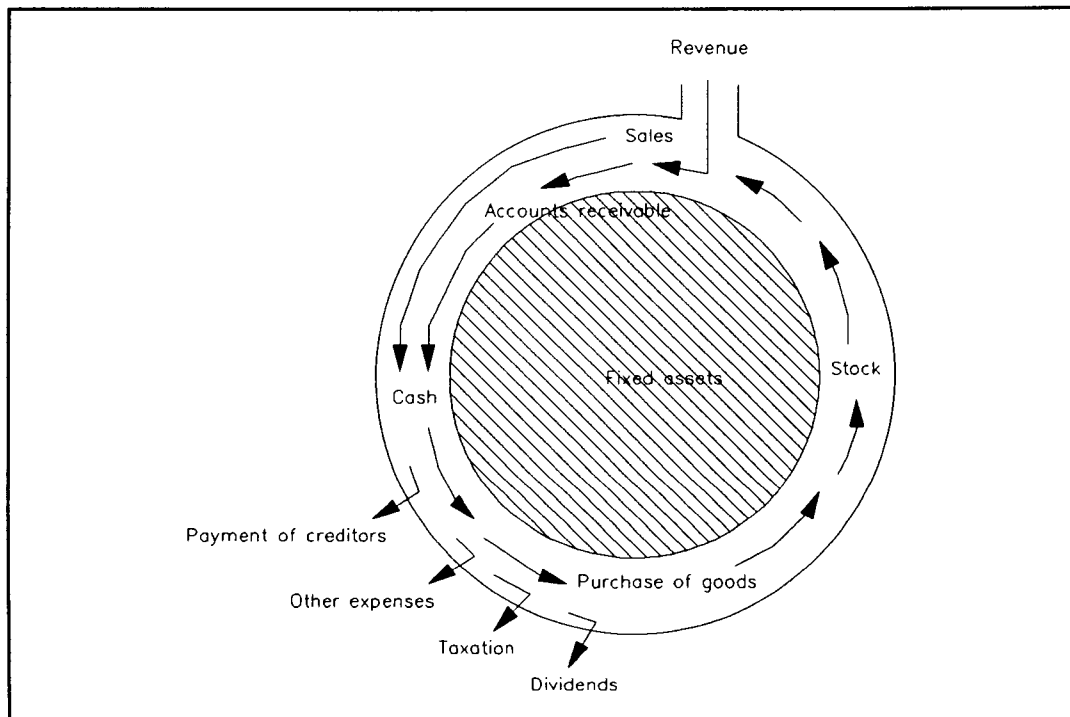
<sup>14</sup> Investment in store facilities, merchandise inventories, working capital and other types of assets are referred to as investment decisions.

Each must be managed efficiently in order to maintain and increase profitability and to maximise the cash flow of the firm. The cash flow of a firm is illustrated by figure 4.1. The following aspects of figure 4.1 will be discussed:

- cash
- stock
- accounts receivable

Cash is the firm's most liquid asset. It provides the ability to pay bills as they become due. Collaterally, this liquid asset provides a pool of funds to cover unexpected outlays, thereby reducing the risk of a liquidity crisis. Since the other major current assets (stock and accounts receivable) will eventually be converted into cash through sales and collections, cash is the common denominator to which all liquid assets may be reduced (Gitman, 1991: 719).

**Figure 4.1**  
**Cash flow**



Source: Own composition

Stock is converted into accounts receivable, and then back into cash. Because of this close relationship between these current assets, stock management and accounts receivable management should not be viewed independently of each other. The decision to extend credit to customers results in an increase in the level of sales, which can be supported only by higher levels of stock and accounts receivable. The credit terms extended will also affect the investment in stock and receivables, since longer credit terms may allow the firm to move items from stock to accounts receivable. The cost of carrying an item in stock is greater than the cost of carrying an account receivable<sup>15</sup> (Gitman, 1991: 776). However, badly managed accounts receivable may give rise to overinvestment in this aspect of the business and losses as a result of bad debts, which in turn may lead to reduced profitability, to illiquidity and ultimately to insolvency.

Cash, stock and accounts receivable may be managed according to the following basic financial management strategies (Gitman, 1991: 728-730):

**\* Stretching accounts payable**

One strategy available to firms is to stretch accounts payable - that is, to pay their bills as late as possible without damaging their credit rating. Although this is a financially attractive strategy, it raises an important ethical issue since it may cause the firm to violate an agreement with a supplier. Clearly, a supplier would not look kindly upon a customer who purposely postpones paying for merchandise or equipment.

**\* Efficient purchasing and stock management**

Another way of minimising required cash is to increase stock turnover. This may be achieved in any of the following ways:

1. The firm may increase its stock turnover through better forecasting of demand and better planning of purchasing to coincide with these forecasts. More efficient control of stock will contribute to a faster stock turnover. Eliminating slow moving stock and replacing it with faster moving stock may improve the cash flow.

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<sup>15</sup> The cost of carrying stock includes, in addition to the required rate of return on invested funds, the costs of storing, insuring, and maintaining the physical stock.

2. With better purchasing planning, scheduling and control techniques, the firm may reduce the length of the purchasing cycle. This will increase the firm's stock turnover.

Regardless of which aspects of the firm's overall stock turnover are adjusted, the result will be a reduction in the amount of operating cash required.

**\* Speeding up the collection of accounts receivable**

Carrying accounts receivable increases operating and overhead costs by adding the expenses of evaluating potential customers (credit screening), the bookkeeping entailed in keeping accounts, sending out statements and collecting payments.

According to Claasen (1992: 8) the collection period of debtors should not exceed the term of payment of creditors. If debtors take 90 days on average to settle their accounts and creditors have to be paid within 60 days, the firm finances debtors from its own funds for 30 days. This may have a negative effect on the liquidity of the firm.

Another way of reducing operating cash requirements is to speed up the collection of accounts receivable (Walker & Petty, 1986: 157). Accounts receivable, just like stock, tie up funds that may be invested in more profitable assets. Accounts receivable are a necessary cost to the firm, since the extension of credit to customers normally allows the firm to achieve higher levels of sales than would be the case if it operated on a cash basis. The actual credit terms extended are dictated by the industry in which the firm operates and are normally related to the nature of the product sold, that is, the way in which it is transported and used.

In industries in which virtually undifferentiated products are sold, credit terms may be a critical factor in sales. In these industries, the firms all match the best credit terms extended in order to maintain their competitive position. In industries in which relatively differentiated types of products are sold, there may be greater variance in credit terms.

The firm's collection period is affected not only by its credit terms but also by its credit and collection policies. Credit policies concern the firm's criteria for determining to whom credit is to be extended, while collection policies determine



what steps the firm will take to collect accounts receivable promptly. Changes in credit terms and policies and collection policies may all be used to decrease the average collection period while maintaining or increasing overall profits. On the whole, the introduction of a cash discount for early payment, the use of more restrictive credit policies, or the introduction of more aggressive collection policies will reduce the average collection period.

The above strategies all have favourable effects on the operating cash requirements of a firm (Gitman, 1990: 517). Firms may therefore use a combination of strategies to reduce their operating cash requirements. The interrelationships of the strategies of a firm also require that they ultimately culminate in a financial plan (Asch, 1991: 106).

#### 4.3.4.3 Research on financial management strategy

**Renou-Rutherford** (1984) investigated how pharmaceutical companies, marketing over the counter ethicals<sup>16</sup> (OTCs) could most efficiently allocate their financial resources to the four key areas of marketing, namely products, promotion, pricing and distribution.

The majority of pharmaceutical companies marketing OTCs promote their products by means of bonuses,<sup>17</sup> customer advertising, or in-store merchandising. Companies marketing unscheduled products are faced with the decision of whether to restrict sales to pharmacies, or to extend distribution to supermarkets. It was found that bonuses could increase the sales of pharmaceutical products effectively if the majority of sales originated from the pharmacist's recommendations. Where sales resulted primarily from customer demand, bonuses lead to adequate in-store display material being used by pharmacists to back up advertising to the customer.

Renou-Rutherford found that television was regarded as the most efficient form of advertising and gondola ends, stands, shelf displays and sump bins as the most efficient merchandising tools.

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16 A schedule 1 or 2 product or over the counter products which may be sold by pharmacies only.

17 Renou-Rutherford (1984: vi) uses the term "deal" as synonymous with bonus or sales incentive.

Bonuses on scheduled products did not result in a price reduction to the customer. Unscheduled products were found to be frequently discounted in order to enable pharmacies to compete on price with supermarkets.

Pharmacists had a negative attitude towards companies that distribute unscheduled medicines to supermarkets. However, where product demand existed, they would not boycott the company.

The contribution of Renou-Rutherford's study to improved functional management of retail pharmacies is the assertion that pharmacists should select products which are offered at discount prices or select suppliers that are prepared to supply promotional material. These considerations affect profitability and stock turnover. These are decisions that have to be made as part of the purchasing and marketing strategies of pharmacies, but they also affect the financial function strategy.

A study<sup>18</sup> on the management of South African retail pharmacies by the **Bureau of Financial Analysis** (BFA) (University of Pretoria, 1983: 81) found that sales of medicine on prescription was higher in pharmacies situated in medical centres (60%) than the average of 39% for all participants. Pharmacies situated in medical centres were also the most profitable, showing a 8,38% profit margin on sales (University of Pretoria, 1983: 44). Because of their high turnover, and their consequent productive utilisation of personnel, total salary and wage costs were the lowest for these pharmacies. In general, pharmacies in suburban areas had the lowest profitability (University of Pretoria, 1983: 85).

In cases where the profit on turnover was negative, the owners' equity represented only 33,48% of capital. With owners' equity representing 63,99%, a profit of 15% on turnover was achieved (University of Pretoria, 1983: 30). This gives an indication of the influence of financial leverage on profitability.

The BFA (University of Pretoria, 1983: 84) found that the average retail pharmacist in the Republic purchases 77% of his supplies from wholesalers, 15% directly from manufacturers and 8% via "buying associations". On average pharmacies obtained

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<sup>18</sup> The Bureau did a similar study in 1987. The population for the 1987 study consisted of pharmacies in Pretoria only.

Approaches to the evaluation of the above-mentioned strategies are also discussed. Approaches which may be used to evaluate strategy include budgets, time-related controls, management by objectives, and management audits. For the purpose of this study it was decided to use management audit criteria. The specific management audit criteria for the evaluation of functional management strategies will be discussed in chapter 5.

## CHAPTER 5

### EVALUATING THE FUNCTIONAL STRATEGIES OF RETAIL PHARMACIES

#### 5.1 INTRODUCTION

The objective of this study is to identify factors which universally and significantly influence the profitability of South African retail pharmacies. In this respect, chapter 3 identified factors which influence the profitability of retail pharmacies, but which are beyond the control of the pharmacist. Chapters 2 and 4 explained factors which influence the profitability of retail pharmacies and which are controllable, namely global, business and functional management strategies.

The purpose of this chapter is to advance criteria which may be used to identify and measure key performance areas in terms of the various functional management strategies.

#### 5.2 CRITERIA FOR THE EVALUATION OF FUNCTIONAL MANAGEMENT STRATEGIES

The functional strategies which will be evaluated are the general management function, and marketing, personnel, purchasing and financial management strategies. The general management function will be covered first, followed by the criteria that may be used to evaluate each of the functional strategies. The discussion will take the following form:

1. Definition of the objective of each functional audit for the purpose of this study.

2. Criteria for evaluating each function will be suggested. These criteria were discussed with managers of promotional chains and individual pharmacy owners. These persons indicated that not all of the suggested criteria could be applied to retail pharmacies without some form of modification.
3. The third part of each section will, therefore, indicate the criteria which have been used in this study. The approach in adopting management audit criteria was to use criteria requiring quantitative responses rather than qualitative responses.<sup>1</sup> The literature on management audits provided mostly criteria requiring qualitative responses. Some of the management audit criteria used in this study consequently had to be developed and subjected to evaluation by retail pharmacists in order to determine their relevancy.

## 5.2.1 THE GENERAL MANAGEMENT FUNCTION AUDIT

### 5.2.1.1 The objective of the general management function audit

Based on research findings<sup>2</sup> which indicate that firms using a strategic management approach achieved relatively higher profitability, a strategic management approach was suggested for South African retail pharmacies.<sup>3</sup> The evaluation of the general management function therefore focused on the extent to which a strategic management approach is planned and implemented.

### 5.2.1.2 Criteria for the evaluation of the general management function

Thierauf (1980: 36-45) suggested, *inter alia*, the following criteria for the evaluation of the general management aspects of a firm:

1. Are objectives stated in specific, measurable terms?
2. Are objectives stated in writing?

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1 Qualitative responses require answers such as a "yes" or "no"; the degree of agreement or disagreement; or the ranking of alternatives according to their importance.

2 These research findings are discussed by Pearce and Robinson (1988: 17-19) and Byars (1987: 6; 8).

3 The suggested strategies for South African retail pharmacies were discussed in chapters 2 and 4.

3. Do objectives include provision for growth and survival?
4. Does the firm have objectives for each functional area?
5. Are strategies compatible with the firm's objectives?
6. Are strategies understood by the firm's personnel?
7. Are specific quantitative standards of cost used as guidelines for measuring future performance?
8. Does the management information system provide timely management information?

### **5.2.1.3 Criteria adopted in this study**

The general management function of retail pharmacies was evaluated by means of the following criteria:

1. whether the pharmacist has defined the mission of his pharmacy
2. whether the mission statement is in writing for his personnel to observe
3. whether long-term goals (for periods longer than a year) have been set for the pharmacy
4. whether short-term goals have been set for the pharmacy (short-term = period shorter than a year)
5. whether an analysis of the strengths and weaknesses of the pharmacy has been conducted
6. whether an analysis of the opportunities and threats to the pharmacy have been conducted

The above criteria were included in the questionnaire used in this study. The intention was to ascertain to what extent pharmacists meet these criteria.

## 5.2.2 THE MARKETING FUNCTION AUDIT

### 5.2.2.1 The objective of the marketing function audit

The objective of the marketing function audit is to evaluate the use of promotion, price and physical distribution to sell the firm's products or services in target markets.

### 5.2.2.2 Criteria for the evaluation of the marketing function

According to Kotler (1988: 744) there are two approaches to evaluating marketing strategies, namely a marketing effectiveness review or a marketing audit.

The marketing effectiveness review reflects the degree to which the business exhibits the five major attributes of a marketing orientation: customer philosophy, integrated marketing organisation, adequate marketing information, strategic orientation, and operational efficiency. Kotler (1988: 745) provides a marketing effectiveness rating instrument that consists of a questionnaire that may be completed by the marketing manager. The appropriate answer is checked for each question. The scores for each of the questions are totalled and compared with the following scale to determine marketing effectiveness:

0-5 = None	16-20 = Good
6-10 = Poor	21-25 = Very good
11-15 = Fair	26-30 = Superior

The marketing audit, on the other hand, starts with a meeting between management and the marketing auditors to work out an agreement on the objectives, coverage, depth, data sources, report format, and the time period of the audit. A detailed plan is prepared to ensure that the auditing time and cost are kept to a minimum. In performing the marketing audit it is not only the business' executive(s) who are asked to provide data and opinions; customers, suppliers, and other outside groups are also consulted.

The marketing audit consists of examining six major components of the business' marketing situation, namely:

1. The marketing environment audit, which analyses major macro-environment forces and trends in the key components of the company's task environment: markets, customers, competitors, distributors, and suppliers.
2. The marketing strategy audit. This audit calls for a review of the company's marketing objectives and marketing strategy to establish how well these are adapted to the current and forecasted environment.
3. The marketing organisation audit, which evaluates the capability of the marketing organisation responsible for implementing the necessary strategy for the forecasted environment.
4. The marketing systems audit, involving the quality of the company's systems analysis, planning and control.
5. The marketing productivity audit, which calls for an examination of the profitability of different marketing entities and the cost effectiveness of different marketing expenditures.
6. The marketing function audit, consisting of evaluations of major marketing mix components, namely products, price, distribution, sales force, advertising, promotion, and publicity (Kotler, 1984: 766).

Given the purpose of this study, both a marketing review and an audit are too comprehensive to undertake. However, a marketing function audit is not beyond the scope of this study. Questions concerning the products, pricing, distribution and promotion were formulated and included in the questionnaire.<sup>4</sup> Potential questions concerning products, pricing, distribution and promotion will now be discussed.

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<sup>4</sup> See part B of the questionnaire (questions 6 to 13). The questionnaire appears in appendix B to the study.



How well products are managed may be measured by means of stock turnover. Other measures are gross profit margin and profit per square metre (Ghosh, 1990: 293). Stock turnover may be calculated for the pharmacy as a whole, for each department within a store, or for each classification of merchandise. Stock turnover is calculated in terms of units or rand or both.

**\* Determining stock turnover by units**

Stock turnover by units is the number of times that the average units of stock on hand have sold out and been replaced during a selling period. Average units of stock on hand means the usual amounts of stock that are kept on hand during the selling period. According to Meyer, Haines and Harris (1982: 300) the rate of stock turnover by units may be computed by:

$$\frac{\text{sales in units}}{\text{average units of stock on hand}}$$

Stock turnover may be used to identify the lines of merchandise that have turned over at a faster or slower rate than the average. Merchandise selling fast may be purchased in greater quantities or more frequently, while better advertising, in-store promotion, display and personal selling may be considered before the prices of slow moving items are reduced (Ghosh, 1990: 400).

**\* Determining stock turnover by rand**

Stock turnover by rand is a measurement of the number of the times during a given period that the retail rand value of the average inventory is sold and replaced (Meyer *et al.*, 1982: 301):

$$\frac{\text{cost of goods sold}}{\text{average rand value of merchandise on hand}}$$

**\* Analysing turnover rates**

The rate of stock turnover for a store or its departments may be compared from one year to the next. Retail pharmacists may also compare rates of

stock turnover with the stock turnover of similar stores. If turnover rates differ significantly, it is necessary to determine reasons for the slower turnover rate.

Stock turnover rates may and do vary. Successful retail pharmacists attempt to achieve the best turnover possible within the merchandising policies they establish. Some stores, for example, carry only a limited line of goods that are best sellers and expect to lose some sales when they do not have everything customers want. This will influence their turnover rate, competitive position and profitability.

In addition to obtaining a desirable stock turnover, retail pharmacists are also concerned about realising maximum profit from utilising available selling space. This will, however, be discussed as part of the financial management function later in this chapter.

Pricing may be assessed by studying the method(s) of pricing applied by the pharmacist. The following methods of pricing have been identified in chapter 4:

1. Percentage mark-up, meaning that the pharmacist prices products by adding a standard mark-up (for example 50%) to the cost thereof.
2. Recommended resale prices, that is, applying prices recommended by manufacturers or wholesalers.
3. Breakeven analysis, which requires that prices be set to break even on the costs of buying and marketing a product, or to make the desired profit.
4. Going-rate pricing. A pharmacist applying this method of pricing bases prices largely on competitors' prices rather than on the pharmacy's costs or on demand.

Another aspect of marketing that may be assessed is physical distribution. Criteria which may be used to evaluate distribution are the following (Thierauf, 1980: 100-103):

1. Is there an effort by distribution management to keep distribution costs under control?
2. Is the organization structured so that a high turnover of inventory may be achieved?

Berman and Evans (1986: 500) suggest, *inter alia*, the use of hours open per week as a criterion for evaluating physical distribution.

Promotion may be assessed by studying the media used for promotion purposes, as well as the amount spent on promotion. Promotion expenditure per person reached by the promotion is another criterion which may be used to evaluate promotion as part of the marketing management function (Kotler, 1984: 770).

### **5.2.2.3 Criteria adopted in this study**

The ranking of turnover rates for the various product lines was used in the questionnaire to evaluate the management of products.

The following criteria concerning pricing have been included in this study, namely whether the pharmacist uses:

- percentage mark-up pricing
- recommended resale prices
- breakeven analysis for pricing purposes
- going-rate pricing

The following criteria concerning distribution have been included in this study:

1. the business hours of the pharmacy (in order to determine total hours open per week)
2. the percentage of sales that accounts for deliveries to clients
3. the distance that has to be travelled to make deliveries to clients

As far as promotion is concerned, the amount spent on promotion by means of advertising in newspapers, sponsorships, radio advertisements or other means was adopted to evaluate the promotion which had been undertaken.

## **5.2.3 THE PURCHASING FUNCTION AUDIT**

### **5.2.3.1 The objective of the purchasing function audit**

The objective of the purchasing function audit is to evaluate the management of the procurement of supplies.

### **5.2.3.2 Criteria for the evaluation of the purchasing function**

The purchasing function audit may be defined as the systematic examination and appraisal of actual performance of the purchasing function with the aid of measures and norms in order to evaluate and improve performance (Van Rooyen & Hugo, 1983: 221).

An objective purchasing function audit is generally not easily attainable for the following reasons:

1. The purchasing function consists of many diverse activities which are performed by various purchasing personnel.
2. It is difficult to express in quantitative terms the actual performance of a number of purchasing activities such as negotiation and the development of supplier relationships. The intangible nature of the purchasing performance introduces a subjective note into the audit of the purchasing function.
3. Closely related to the preceding factor is the difficulty of setting quantitative performance standards for the purchasing function. Most purchasing standards reflect performance but do not represent a direct measurement of purchasing performance itself.
4. Purchasing objectives are seldom of any practical value in evaluating purchasing performance because the diverse nature of purchasing activities compels purchasing management to pursue conflicting objectives.

5. Purchasing performance is inevitably subject to influences from outside the purchasing function and to internal influences. Poor economic conditions, for example, may necessitate lower stock levels. A development of this nature is beyond the control of the purchasing function (Van Rooyen & Hugo, 1983: 222).

The development of the purchasing function audit requires meticulous attention. It requires the setting of performance measures that may serve as yardsticks for the measurement of performance. According to Van Rooyen and Hugo (1983: 228-235) measures must be determined for three evaluation levels, namely purchasing management, purchasing proficiency and purchasing efficiency. Each of these measures which have been formulated by Van Rooyen and Hugo (1983) will now be dealt with.

#### **5.2.3.2.1 Purchasing management**

At the level of purchasing management the evaluation process tries to determine how well the elements of management - planning, organising, directing, co-ordinating and control - are being carried out. Considering that the management process is a complex interaction between all the elements of management, it is difficult to conduct an objective evaluation of purchasing performance at this level. Purchasing management performance is usually evaluated subjectively with the aid of an evaluation sheet or questionnaire based on the elements of management (Van Rooyen & Hugo, 1983: 210).

#### **5.2.3.2.2 Purchasing proficiency**

The object of auditing on the level of purchasing proficiency is to determine how successfully the purchasing function attained its purchasing objectives.

The following measures may be used to evaluate proficiency:

(i) Price proficiency

Price proficiency basically relates to the competitiveness of the prices paid for goods and services. The following basic approaches may be used to evaluate price proficiency:

$$\text{Ratio of price difference} = \frac{\text{actual price}}{\text{planned price}}$$

$$\text{Total price difference} = (\text{actual price} - \text{planned price}) \times \text{quantity purchased}$$

(ii) Supplier performance

Supplier performance is an indirect measure of purchasing performance. Since selecting and developing the supply system is primarily the task of the purchasing function, supplier performance reflects how successfully the latter has attained this basic objective. Supplier performance may be measured by:

$$\text{Ratio of rejection} = \frac{(\text{monetary value of deliveries received} - \text{monetary value of deliveries accepted})}{\text{monetary value of delivery received}}$$

$$\text{Availability} = \frac{\text{number of times when goods were available from the supplier when ordered}}{\text{number of orders placed with supplier}}$$

(iii) Product flow

Product flow indicates how proficient the purchasing function is in achieving a continual and timely flow of products between the supply system and the enterprise. This overlaps somewhat with the previous measurement. The following are examples of measurements that may be used to evaluate product flow:

$$\text{Critical factor} = \frac{\text{number of urgent orders}}{\text{total number of orders placed}}$$

$$\text{Reliability factor} = \frac{\text{number of orders delivered on the date planned}}{\text{total number of orders received}}$$

#### (iv) Competition

Competition as a measure of proficiency provides information on how proficient the purchasing function is in developing and maintaining competition within the supply system. The following may be used as measurements of this aspect:

$$\text{Concentration of purchasing power} = \frac{\text{monetary value of centralised purchasing}}{\text{monetary value of total purchases}}$$

$$\text{Lack of competition} = \frac{\text{monetary value of orders placed with sole supplier}}{\text{monetary value of total purchases}}$$

#### 5.2.3.2.3 Purchasing efficiency

On the level of purchasing efficiency the prime objective is to evaluate how well the available resources (financial and personnel) have been used.

##### (i) Cost savings

Cost savings project an image of how efficiently the purchasing function uses its financial resources. Cost savings have two elements, namely cost reduction and cost avoidance. The following are two ratios that are used in this regard:

$$\text{Cost avoidance ratio} = \frac{\text{actual purchase price} \times \text{quantity purchased}}{\text{lowest price quoted} \times \text{quantity purchased}}$$

$$\text{Cost savings ratio} = \frac{\text{cost savings}}{\text{cost of purchasing department}}$$

**(ii) Workload**

Workload is concerned with how efficiently purchasing management carry out purchasing activities. The following measures may be used:

$$\text{Input ratio} = \frac{\text{number of requisitions received}}{\text{number of orders placed}}$$

$$\text{Purchase ratio} = \frac{\text{monetary value of orders placed}}{\text{number of buyers}}$$

**(iii) Administrative performance**

Administrative performance is directly related to the administrative budget of the purchasing function and is connected with workload as a performance measure. The administrative budget is chiefly concerned with personnel costs such as wages and salaries, travelling allowances, training costs and telephone expenditures. The following measures may be applied in this respect:

$$\text{Purchase cost ratio} = \frac{\text{actual administrative costs}}{\text{monetary value of purchases}}$$

$$\text{Cost per order} = \frac{\text{actual administrative costs}}{\text{number of orders placed}}$$

**5.2.3.3 Criteria adopted in this study**

Retail pharmacists indicated that they could only furnish particulars on two of the above-mentioned criteria, namely:

- the critical factor
- the purchase ratio

Questions relating to these two criteria were therefore adopted in this study.



## 5.2.4 THE PERSONNEL FUNCTION AUDIT

### 5.2.4.1 The objective of the personnel function audit

The objective of the personnel function audit is to evaluate the development and effective utilisation of personnel.

### 5.2.4.2 Criteria for the evaluation of the personnel function

Odiorne (1972) suggested four methods of personnel audit. The first is to copy successful companies' personnel programs<sup>5</sup> and implement them in your own business. A second approach is to have the organisation evaluated by an outside authority, such as a consultant. A third approach is a statistical one, in other words measurement and comparison against averages. However, the problem arises of which averages to use. This approach is criticised for its use of averages as it makes little sense to add all the data of several organisations together and to calculate an average which may be misleading. A fourth approach is the compliance method, in which case the personnel department evaluates the degree of compliance with policies, rules and regulations.

The most frequently used formal evaluation methods are those which examine and analyse organisations' employment statistics (Glueck, 1983: 738). The statistical approach suggested by Odiorne may be much more sophisticated than checklists. The statistics gathered may be compared with the organisation's own past performance or against some other yardstick or measurement. Quantitative factors alone never explain or evaluate anything by themselves. Statistics, by contrast, only indicate where to begin looking for problems and possible explanations of the statistics have to be found to make them meaningful.

Table 5.1 lists some of the ratios that may be used in a personnel audit.

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5 This may be done by preparing a checklist of what an esteemed organisation does, and then applying it to the organisation being evaluated. The checklist requires that the analyst tick "yes" or "no" columns beside listed activities.

**Table 5.1**  
**Personnel audit ratios**

Effectiveness ratios	Ratio of number of employees to total output Sales in rand per employee Output in units per employee hour worked
Accident ratios	Frequency of accident rate Number of lost time accidents Compensation paid per 1000 hours worked Accident by type
Organisation health ratios	Number of grievances filed Number of arbitration awards lost
Turnover and absenteeism ratios	Attendance, tardiness, and overtime comparisons Employee turnover
Employment ratios	Vacations granted as a percentage of employees eligible Sick leave days granted as a percentage of man-days worked Employment distribution (according to position, age, etc.) Average age of workforce

Source: Glueck (1983: 738-739)

#### 5.2.4.3 Criteria adopted in this study

Retail pharmacists indicated that they would be able to respond to the following criteria:

1. the number of people employed
2. absenteeism
3. personnel turnover
4. the number of grievances filed
5. the number of management courses attended by the pharmacist

The above-mentioned criteria were consequently adopted in the study.

## **5.2.5 THE FINANCIAL MANAGEMENT FUNCTION AUDIT**

### **5.2.5.1 The objective of the financial function audit**

The objective of the financial function audit in this study is to evaluate the profitability of the firm.

### **5.2.5.2 Criteria for the evaluation of the financial function**

Similar to the use of ratios in the evaluation of the other functional strategies which have been discussed so far, financial ratio analysis may be used to evaluate the financial management function of a retail pharmacy. Financial analysis involves methods of calculating and interpreting financial ratios in order to evaluate the firm's performance and status (Gitman, 1991: 252). The basic inputs to financial analysis are the firm's income statement and balance sheet for the period(s) to be examined. Financial analysis does not merely involve the application of a formula to financial data in order to calculate a given ratio. More important is the interpretation of the ratios that are calculated. Cross-sectional analysis or time-series analysis may be used to compare and interpret the various ratios (Gitman, 1991; 253-255).

Cross-sectional analysis involves comparing different firms' financial performance at the same point in time. In this way a business determines how well it has performed in relation to its competitors.

Time-series analysis is applied when a financial analyst evaluates performance over time. This allows the business to determine whether it is progressing as planned. Developing trends may be identified by using multi-year comparisons, and a knowledge of these trends may assist the business in planning its future operations.

The cross-sectional and time-series analyses may be used in conjunction, thus permitting the evaluation of trends in the behaviour of ratios in relation to the trend for the industry.

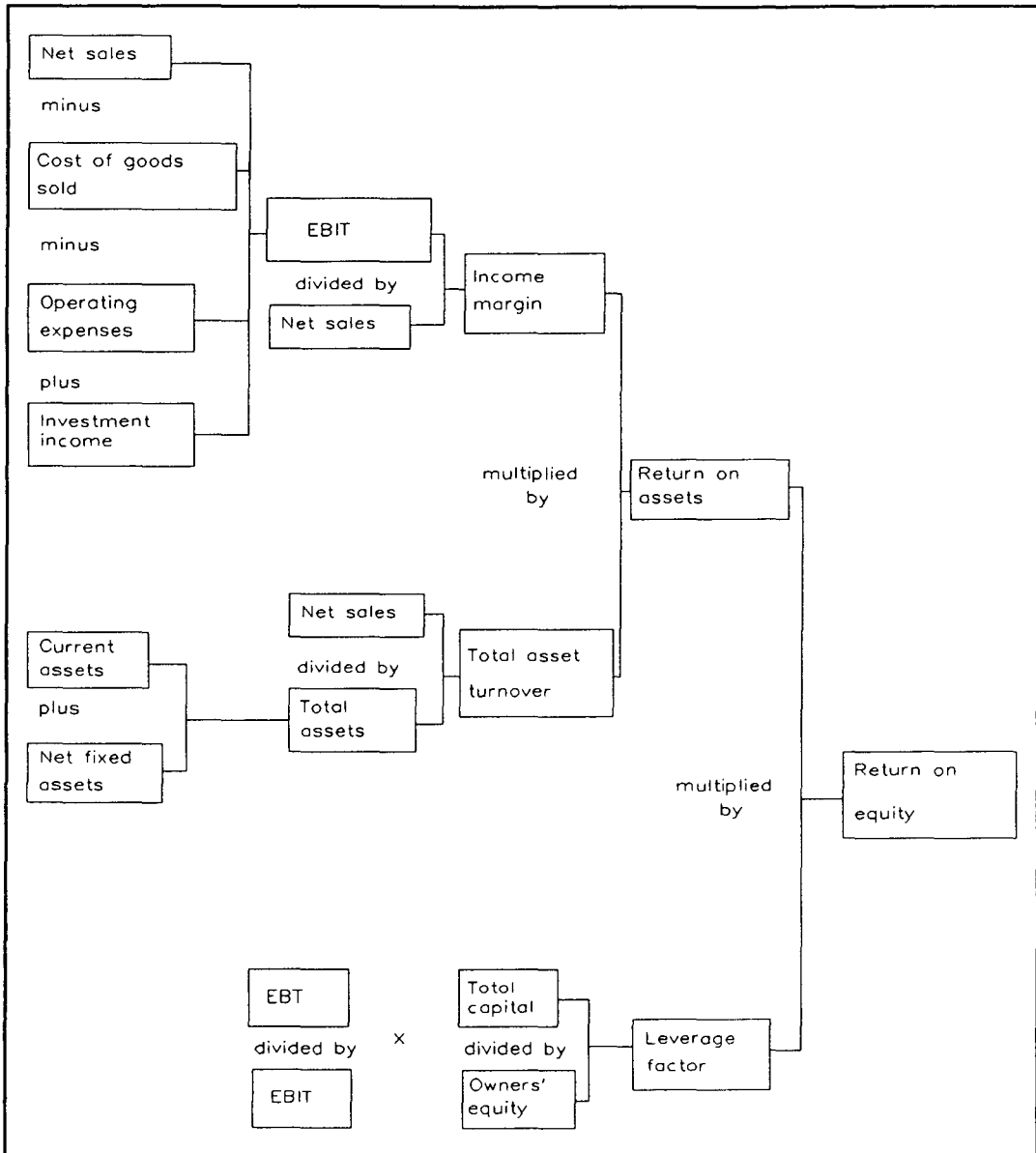
Various financial ratios are calculated to measure the performance of a firm. These include measures of liquidity, activity, solvency and profitability. Since the objective of this study concerns profitability, the DuPont system of analysis is proposed. The remainder of the discussion on the financial function is accordingly devoted to the DuPont system of analysis. It is a system of analysis which provides a structure for dissecting the firm's financial condition by merging the income statement and balance sheet into two summary measures of profitability: return on assets (ROA) and return on equity (ROE). Figure 5.1 explains how the DuPont model operates.

One of the advantages of the DuPont system is that it allows the pharmacy to break its return on equity into a profit-on-sales component (income margin), an efficiency-of-asset-use component (total asset turnover), and a use-of-leverage component (leverage factor).

The DuPont system of analysis provides the net profit margin, the return on assets (ROA) and return on equity (ROE) measures of profitability. Retail pharmacists must also be concerned with realising maximum profit from available selling space. This space is either owned or rented. Such costs as interest on borrowed money, rent payments, and maintenance expenses must be paid from the sales realised from the space available.

Stock turnover is directly related to the profit-per-square-metre calculations. Retail pharmacists may periodically analyse the profit per square metre in relation to the stock turnover of the various lines of merchandise with the objective of realising maximum profit from available selling space. The calculation of profit per square metre provides an indication of how much profit was realised on an item of merchandise from each square metre of selling space it occupied. This calculation helps to determine how much space may be allocated to each item.

**Figure 5.1**  
**The DuPont system of analysis**



Source: Lambrechts (1990: 95-96).

Gross profit per square metre may be calculated by dividing the gross profit of an item - or merchandise line - by the area of selling space for that item. The calculation of profit per square metre may be done as follows (Meyer, Haines & Harris, 1982: 304):

$$\text{Gross profit per square metre} = \frac{\text{gross profit on item or merchandise line}}{\text{square metre of selling space}}$$

To obtain the highest profit from available selling space, retail pharmacists must study each merchandise line to determine which provides the highest, as well as the lowest, profit per square metre. To do this, they calculate the profit per square metre for the fastest- and slowest-moving items. The difference in these profits is called a profitability range.

#### 5.2.5.3 Criteria adopted in this study

For the purpose of this study only figures from the financial statements of retail pharmacists which may be used in DuPont analysis were required. The pharmacist was given the option of attaching the financial statements of his pharmacy for the period 1989/90 to the questionnaire. The required data was then extracted from these financial statements.

### 5.3 SUMMARY

The criteria that may be used for the evaluation of the general management and functional strategies - marketing, personnel, purchasing and financial management - were discussed in this chapter.

The objective of each of the functional strategy audits was defined, potential criteria identified from the literature, and usable criteria adopted to satisfy the purpose of the study.

The questionnaire was constructed on the basis of criteria adopted in the evaluation of the functional management strategies discussed in this chapter. Unfortunately not all the criteria could be included in the questionnaire. In order to ensure an

effective questionnaire only those criteria that are directly related to the overall objective of this research and for which information could be readily be supplied were included.

The following chapter discusses the design and methodology adopted for the collection and analysis of the data required for this study.

## CHAPTER 6

### RESEARCH METHODOLOGY

#### 6.1 INTRODUCTION

Scientific research is a systematic, controlled, empirical and critical investigation of hypothetical propositions about the presumed relations among phenomena (Kerlinger, 1986: 10).

The purpose of this chapter is to describe the scientific research methodology used to analyse the relationship between internal, controllable variables related to functional management strategies and the profitability of South African retail pharmacies. The objective is to identify and analyse these internal, controllable variables which universally and significantly influence the profitability of South African retail pharmacies.

The aspects of research methodology which will receive attention in this chapter are the following:

1. the sources of data consulted for the purpose of this study
2. a description of the population of retail pharmacies and how the sample size was determined
3. the distribution of the questionnaire
4. a comparison of the response with the sample size
5. the processing of the data
6. the approach followed in analysing the data

#### 6.2 SOURCES OF DATA

The sources of data consist of both secondary and primary data.



The secondary data was obtained from a literature study, a review of which have been included in chapters 1 to 4.

Primary data was also used in the study, as explained in chapters 5 to 7. The procedure followed in collecting and analysing the primary data is discussed below.

### **6.2.1 The collection of primary data**

The following methods were considered for the collection of primary data:

- the interview
- the questionnaire
- observation

For the purpose of this study the questionnaire was the most appropriate technique, as will be pointed out in the following section. For a questionnaire to be effective certain prerequisites and practical considerations have to be taken into account.<sup>1</sup> A sound method of sampling and analysis should also be applied to ensure the validity and reliability of a research project.

#### **6.2.1.1 The questionnaire**

A distinction can be drawn between structured and unstructured questionnaires. The unstructured questionnaire enables the respondent to answer the questions in his own words. In the case of the structured questionnaire the questions are formulated in an orderly way prior to the completion thereof, whilst the respondent is merely required to mark the alternative of his choice. It is a short, powerful and useful tool for the collection of data (McCallon & McCray, 1975: 3).

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<sup>1</sup> According to Smith (1981: 237) the effective questionnaire should contain questions that are easily understood by respondents and which will not cause any embarrassment to them. McCallon and McCray (1975: 17) add that unnecessary questions should not be asked and that, depending on the research problem, the objective should be to keep the questionnaire as short as possible. Therefore, not all management audit criteria could be included in the questionnaire which was used in this study.

A structured questionnaire was used for the following reasons:

1. Structured questionnaires are self-explanatory and could be completed relatively faster than an unstructured questionnaire.
2. It is more economical to use a questionnaire than interviews or observations.
3. Relatively few instructions are required.

#### **6.2.1.2 Construction of the questionnaire**

The following steps were followed in the construction of the questionnaire:

1. Based on the secondary sources of data and taking cognisance of the purpose of the study, the data that had to be collected was determined. In this respect the management audit criteria discussed in chapter 5 were used in conjunction with questions on the biographical particulars of the pharmacist and on features of the pharmacy.
2. The questionnaire for this study was tested by having it critically reviewed by the managers of pharmaceutical promotional chains,<sup>2</sup> a management consultant specialising in pharmacy management,<sup>3</sup> as well as the promoter and co-promoter of the study. The questionnaire was also taken personally to eight retail pharmacies for formal testing.<sup>4</sup> The questionnaire was revised after both the informal and formal tests. The pharmacies were visited personally in order to have the draft questionnaire completed and to clarify any misinterpretations. Questions that seemed to pose problems were revised and resubmitted to the next pharmacist. After visiting these eight pharmacies

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2 Plus Promotions (Pty) Ltd, SA Druggists Ltd (Link pharmacies), EJ Adcock Ltd (Family Circle pharmacies).

3 Interview with Dave (JD Management Services CC in Cape Town).

4 These pharmacies were Bronberrick Pharmacy, Loftus Pharmacy, Doornpoort Pharmacy, Hazelwood Pharmacy, Metro Pharmacy, Garsfontein Pharmacy, Strijdom Plein Pharmacy, and Pasteur Building Pharmacy.

it appeared that there were no questions in the questionnaire which posed any problems. The questionnaire was also mailed to two pharmacies,<sup>5</sup> but they did not wish to complete the questionnaire as part of a trial run.

3. The final questionnaire was compiled after editing and translation into Afrikaans.

The questionnaire was printed in the official languages of the Republic of South Africa. An English or Afrikaans questionnaire was sent to pharmacists depending on their language preference. The language preference was determined from the Register of South African Retail Pharmacies. The particulars of all South African retail pharmacies are entered in the register in accordance with their preferred language. The covering letter nevertheless stated that the questionnaire was also available in the alternative language and that it would be sent to the respondent once the researcher was notified of a preference for the alternative language.

#### **6.2.1.3 The layout and contents of the questionnaire**

The layout of the questionnaire was based on to the following seven sections:

- section A - information concerning the pharmacy
- section B - the marketing function
- section C - the personnel function
- section D - the purchasing function
- section E - strategic management
- section F - the financial function
- section G - particulars of the pharmacist

The contents of each of the above-mentioned sections will now be explained.

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5 Berea pharmacy (Pretoria) and Lantern pharmacy (Potchefstroom).

## 1. Section A - information concerning the pharmacy

This section consists of questions aimed at gathering information concerning the location, site, form of business organisation and type of pharmacy. The location, form of business organisation and type of a pharmacy could have a significant influence on the profitability of a pharmacy.<sup>6</sup> The questions and their contents are the following:

### Question 1

- The question determines whether the pharmacy is located in a residential area or a central business district.

### Question 2

- The question determines whether the pharmacy is located in a medical centre, in a shopping centre, among other shops on the street front or isolated from other shops.

### Question 3

Question 3 determines the type of pharmacy. The type of pharmacy could be either Family Circle, Link, Plus, Bonus or an independent pharmacy.<sup>7</sup> Each of these types of pharmacy has their own marketing strategy, which could influence the profitability of member pharmacies. The extent of financing and conditions attached to financing provided by wholesalers (through their respective promotional chains) could also influence the profitability of retail pharmacies.

### Question 4

Question 4 was aimed at determining the form of business organisation of a respondent's pharmacy. The form of business organisation could affect the profitability of a retail pharmacy given the tax system and the costs involved

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6 These aspects correspond with the findings of the Bureau of Financial Analysis (University of Pretoria, 1983: 80-85).

7 See chapter 3, section 3.3.2.

in complying with the regulatory requirements set out in the Close Corporations Act (Act no. 69 of 1984) and the Companies Act (Act no. 61 of 1973) (to which sole proprietorships and partnerships are not subject).

#### Question 5

The question determines whether the pharmacy is located in a metropolitan area, city or town. In this respect all that was required from respondents was to furnish the postal code of the city or town in which they are located.

### **2. Section B - the marketing function**

Aspects of the marketing function strategy, such as products, promotion, pricing, and distribution, are covered by questions 6 to 13.

#### Question 6

Question 6 requires data concerning the trading hours of retail pharmacies. The number of trading hours of a pharmacy is an indication of its level of service to customers. The better the service to customers, the greater the likelihood of increasing sales. However, being open at certain hours may cause under-utilisation of employees and could be costly.

#### Question 7

Question 7 concerns promotion expenditure. As indicated in chapter 3, promotion is effected by advertising in newspapers, sponsorships, publicity, and personal selling in an attempt to attract customers to a pharmacy. Although radio advertisements are neither suitable nor cost-effective for a retail pharmacy, a subsection of question 7 nevertheless required information concerning expenditure (if any) on such advertisements.

#### Question 8

Question 8 requires information on the percentage of sales that accounts for deliveries. Physical distribution of a retail pharmacy concerns decisions

relating to location, deliveries and the mode of transport to be used. Chapter 5 set out criteria that could be used to assess distribution as part of the marketing function.

#### Question 9

Question 9 requires information concerning the number of kilometres travelled per day (on average) to make the pharmacy's deliveries.

#### Question 10

A measure used to assess the productive use of the available floor space of a pharmacy is the gross profit per square metre. Question 10 is aimed at collecting data on the size of the pharmacy.

#### Question 11

As indicated in section 5.2.2 the methods of pricing which a retail pharmacist may use are:

- percentage mark-up
- recommended resale prices
- breakeven analysis
- going-rate pricing or a combination of the above-mentioned

The purpose of question 11 was therefore to determine the pricing methods applied by retail pharmacists.

#### Question 12

Stock turnover is used as a measure of how well products are managed.<sup>8</sup> Question 12 requires that pharmacists rank the various product lines according to stock turnover.

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<sup>8</sup> For a discussion on stock turnover, see section 5.2.2.

### Question 13

One factor that influences the number of customers entering a pharmacy is the number of prescriptions that are brought to the retail pharmacy by patients for dispensing. Question 13 was aimed at collecting data on the average number of prescriptions dispensed per day.

### 3. Section C - the personnel function

#### Questions 14 - 18

The personnel management function is covered by questions 14 to 18. The questions relate to the number of employees, absenteeism, employee turnover and grievances encountered. The rationale for questions 14 to 18 is explained in section 5.2.4. These questions required data on each of the following categories of personnel which may be employed in a retail pharmacy:

- qualified pharmacists
- pharmacy assistants registered with the Pharmacy Council
- pharmacy interns registered with the Pharmacy Council
- sales personnel
- nurses
- administrative personnel
- cleaners
- delivery personnel

### 4. Section D - the purchasing function

Questions 19 to 23 cover the purchasing function. Of all the management audit criteria discussed in section 5.2.3 only the critical factor ratio (number of urgent orders divided by total number of orders) and the purchase ratio (monetary value of orders placed divided by the number of buyers) could be used for retail pharmacists.<sup>9</sup> The said questions therefore concern the number of wholesalers bought from, the number of orders placed, the number of urgent orders placed and the value of purchases.

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<sup>9</sup> This became evident from deliberations with retail pharmacists and pharmaceutical wholesalers when discussing a draft questionnaire.

## **5. Section E - strategic management**

### **Question 24**

Strategic management is used as a heading in the questionnaire. This section relates to the general management function which involves the formulation of a mission, goals and objectives as part of strategic management.

The rationale for including question 24 and its subsections can be found in section 5.2.1.

## **6. Section F - the financial function**

### **Question 25**

A factor which could have a negative influence on the profitability of retail pharmacies is the discount allowed to medical schemes. Question 25 requires the pharmacist to indicate the percentage discount allowed to medical schemes.

### **Questions 26 and 27**

In order to measure the financial performance of pharmacies, information is required from their financial statements. Due to the sensitivity of the information that the pharmacist has to provide here, this section was positioned as far back in the questionnaire as possible. Respondents could either staple a photocopy of their 1989/90 income statement and balance sheet to the questionnaire, or alternatively answer questions 26 and 27.

The data collected by means of questions 26 and 27 is required to perform a DuPont analysis as discussed in section 5.2.5.

## **7. Section G - particulars of the pharmacist**

### **Questions 28 - 31**

The particulars of the pharmacist were recorded by means of the above-mentioned questions in section G, and concerned the age, gender,



years of experience as a retail pharmacist, and the number of management courses attended. Each of the variables recorded by the biographical particulars could have an influence on the way in which the retail pharmacy is managed, and ultimately on the profitability of the retail pharmacy.

Questions concerning biographical particulars were distributed between sections A and G to ensure that those in section A were easy to answer without creating the impression that the remainder of the questionnaire might contain personal, sensitive or monotonous questions. This approach was adopted to prevent respondents becoming bored or developing a resistance to the questionnaire.

Although a quantitative approach to the questionnaire was used as far as possible, certain aspects regarding the management of a pharmacy could not be measured in quantitative terms and were measured by statements to which the pharmacist had to respond by merely ticking "yes", "no" or in some cases "not applicable".<sup>10</sup>

The questionnaire was sent to retail pharmacists along with a personalised covering letter, which explained the purpose of the study. An example of the covering letter appears in appendix C of the research report.

## **6.3 THE POPULATION AND SAMPLE SIZE**

### **6.3.1 The population**

At the time of selecting a sample, the population of this study, namely retail pharmacies in the Republic of South Africa, numbered 2 775. These retail pharmacies were distributed as follows:

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<sup>10</sup> See question 24 of the questionnaire for example.

**Table 6.1**  
**Distribution of pharmacies in South Africa according to promotional chain and province**

Province	Bonus	Family Circle	Link	Plus	Other	Total
Transvaal	0	126	218	424	674	1 442
Natal	0	39	72	184	116	411
Cape Province	182	37	194	71	242	726
Orange Free State	0	22	13	56	85	176
Total	182	224	497	735	1 117	2 755

### 6.3.2 The sample size

Sample size can be mathematically calculated. Assuming a confidence interval of 95% the sample size can be determined by the following equation (Greenacre, 1989):

$$n = \frac{N}{1 + 0.0025N} \quad \text{equation 6.1}$$

where:

n = sample size

N = total population

Since the total population of retail pharmacies in South Africa totalled 2 755 at the time of selecting a sample, the sample size would have been 349 using equation 6.1 and calculated as follows:

$$\begin{aligned} n &= \frac{2\,755}{1 + (0.0025 \times 2\,755)} \\ &= \frac{2\,755}{7.8875} \\ &= 349 \end{aligned}$$

However, Stoker (1987) concluded that in the final analysis sample size is dictated by practical considerations such as financial considerations and the manageability of a certain sample size. In view of these practical considerations a sample size of 800 was decided upon.

Since a sample of 800 retail pharmacies was selected, the confidence interval increased from 95% to 97%. In order to assure that the sample would be representative of all retail pharmacies in South Africa, a stratified random sample according to the area<sup>11</sup> and type of pharmacy<sup>12</sup> was selected. The sample sizes for each of the provinces, the metropolitan areas, cities and rural towns were calculated consecutively using a Lotus 1-2-3 spreadsheet. The objective of representativeness meant that a proportional number of retail pharmacies for each province, metropolitan area, city and town in South Africa as well as each type of pharmacy had to be included in the sample.

**Table 6.2**  
**Proportional sample sizes according to promotional chain**  
**and for the various provinces**

Province	Bonus	Family Circle	Link	Plus	Other	Total
Transvaal	0	37	63	123	196	419
Natal	0	11	21	53	34	119
Cape Province	53	11	56	21	70	211
Orange Free State	0	6	4	16	25	51
Total	53	65	144	213	325	800

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11 Area here means province and whether the pharmacy is located in a metropolitan area, city or town.

12 Bonus, Family Circle, Link, Plus pharmacy or other.

The proportional sample sizes of pharmacies situated in metropolitan areas were consequently calculated to be as follows:

**Table 6.3**  
**Stratified sample sizes according to promotional chain**  
**and for the various metropolitan areas**

Metropolitan area	Bonus	Family Circle	Link	Plus	Other	Total
Johannesburg	0	7	14	29	49	99
Pretoria	0	2	5	19	47	73
Cape Town	0	4	12	9	28	53
Durban	0	3	6	19	12	40
Total	0	16	37	76	136	265

The proportional sample size of pharmacies for other cities was calculated to be as follows:

**Table 6.4**  
**Stratified sample sizes according to promotional chain**  
**and for various other cities**

City	Bonus	Family Circle	Link	Plus	Other	Total
Germiston	0	1	1	5	4	11
Belville	0	1	3	0	4	8
Kimberley	0	0	2	1	3	6
East London	3	0	4	0	2	9
Port Elizabeth	25	0	1	0	2	28
Pietermaritzburg	0	1	3	6	3	13
Bloemfontein	0	0	1	3	10	14
Welkom	0	3	0	2	3	8
Total	28	6	15	17	31	97

The sample of pharmacies for rural towns in the various provinces was selected in the following proportions:

**Table 6.5**  
**Stratified sample sizes according to promotional chain**  
**and for various rural towns**

Province	Bonus	Family Circle	Link	Plus	Other	Total
Transvaal	0	27	44	70	97	238
Natal	0	7	13	28	18	66
Cape Province	25	6	33	11	30	105
Orange Free State	0	3	3	11	12	29
Total	25	43	93	120	157	438

In order to decide which specific pharmacies should be included in the sample, a statistical twenty-sided dice was used.<sup>13</sup>

#### 6.4 DISTRIBUTION OF THE QUESTIONNAIRE

The questionnaire was distributed in two phases, namely:

- notification concerning the forthcoming questionnaire
- the actual distribution of the questionnaire

##### 6.4.1 Notification concerning the forthcoming questionnaire

The co-operation of the South African Pharmaceutical Society was obtained to promote the research project among pharmacists. An article was published in the October 1990 issue of the *South African Pharmaceutical Journal*, briefly setting out the purpose and method of the study.

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<sup>13</sup> A table containing random numbers could also have been used for this purpose.

#### 6.4.2 Distribution of the questionnaire

Retail pharmacies which were selected from the population and included in the sample were notified of their inclusion by means of a personalised letter. The personalised letter<sup>14</sup> was sent to the sample population two weeks before the questionnaire was mailed to them. This letter informed the pharmacist that he had been selected to participate in the research project. He was assured that he could withdraw if he so wished. If no reply was received from the pharmacist it was assumed that he was prepared to participate and the questionnaire was mailed to him. If a pharmacist indicated that he did not wish to participate in the research project, a replacement was randomly selected from the same strata from which the initial respondent had been selected.

The questionnaire was distributed to the 800 retail pharmacies included in the sample. The questionnaire was mailed along with a covering letter,<sup>15</sup> two prepaid envelopes and a confirmation slip. The covering letter requested the co-operation of the pharmacist and included instructions for the completion of the questionnaire. An undertaking was also given that all respondents would receive a copy of the most important findings. The confirmation slip stated that the pharmacist had completed and returned the questionnaire.

The pharmacist returned the questionnaire in one envelope, while the confirmation slip was mailed separately in the other envelope. This was done in order to ensure anonymity and confidentiality.

In an attempt to ensure the highest possible response rate, a follow-up letter<sup>16</sup> was sent to non-respondents two weeks after the questionnaire had been mailed to them, urging them to complete and return their questionnaires.

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14 An example of the personalised letter is provided in appendix C.

15 An example of the covering letter is provided in appendix D.

16 An example of the follow-up letter is provided in appendix E.

## 6.5 THE RESPONSE

The questionnaire was sent to a sample of 800 retail pharmacies. The respondents numbered 258, representing a response rate of 32,25%. This compares favourably with a response rate of 27,55% achieved by the Bureau of Financial Analysis (University of Pretoria, 1983: 75). The South African Pharmaceutical Society achieved a 10% response rate on a questionnaire which was sent to retail pharmacies six months prior to the distribution of the questionnaire involved in this study.

The sample realisation is tabulated in table 6.6. The respondents were not proportionate to the sample originally selected. In order to correct this situation, weighting was used. The weights used in this study are reported along with the sample realisation (responses).

**Table 6.6**

**Calculation of weights based on the ratio of the sample versus responses**

Province (1)	Type of pharmacy (2)	Area (3)	Sample (4)	Responses (5)	Weight (4)/(5)
Transvaal	Family Circle	Metro's & cities	10	4	2,5
		Towns	27	13	2,0769
	Link	Metro's & cities	20	6	3,3333
		Towns	44	13	3,3846
	Plus	Metro's & cities	53	9	5,8888
		Towns	70	26	2,69
	Other	Metro's & cities	99	29	3,4137
		Towns	98	27	3,6296
Natal	Family Circle	Metro's, cities & towns	11	3	3,6666
	Link	Metro's & cities	8	2	4
		Towns	14	6	2,3333
	Plus	Metro's & cities	25	10	2,5
		Towns	28	14	2
	Other	Metro's & cities	15	7	2,1429
		Towns	19	4	4,75

Table 6.6 (continued)

Calculation of weights based on the ratio of the sample versus responses

Province (1)	Type of pharmacy (2)	Area (3)	Sample (4)	Responses (5)	Weight (4)/(5)
Cape Province	Bonus	Metro's & cities	27	13	2,0769
		Towns	25	8	3,125
	Family Circle	Metro's, cities & towns	11	4	2,75
	Link	Metro's & cities	21	5	4,2
		Towns	33	11	3
	Plus	Metro's & cities	10	4	2,5
		Towns	11	5	2,2
	Other	Metro's	28	7	4
		Cities	11	3	3,6666
		Towns	31	7	4,4286
OFS	Family Circle	Cities	3	3	*
		Towns	3	1	*
	Link	Cities	1	0	*
		Towns	3	0	*
	Plus	Cities	5	1	*
		Towns	11	6	*
	Other	Cities	13	4	*
		Towns	12	3	*
Total			800	258	-
% of total			100	32	-

\* The weights for respondents from the Orange Free State were calculated as follows:

$$\text{Cities} = \frac{3 + 1 + 5 + 13}{3 + 0 + 1 + 4} = \frac{22}{8} = 2,75$$

$$\text{Towns} = \frac{3 + 3 + 11 + 12}{1 + 0 + 6 + 3} = \frac{29}{10} = 2,9$$



## **6.6 PROCESSING OF THE DATA**

Before the data was captured in a data file each questionnaire was provided with a record number<sup>17</sup> to allow for cross-referencing between questionnaire and the computerised data file.

Since a structured questionnaire was used, each alternative to a question was assigned a number. The number of the alternative selected by the respondent was read into the data file so that it corresponded with the question number of that record number. Open-ended questions were codified after the responses had been analysed and categorised.

The Statistical Analysis System (SAS) was used to analyse the data. SAS offers a wide variety of procedures which can be used to analyse data. However, for the purpose of this study a procedure was required which could evaluate the relationship or association of one or more independent variables to or with a single continuous dependent variable.

## **6.7 ANALYSIS OF THE DATA**

The questionnaire generated data which could be used in multivariate analysis. Multivariate analysis involves the analysis of numerous observations or variables which have been obtained for each individual or unit studied. Several statistical techniques are available for multivariate analysis (Afifi & Clark, 1984: 74). These techniques are summarised according to Stevens' classification in table 6.7.

### **6.7.1 Data analysis techniques**

The choice of any particular technique depends on the objective of the study, and the nature and number of variables.

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17 Space was provided for the record number on the last page of the questionnaire.

**Table 6.7**  
**Suggested data analysis under Stevens' classification**

Dependent variable	Independent variable			
	Nominal or ordinal		Interval or ratio	
	1 variable	>1 variable	1 variable	>1 variable
No dependent variable	$\chi^2$ goodness of fit	Measures of association Log-linear model $\chi^2$ test of independence	Univariate statistics Descriptive measures Outliers Tests for normality Transformation Independence	Correlation matrix Principal components Factor analysis Cluster analysis
Nominal or ordinal 1 variable	$\chi^2$ test Fisher's exact test	Log-linear model Logistic regression	Discriminant function Logistic regression Univariate statistics	Discriminant function Logistic regression
>1 variable	Log-linear model	Log-linear model	Discriminant function	Discriminant function
Interval or ratio 1 variable	t test Analysis of variance	Analysis of variance Multiple-classification analysis	Linear regression Nonlinear regression Correlation	Multiple regression Nonlinear regression
>1 variable	Multivariate analysis of variance Analysis of variance on principal components Hotelling's $T^2$ Profile analysis	Multivariate analysis of variance Analysis of variance on principal components	Canonical correlation	Canonical correlation Path analysis Structural models

Source: Afifi and Clark (1984: 74)

### **6.7.2 The use of multiple regression analysis in this study**

The overall objective of the study is to identify and evaluate variables which universally and significantly influence the profitability of South African retail pharmacies. From the overall objective, two research hypotheses were derived. The first research hypothesis was examined in chapters 2 to 4 of the study. The second research hypothesis stated that internal, controllable variables related to functional management strategies influence the profitability of South African retail pharmacies. This implies a relationship between several ratios or interval independent variables and a single ratio or interval dependent variable - the profitability of South African retail pharmacies. The management audit criteria represent the independent variables and profitability the dependent variables.

The dependent variable - profitability - can be measured by one of the following:

- gross profit margin
- gross profit per square metre
- net profit margin
- return on assets (ROA)

Given the objective of and the nature and number of variables involved in this study, it was decided to use multiple regression analysis to analyse the data. Multiple regression analysis is a statistical tool for evaluating the relationship or association of one or more independent variables to or with a single continuous dependent variable by means of a mathematical model (Kleinbaum & Kupper, 1978: 34). Models built by means of this technique not only describe relationships, but can also be used for predictive purposes. The independent variables are therefore also known as predictors or explanatory variables. In this study the emphasis is on the determination of associations, so that the independent variables included in the models are used for explanatory rather than predictive purposes.

The general format of a multiple regression model is as follows:

$$Y_i = b_0 + b_1X_1 + b_2X_2 + \dots + b_kX_n + e_i \quad \text{equation 6.2}$$

where:

- Y = dependent variable
- $b_0$  = intercept or constant term
- $b_i$  = regression coefficient for variable  $X_i$
- $X_1, X_2, \dots, X_k$  = independent variables
- $i = 1, 2, \dots, n$
- $n$  = number of observations
- $e$  = residual

If  $x_1, \dots, x_k$  represent the observed values of  $X_1, X_2, \dots, X_k$ , then the predicted value  $\hat{Y}$  of  $Y$  applies so that:

$$\hat{Y} = b_0 + b_1x_1 + \dots + b_kx_n \quad \text{equation 6.3}$$

The principal difference between multiple regression and simple regression is that simple regression can be plotted in a two-dimensional space, whereas a multiple regression model forms a hyperplane through multidimensional space. Each regression coefficient represents a slope and it is not possible to visually present the multiple regression model if there are more than two independent variables.

The value of the coefficient of determination ( $R^2$ ) may be increased by adding more explanatory variables to the regression model. However, not all explanatory variables statistically contribute significantly to the explanation of the variation in the dependent variable  $Y$ . In building a regression model, the number of explanatory variables should be limited to those that explain the variation in  $Y$  the best.

The regression coefficients or parameters of each of the models discussed in this study were estimated by means of the regression procedure (REG) of the Statistical Analysis Software (SAS) programme. Explanatory variables for inclusion in a final model were selected objectively after repeatedly performing the general linear model (GLM) and REG procedures of SAS.

Residual analysis can be performed to determine the aptness of each of the models. Aptness here refers to the degree to which the model satisfies the assumptions of regression analysis, namely that:

1. The residuals are independent.
2. The mean of the residuals is zero and the variance of the residuals is constant over the range of the independent variables.
3. The residuals are normally distributed.

The residual ( $Y - \hat{Y}$ ) is the difference between the actual value of the dependent variable and the value predicted by the regression model. A residual value can be computed for each observation in the data set. The principal means of residual analysis is studying the residual plots.<sup>18</sup> Possible outliers in the data set can also be identified by means of residual analysis.

Not all of the independent variables were continuous variables. This does not create any problems when using the GLM procedure of SAS, because this procedure uses the CLASS statement to convert categorical variables into so-called "dummy" or "indicator" variables. A dummy variable is any variable in a regression equation that takes on a finite number of values for the purpose of identifying different categories of a categorical variable. The term "dummy" simply relates to the values taken on by such variables<sup>19</sup> and describes no meaningful measurement level of the variable, but rather acts only to designate the categories of interest.

When applying the REG procedure, dummy variables must be defined for the categorical independent variables. The rule for defining dummy variables is as follows (Kleinbaum & Kupper, 1978: 189):

If the categorical independent variable of interest has  $k$  categories, then one must define  $k-1$  dummy variables to index these categories, provided that the regression model contains a constant term (an intercept).

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<sup>18</sup> The residual analysis was done graphically by means of the REG and PLOT procedures of SAS.

<sup>19</sup> Usually values like 0, 1 and -1.

The continuous variables were initially explored by means of the UNIVARIATE procedure of SAS, and the categorical variables by means of the FREQ procedure before the construction of the regression model was embarked upon. The UNIVARIATE analysis provided, *inter alia*, the mean, first and third quartiles, as well as the ranges (the difference between the minimum and maximum levels) of the continuous independent variables. These ranges were needed to calculate indexes of the variables included in the final regression models.

The following approach was then followed throughout to construct the regression models:

1. A first run was done with GLM and REG with all the independent variables included in the models.
2. From the printout obtained with the first run, independent variables with a exceedence probability smaller than 20 percent ( $P < 0,20$ ) were selected for inclusion in a next run. These variables contribute significantly (on a 20% exceedence probability) to the variation in the dependent variable.
3. After the second run, only independent variables with a exceedence probability smaller than 5% ( $P < 0,05$ ) were selected for inclusion in a third run of the model, to provide the final model.

The above approach was adopted to allow for one of the traits of multiple regression analysis, namely that the contribution of a variable to a model is influenced by the other variables which are simultaneously included in the model. The two runs served as a selection process in order to find the best model possible.

The regression coefficients of the final regression model indicate the strength of an association of an independent variable with a dependent variable. Since the model was constructed for explanatory purposes, it does not have as high a coefficient of determination ( $R^2$ ) as would have been the case if the model had been constructed for prediction purposes.

The significance of the linear relationship between the dependent variable ( $Y$ ) and the set of explanatory independent variables ( $X_1, \dots, X_k$ ) is measured by the multiple coefficient of determination,  $R^2$ . In other words,  $R^2$  is the proportion of the variation in the dependent variable  $Y$  that is explained by the explanatory variables  $X_1, X_2, \dots, X_k$  in a multiple linear regression.

In multiple regression analysis, the adjusted coefficient of variation ( $\text{adj } R^2$ ) takes into account the relationship between the number of cases and the number of independent variables in the regression model. Whereas  $R^2$  will increase when an independent variable is added, the  $\text{adj } R^2$  will decrease if the added variable does not sufficiently reduce the unexplained variation to offset the loss of degrees of freedom.

## 6.8 SUMMARY

The purpose of this chapter was to describe the research methodology used to analyse the relationship between internal, controllable variables related to functional management strategies and the profitability of South African retail pharmacies.

The aspects of research methodology which were examined were the following:

1. The secondary and primary sources of data consulted for the purpose of this study.

The secondary data was obtained from a literature study and recorded in chapters 1 to 4 of this study. These chapters focused on the ways in which the primary data was collected and analysed.

2. A description of the population of retail pharmacies and how the sample size was determined.

A stratified random sample consisting of 800 retail pharmacies were selected according to the area and type of pharmacy from the population of 2 775 retail pharmacies which existed at the time of the study.

3. Distribution of the questionnaire.

Respondents were notified of the forthcoming questionnaire by means of an article in the *South African Pharmaceutical Journal* (the official magazine of the South African Pharmaceutical Society) and a letter which was sent out two weeks in advance of the questionnaire.

The questionnaire was then mailed to the sample of retail pharmacies to collect data on their current functional management strategies and financial performance. In order to maximise the response rate to the questionnaire, a follow-up letter was sent to non-respondents two weeks after the questionnaire had been dispatched.

4. A comparison of the response with the sample size.

In order to determine whether weights had to be used, the response was compared with the sample. The respondents were not proportionate to the sample originally selected. In order to correct this situation, weighting was used. The weights used in this study were reported in table 6.6 along with the sample and sample realisation (responses).

5. The processing of the data.

Taking cognisance of the suggested ways of data analysis under Stevens' classification and considering the objective of the study, the nature and number of variables involved in this study, it was decided to use multiple regression analysis to analyse the data. Multiple regression analysis evaluates the relationship or association of one or more independent variables to or with a single continuous dependent variable.

6. The approach followed in analysing the data.

The data was explored by means of the UNIVARIATE and FREQ procedures of the SAS system. General linear models were constructed using the GLM and REG procedures, after which variables were selected for inclusion in multiple regression models.

Chapter 7 will describe the statistical analysis and the results emanating from the analysis.



## CHAPTER 7

### STATISTICAL ANALYSIS AND DISCUSSION OF THE RESULTS

#### 7.1 INTRODUCTION

The overall objective of the study is to assess the functional management strategies of retail pharmacies in South Africa with a view to identify and evaluate variables which universally and significantly affect their profitability. Two research hypotheses were formulated in chapter 1. These are:

1. The profitability of South African retail pharmacies is influenced by both external, uncontrollable variables and internal, controllable variables.
2. There are particular internal and controllable variables related to functional management strategies which universally and significantly influence the profitability of South African retail pharmacies.

The first hypothesis was addressed in chapters 2, 3 and 4. Chapter 2 studied various strategic management models and developed a strategic management model for South African retail pharmacies. The strategic management models provide a broad strategic management approach to the management of a firm, in this case a retail pharmacy. A strategic management approach is an internal, controllable variable which a retail pharmacist may use to positively influence the profitability of his pharmacy. The strategic management model for retail pharmacies required that a distinction be made between external, uncontrollable variables and internal, controllable variables which may influence the profitability of retail pharmacies. Consequently, chapter 3 studied the external, uncontrollable variables which universally affect the profitability of South African retail pharmacies. The emphasis was on variables emanating from groups and organisations associated with the distribution channel for pharmaceuticals. Chapter 4 studied internal, controllable variables of retail pharmacy other than the broad strategic management approach, namely functional management strategies.

This chapter focuses on an empirical study of functional strategies as internal, controllable variables which influence the profitability of South African retail pharmacies. To achieve this the data must be statistically analysed and the results of the statistical analysis discussed. The purpose of chapter 7 is therefore to:

1. explore the data obtained by means of the questionnaire
2. study the results of multiple regression models and to offer possible explanations for the findings of these models, which were constructed to assess the relationship between internal, controllable variables and the profitability of retail pharmacies

The exploration of the data consists of a study of features of the respondents and the construction of exploratory multiple regression models. Features of respondents could assist in interpreting the results of the multiple regression models. This exploration of the data is followed by a description of the results of (exploratory) multiple regression models.

The exploratory multiple regression models were developed with the objective of determining relationships between internal, controllable aspects of the respective functional areas<sup>1</sup> and the measures of profitability.<sup>2</sup>

Comprehensive models were also constructed. The comprehensive models study concurrently the relationship between internal, controllable aspects of the functional areas and the measures of profitability. The results of these comprehensive multiple regression models will also be discussed.

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1 These functional areas are marketing, personnel, purchasing and financial management. The exploratory models for the functional areas were preceded by the development of a multiple regression model for general management.

2 The measures of profitability used in this study are gross profit margin, gross profit per square metre, net profit margin and return on assets (ROA). See figure 5.1 and section 5.2.5.

## **7.2 FEATURES OF THE RESPONDENTS**

Details of features of the respondents' pharmacies were obtained from questions 1 to 5 of section A of the questionnaire. Pharmacists' biographical details were obtained from questions 28 to 31 of section G of the questionnaire.<sup>3</sup>

### **7.2.1 Features of the respondents' pharmacies**

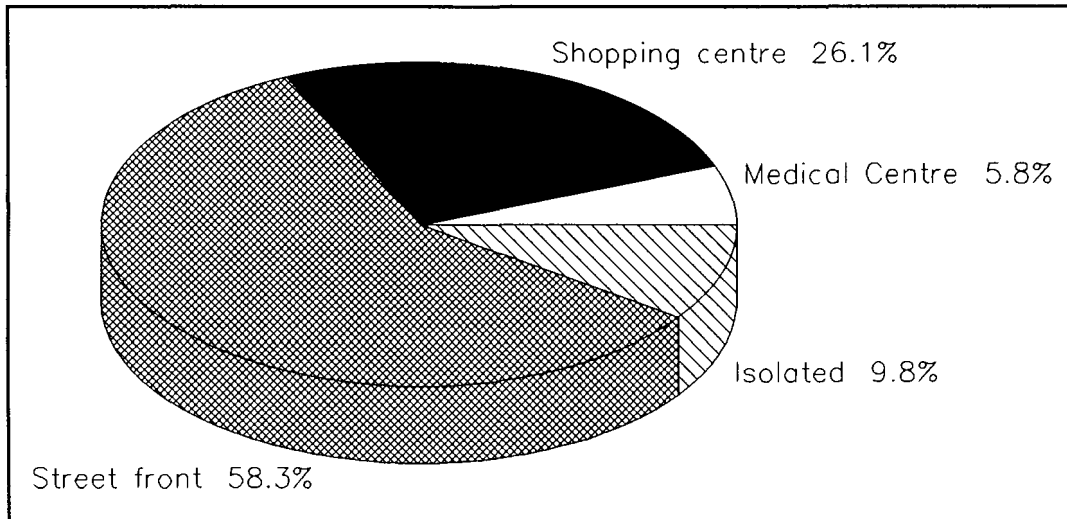
Question 1 of the questionnaire concerned location in either the central business district or in a residential area. In this respect 53,1% of the respondents were located in central business districts and 46,9% in residential areas.

The premises in which the respondents' pharmacies are situated were determined by means of question 2 of the questionnaire. Of the respondents 58,3% of the respondents' pharmacies are located on the street front and 26,1% are situated in shopping centres. Only 5,8% of the respondents' pharmacies are located in medical centres.

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<sup>3</sup> The questionnaire is included in appendix B of this thesis.

**Figure 7.1**  
**The location of respondents' pharmacies**



Retail pharmacists may be members of promotional chains such as Family Circle, Link, Plus or Bonus, or they may manage their pharmacies as independent enterprises. Question 3 required respondents to indicate the promotional chain with which they are associated or whether they managed independent pharmacies.

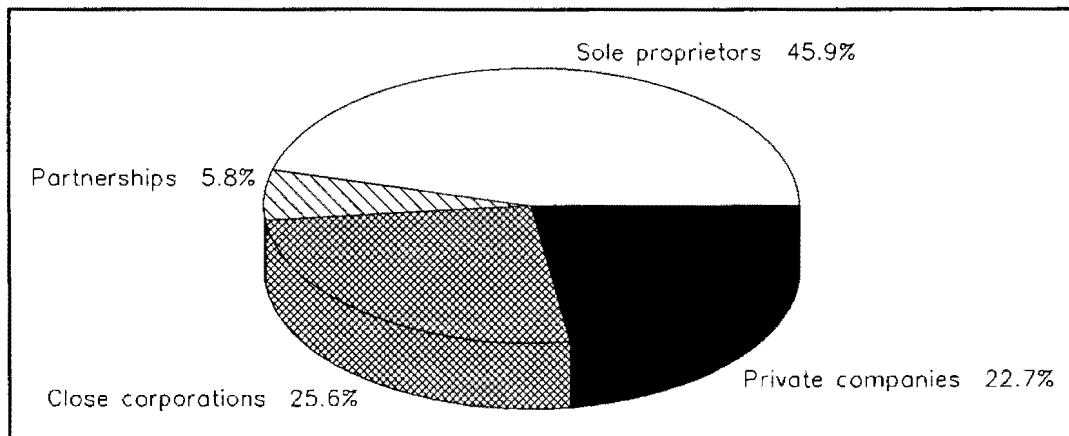
**Table 7.1**  
**Association of pharmacies with promotional chains**

Promotional chain	% of respondents
Family Circle	9,5
Link	17,0
Plus	29,8
Bonus	6,9
Not members of a promotional chain	36,8
Total	100,0

Question 4 of the questionnaire required that respondents indicate whether their pharmacies are sole proprietorships, partnerships, close corporations or private companies. The largest proportion (0,459 or 45,9%) of the respondents' pharmacies

are sole proprietorships, followed by close corporations (25,6%) and private companies (22,6%). Only 5,8% of respondents were involved in partnerships. One respondent indicated that his pharmacy is part of a medical complex which was operated as a public company.<sup>4</sup>

**Figure 7.2**  
**The forms of business organisation of respondents' pharmacies**



Location in either a rural town or in a city (including a metropolitan area) was determined by question 5 of the questionnaire. Of the respondents 56,5% were located in rural areas and 43,5% in cities and metropolitan areas.

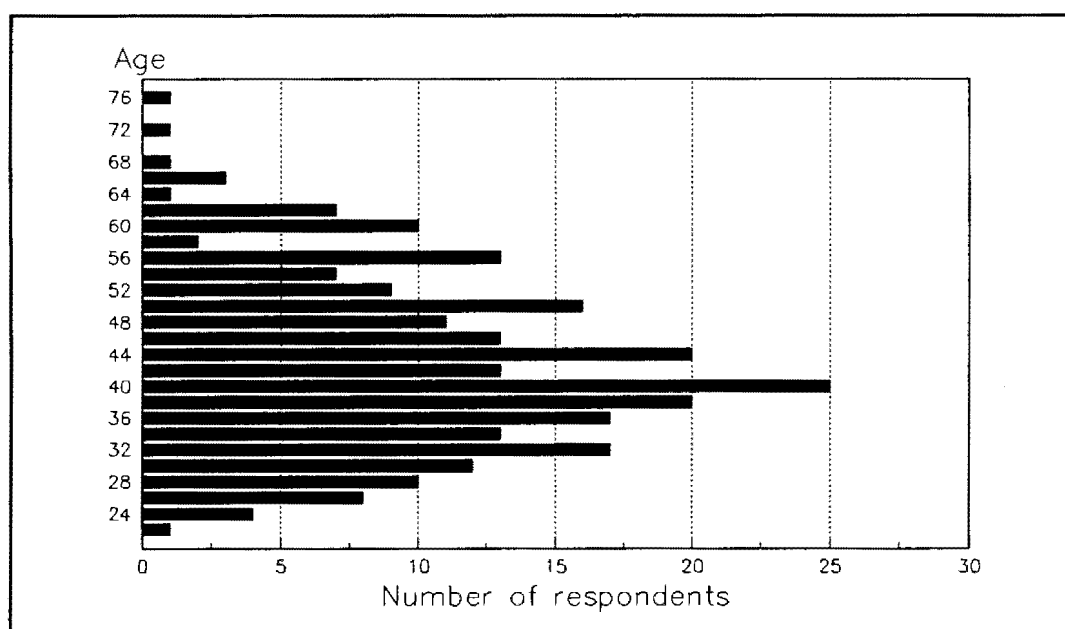
### 7.2.2 Demographic features of the pharmacists

Features of the pharmacists that responded include their age, gender, the number of management courses which they have attended and the number of years of experience as retail pharmacists.

<sup>4</sup> Since the earnings before tax of private companies and of public companies are subject to the same tax rate, and because only one respondent indicated that he is part of a public company, this respondent was included in the group of private companies.

Question 28 required that the respondent provide his age. The mean age of respondents was 42, while the mode was found at 40. The youngest respondent was aged 23 and the oldest respondent was aged 76. The distribution of the ages of respondents is presented graphically in figure 7.3.

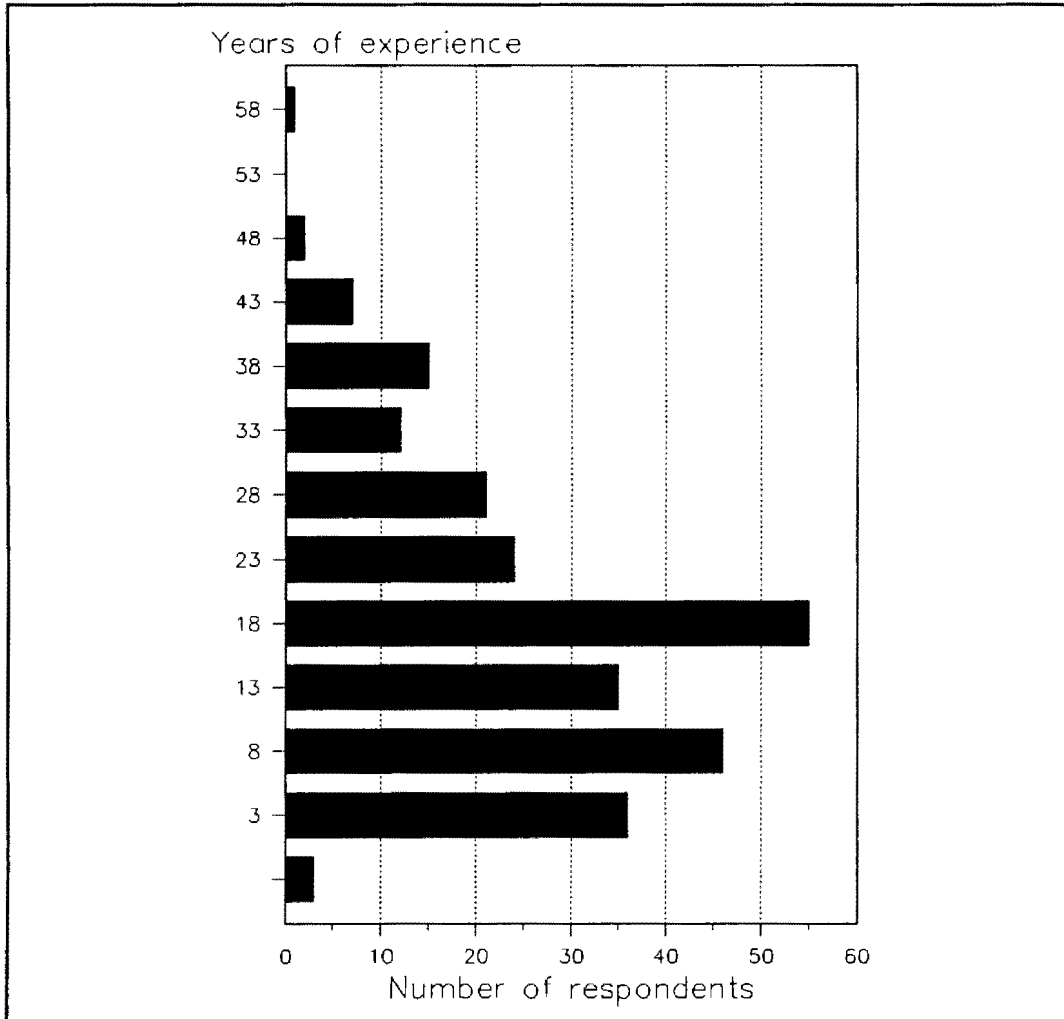
**Figure 7.3**  
**Distribution of the age groups of respondents**



Question 29 of the questionnaire concerned the gender of the respondent. The majority of respondents were male pharmacists (89,1%). Female pharmacists accounted for 10,9% of the respondents.

The experience of the respondents ranged between 1 year and 58 years, with the mode at 20. The distribution of experience as retail pharmacists among respondents is graphically presented in figure 7.4.

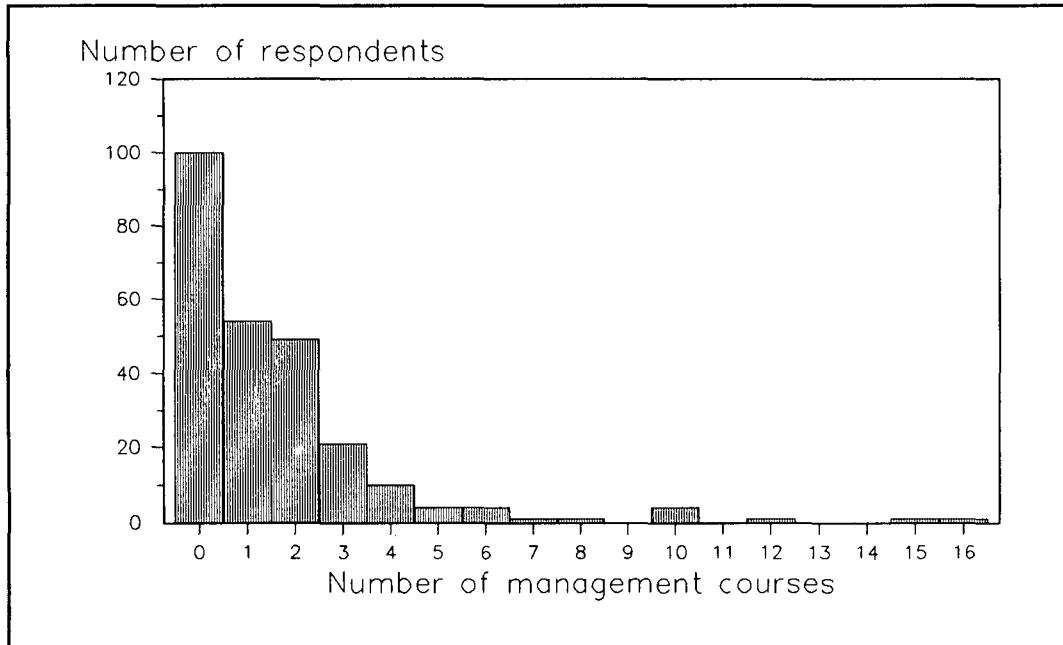
**Figure 7.4**  
**The respondents' experience**



As far as management training is concerned, 40,9% of respondents indicated that they had not attended a single management course;<sup>5</sup> 20,9% indicated that they had attended one management course, while 19,2% indicated that they had attended two management courses. 8,6% had attended three management courses and 10,4% had attended more than three management courses.

<sup>5</sup> Those pharmacists who had not attended management courses were possibly either not aware of the existence of such courses or felt no need for such training. Some pharmacists may also fear the consequences of leaving their pharmacy for a considerable period under the management of a locum.

**Figure 7.5**  
**Number of management courses attended by respondents**



The sections above described the demographic features of the respondents' pharmacies and of the pharmacists. The findings of exploratory regression models are considered next.

### 7.3 RESULTS OF THE EXPLORATORY MODELS

Exploratory multiple regression models were developed with the objective of determining relationships between the management audit criteria of the respective functional areas<sup>6</sup> (independent variables) and the measures of profitability<sup>7</sup> (the dependent variable). The confidence level used here to determine significant

<sup>6</sup> Marketing, personnel, purchasing and financial management. A multiple regression model for general management was also constructed.

<sup>7</sup> The measures of profitability used in this study are gross profit margin, gross profit per square metre, net profit margin and return on assets (ROA). See figure 5.1 and section 5.2.5.



relationships may be set at the traditional 1%, 5%, 10% or 20% level. Since the models were developed primarily for exploratory purposes, the confidence level was set at 20%. Any independent variable that had an exceedence probability of less than 20%, that is the association had less than a 20% probability of being purely coincidentally associated with the dependent variable, were regarded as significantly associated. Before discussing the exploratory models for the respective functional areas, attention will first be given to the model for management audit criteria of general management.

### 7.3.1 Exploratory model for general management

The independent variables included (simultaneously) in the model for general management concern the following:

1. Has the retail pharmacist defined the mission of his pharmacy?
2. Is the mission statement in writing?
3. Are the personnel of the pharmacy familiar with the mission statement?
4. Have long-term goals been set?
5. Have short-term goals been set?
6. Have strengths and weaknesses been analysed?
7. Have opportunities and threats been analysed?
8. Does a management information system exist?

The figures in table 7.2 distinguish between independent variables with an exceedence probability of less than 20% and those with an exceedence probability of more than 20%. Those which had a significant association<sup>8</sup> with the respective measures of profitability models have been shaded in table 7.2, while those independent variables which were not significantly associated are indicated by >20%.

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<sup>8</sup> An exceedence probability of less than 20% means that the association had less than a 20% probability of being purely coincidentally associated with the dependent variables.

**Table 7.2**  
**The significance of association of general management variables**  
**with profitability**

Independent variable	Dependent variables			
	Gross profit	Gross profit per m <sup>2</sup>	Net profit	Return on assets (ROA)
definition of the mission of the pharmacy	0,0798	0,0820	>20%	>20%
mission statement in writing	0,0413	0,0009	>20%	>20%
awareness of personnel of the mission statement	0,0886	>20%	>20%	>20%
long-term goals	>20%	>20%	>20%	>20%
short-term goals	>20%	>20%	>20%	>20%
strengths and weaknesses analysed	>20%	>20%	>20%	0,0714
opportunities and threats analysed	>20%	>20%	>20%	>20%
management information system	>20%	>20%	>20%	>20%
$R^2 =$	0,08	0,10	0,02	0,05

Note: The shaded areas indicate associations with an exceedence probability of less than 20%.

From table 7.2 it can be seen that various independent variables are associated differently with different dependent variables. However, it can be deduced from the table that the mission statement is associated significantly with both the gross profit and the gross profit per square metre dependent variables. The analysis of the strengths and weaknesses of the pharmacy was significantly associated with the return on assets dependent variable. This could possibly be ascribed to the role of a strategic management approach to the improvement and maintenance of the profitability of retail pharmacies. The formulation and statement of the mission serve to provide clarity on a common purpose to be achieved by the personnel of the pharmacy and to focus their attention on the reason for the existence of the pharmacy, namely to serve the consumer of medicines (the patient) in alleviating his/her ailment and to

fulfil other health-related needs of consumers in the area in which the pharmacy is situated and which are not being catered for by other professional persons or businesses in the area.

On the other hand, the lack of a significant association between the other measures of profitability and aspects of general management indicates the possible existence of other variables that may contribute to a better explanation of the differences in profitability among pharmacies. This is also evident from the coefficient of determination ( $R^2$  figures) for each of the dependent variables. The higher the coefficient of determination ( $R^2$ ), the better the variance in the dependent variable is described by the independent variables. The above-mentioned independent variables explained only 8%, 10%, 2% and 5% respectively of the variance in the measures of profitability of retail pharmacies. Other variables that could contribute to a better explanation of the variance in the profitability among retail pharmacies are related to either the marketing, personnel, purchasing or financial functions. Each of these functional areas will now be dealt with in the order mentioned.

### 7.3.2 Exploratory model for the marketing function

Variables related to the marketing function which were included in the exploratory model are the following:

- location in either a central business district or a residential area
- the premises in which the pharmacy is situated, namely either in a medical centre, a shopping centre, among other shops on the street front or isolated from other shops
- membership of a promotional chain<sup>9</sup> or whether the pharmacy is an independent pharmacy
- location in either a metropolitan area/city or rural town
- the total trading hours of the pharmacy per week
- total expenditure on promotion
- the percentage of sales that accounts for deliveries to clients
- the total kilometres travelled per day to make deliveries
- the total floor space of the pharmacy
- the method of pricing applied by the pharmacist
- the average number of prescriptions dispensed per day

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<sup>9</sup> These promotional chains are Family Circle, Link, Plus or Bonus.

The results of this model are shown in table 7.3.

**Table 7.3**  
**Association of marketing management variables with profitability**

Independent variable	Dependent variable			
	Gross profit	Gross profit per m <sup>2</sup>	Net profit	Return on assets (ROA)
trading hours	0,1358	>20%	>20%	0,1875
total expenditure on promotion	>20%	0,1806	>20%	>20%
% of sales delivered	>20%	>20%	>20%	>20%
km travelled for deliveries	>20%	0,1195	>20%	>20%
total floor space	>20%	0,0001	>20%	>20%
number of prescriptions dispensed per day	0,0819	0,0001	0,1953	>20%
central business district	>20%	0,0001	>20%	>20%
situated in medical centre	0,1449	0,0532	0,1214	>20%
situated in shopping centre	>20%	0,0001	>20%	>20%
situated among other shops on the street front	>20%	>20%	>20%	0,1551
Family Circle pharmacy	0,1200	>20%	>20%	>20%
Link pharmacy	>20%	>20%	>20%	>20%
Plus pharmacy	>20%	>20%	0,1150	0,1448
Bonus pharmacy	0,0441	>20%	>20%	>20%
metropolitan area/city	>20%	>20%	0,0908	0,0031
percentage mark-up pricing	>20%	>20%	0,0328	>20%
recommended resale prices	>20%	>20%	>20%	>20%
breakeven analysis method	>20%	0,1512	0,1045	0,0580
going-rate pricing	0,1562	>20%	>20%	>20%
$R^2 =$	0,14	0,56 <sup>10</sup>	0,138	0,16

Note: The shaded areas indicate associations with an exceedence probability of less than 20%.

<sup>10</sup> This relatively high  $R^2$  can be ascribed to the inclusion of the variable square metre size of the pharmacy. This variable is encountered in both the dependent variable and the independent variables. This is referred to as heteroscedasticity. The variable - square metre size of the pharmacy - was included here so that the same set of independent variables was used in all the exploratory models concerning marketing.

Independent variables which appeared to be significantly related to more than two of the dependent variables were the number of prescriptions dispensed per day, location in a medical centre, and the use of the breakeven method of pricing. These variables could prove to be significant independent variables in the construction of the comprehensive regression models and prove here that they may be included in further analyses.

The coefficient of determination ( $R^2$ ) was nevertheless smaller than 0,20 or 20%, that is, the independent variables (management audit criteria) concerning marketing management explained less than 20% of the variance in profitability among retail pharmacies. Management audit criteria of other functional areas would therefore have to be added to the independent variables used in this exploratory model in order to increase the coefficient of determination.

### **7.3.3 Exploratory model for the personnel function**

Variables related to the personnel function which were included in the exploratory model are the following:

- the total number of full-time employees of the pharmacy
- the total number of part-time employees of the pharmacy
- total number of days of absenteeism
- total number of dismissals
- total number of employee grievances
- number of management courses attended by the pharmacist
- number of years' experience as a retail pharmacist

Table 7.4

The association of variables concerning personnel management with profitability

Independent variable	Dependent variable			
	Gross profit	Gross profit per m <sup>2</sup>	Net profit	Return on assets (ROA)
number of full-time employees	0,1274	0,0303	0,1403	>20%
number of part-time employees	>20%	0,0045	>20%	>20%
number of days of absenteeism	>20%	>20%	>20%	>20%
total number of dismissals	0,1985	>20%	>20%	>20%
number of employee grievances	>20%	>20%	0,1317	>20%
the number of management courses	>20%	>20%	>20%	>20%
the number of years' experience	0,0511	>20%	>20%	0,1050
$R^2 =$	0,0655	0,1437	0,0384	0,0312

Note: The shaded areas indicate associations with an exceedence probability of less than 20%.

From table 7.4 it can be seen that there is a significant relationship between the number of full-time employees and the profitability of retail pharmacies. The more full-time employees, the bigger the salary expenses and the greater the impact on the profit of the pharmacy. Salary expenses represent a fixed cost to the pharmacy that has to be covered by adequate sales in order to maintain profitability. With the exception of the number of years' experience of the pharmacist, the other variables concerning personnel management included in the exploratory models displayed association with individual dependent variables but not with more than one dependent variable.

Given the coefficient of determination ( $R^2$ ), the above-mentioned personnel function criteria explained the variance in the measures of profitability by 6,55%, 14,37%, 3,84% and 3,12% respectively. The variance in the gross profit per square metre is - relative to gross profit, net profit, and return on assets - explained the best (14,37%).

### 7.3.4 Exploratory model for the purchasing function

Variables related to the purchasing function which were included in the exploratory model are the following:

- the number of wholesalers purchased from
- the critical factor ratio
- the purchase ratio

**Table 7.5**  
**The association of variables concerning purchasing management with profitability**

Independent variable	Dependent variable			
	Gross profit	Gross profit per m <sup>2</sup>	Net profit	Return on assets (ROA)
number of wholesalers purchased from	>20%	>20%	>20%	>20%
critical ratio	0,1594	>20%	>20%	>20%
purchase ratio	0,0369	0,1850	0,1242	0,0123
$R^2 =$	0,0427	0,0253	0,0242	0,0464

Note: The shaded areas indicate associations with an exceedence probability of less than 20%.

Of the above independent variables concerning purchasing management, the purchase ratio has a significant association (on a 20% level) with all the dependent variables. The association of the purchase ratio with profitability indicates that relatively profitable pharmacies use their personnel and financial resources effectively when making purchases. The critical ratio is significantly associated only with the gross profit margin dependent variable. This could possibly be ascribed to losses of sales which occur in cases in which purchases frequently have to be made urgently because of out of stock situations. Lost sales influence gross profit negatively.

It can be seen from the  $R^2$  that a relatively small proportion of the variance in profitability can be explained by purchasing management variables.

### **7.3.5 Exploratory model for the financial function**

Variables related to the financial function which were included in the exploratory model are the following:

- the percentage discount allowed to medical schemes
- the form of business organisation

The number of independent variables used in the exploratory model for the financial management function was limited to the above two variables. As was mentioned in chapter 1, the approach used in this study was to regard the financial function as the result of the performance of other management functions. The exploratory models for the other management functions have been studied and discussed and will not be repeated here. However, the relationship of the above-mentioned variables to profitability have not been included in the other exploratory models and are included in this model for the sake of completeness.



Table 7.6

The association of variables concerning financial management with profitability

Independent variable	Dependent variable			
	Gross profit	Gross profit per m <sup>2</sup>	Net profit	Return on assets (ROA)
% discount allowed to medical schemes	>20%	>20%	>20%	0,1073
sole proprietorship	>20%	>20%	0,001	0,0017
partnership	>20%	0,1547	0,0873	>20%
close corporation	>20%	0,0884	0,0002	0,0031
$R^2 =$	0,0041	0,0258	0,2839	0,1936

Note: The shaded areas indicate associations with an exceedence probability of less than 20%.

With the exception of the partnership as form of business organisation, the above independent variables all show a significant relationship with the dependent variable return on assets (ROA). For the other dependent variables the association varies as indicated in table 7.6. None of the independent variables have a significant association with gross profit margin. These associations may possibly be explained by the form of business organisation, which determines the tax rate to which the pharmacy is subject.

A relatively high coefficient of determination ( $R^2$ ) is found in the case of the dependent variable net profit margin, namely 28,39%. This means that the independent variables explain 28,39% of the variance in the net profit margins of retail pharmacies.

Although all the exploratory multiple regression models have indicated to some extent the association of certain independent variables with dependent variables, the association of all the independent variables has to be studied simultaneously in relation to the dependent variables. The following section will deal with the

comprehensive multiple regression models which studied the association of the management audit criteria with the measures of profitability as has just been explained.

#### **7.4 RESULTS OF THE COMPREHENSIVE MULTIPLE REGRESSION ANALYSIS MODELS**

A multiple regression model describes the relationship between a dependent variable and a set of independent variables. For the purpose of this study the dependent variable is one of four alternative measures of profitability, namely:

- the gross profit margin
- gross profit per square metre
- net profit margin
- return on assets (ROA)

The management audit criteria for the assessment of the functional strategies of retail pharmacists form the independent variables. Variables related to the location of the pharmacy as well as those concerning the pharmacist were also included in the comprehensive models.

The categorical and continuous independent variables included in each of the initial comprehensive regression models are set out in tables 7.7 and 7.8 respectively. The weighted values of the observations are also included in the tables.

**Table 7.7**  
**Independent categorical variables included in the regression models**

Variable	Category	%
Location	Central business district	53,1
	Residential area	46,9
Premises	In a medical centre	5,8
	Shopping centre	26,1
	On the street front	58,3
	Isolated	9,8
District	Metropolitan area or city	43,5
	Rural town	56,5
Pharmacy type	Family Circle	9,5
	Link	17
	Plus	29,8
	Bonus	6,9
	Other	36,8
Strategic management	Pharmacists who have defined their mission statement	74,1
	Pharmacists who have not defined their mission statement	25,9
	Pharmacists who have their mission statement in writing	13,9
	Pharmacists who do not have their mission statement in writing	86,1
	Pharmacists whose personnel are aware of the mission statement	68,3
	Pharmacists whose personnel are not aware of the mission statement	31,7
	Pharmacists who have set long-term objectives	57,2
	Pharmacists who have not set long-term objectives	42,8
	Pharmacists who have set short-term objectives	80,6
	Pharmacists who have not set short-term objectives	19,4
	Pharmacists who have analysed the strengths and weaknesses of their pharmacies	75,3
	Pharmacists who have not analysed the strengths and weaknesses of their pharmacies	24,7
	Pharmacists who have analysed the opportunities and threats of their pharmacies	79,5
	Pharmacists who have not analysed the opportunities and threats of their pharmacies	20,5
	Pharmacists who have a management information system	62,5
Pharmacists who do not have a management information system	37,5	
Pricing method	Pharmacists who apply percentage mark-up	86,4
	Pharmacists who do not apply percentage mark-up	13,6
	Pharmacists who apply recommended resale prices	81,8
	Pharmacists who do not apply recommended resale prices	18,2
	Pharmacists who apply the breakeven method	15,5
	Pharmacists who do not apply the breakeven method	84,5
	Pharmacists who apply going-rate prices	23,9
	Pharmacists who do not apply going-rate prices	76,1

**Table 7.8**  
**Independent continuous variables for inclusion in regression models**

Variable	Quartile 1	Mean	Quartile 3
Number of management courses attended by pharmacist	0	1	2
Number of years experience of pharmacist	9	16	24.5
Number of trading hours per week	49.5	53	59.125
Promotional expenditure	412.5	1500	4075
Percentage of sales that have to be delivered	5	15	30
Kilometres travelled to make deliveries	10	45	100
Size of pharmacy (measured in square metres) <sup>11</sup>	110	150	210
Average number of prescriptions dispensed per day	19.5	30	55
Total number of full-time employees	5	6	9
Total number of part-time employees	0	1	2
Number of days of absenteeism	7.5	17	40
Personnel turnover	0	1	2
Number of personnel grievances	0	0	3
Number of wholesalers purchased from	3	10	25.5
Amount of purchases per buyer	152669	214374	342375
Critical order ratio	0.33	0.5	0.66
Percentage discount allowed to medical aid schemes	15	15	17

For each of the dependent variables (the measures of profitability) a regression model was constructed. In the models that follow a confidence level of 5% was used. This means that any independent variable that had an exceedence probability of less than 5%, that is the association had less than a 5% probability of being purely coincidentally associated with the dependent variable, was regarded as significantly associated with the dependent variable. The findings of these regression models will now be discussed in the following order:

- the gross profit margin
- gross profit per square metre
- net profit margin
- return on assets (ROA)

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<sup>11</sup> This criterion was excluded from the gross profit per square metre regression model.

#### 7.4.1 Regression model for gross profit margin

In the construction of this model it was found that only the following independent variables had a significant association (on a 5% level) with the gross profit margin of retail pharmacies:

- the number of management courses attended by pharmacists
- the percentage discount allowed to medical aid schemes
- the existence or absence of a written mission statement

An additional multiple regression model indicated that all the interactions between the above-mentioned three variables were significant, except the product term of management courses with percentage discount allowed.

A final model was constructed with three main effects and three interaction terms. An adjusted  $R^2$  of 0,2973 was found. The residual analysis of this model indicated two outliers. The outliers resulted from information provided in questionnaires 174 and 247. It was clear that the information provided by these respondents was not valid and these records were deleted from all further analyses. After deletion of these records, the procedure described for the construction of the regression models was repeated.

The new model resulted in the following variables being significant explanatory variables (on a 5% confidence level):

- the number of management courses attended by pharmacists
- the existence or absence of a written mission statement
- the total trading hours per week
- the percentage discount allowed to medical aid schemes

The regression model for the dependent variable gross profit margin is summarised in table 7.9.

**Table 7.9**  
**Results of the regression model for gross profit margin**

Independent variable	Regression coefficient	Exceedence probability <sup>12</sup>	Standardised regression coefficient
Intercept	33,35	0,0001*	0,00
Management courses	0,93	0,0004*	0,27
Written mission statement:			
Yes	2,05	0,0085*	0,19
No	-2,05	0,0085*	-0,19
Total trading hours	0,08	0,0668	0,14
Discount allowed	-0,51	0,0098*	-0,19

\* Significant at a confidence level of 5%

Adjusted R<sup>2</sup> = 0,139 or 13,9%

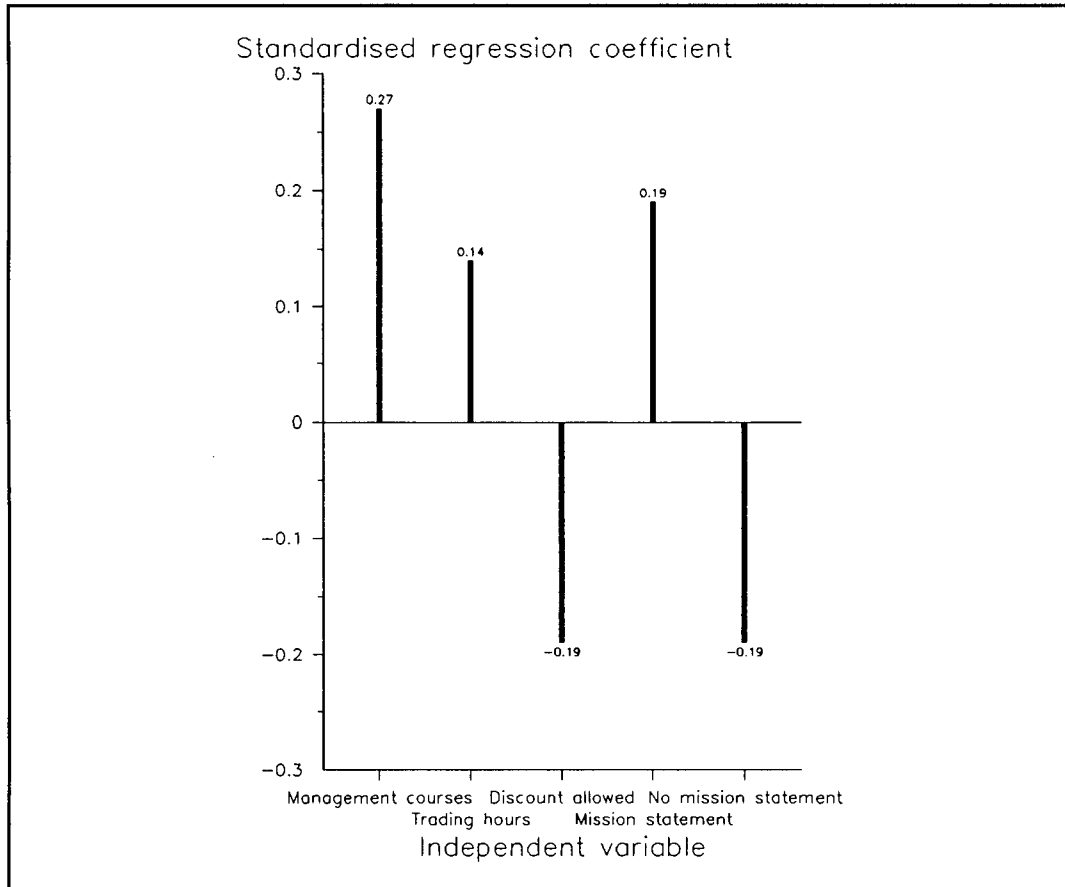
The regression coefficients indicate the partial influence exerted on average on the dependent variable<sup>13</sup> by a particular independent variable if the other independent variables are held constant. The regression coefficients are graphically presented in figure 7.6.

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<sup>12</sup> For the significance of the regression coefficient.

<sup>13</sup> For all pharmacies.

**Figure 7.6**  
**Standardised regression coefficients for the gross profit model**



The regression coefficient of 0,93 for management courses means that for every additional management course that a pharmacist attends, the gross profit margin could be increased by 0,93% (on average).

Similarly, for a 1% increase in discounts to medical aid funds, the pharmacist reduces his gross profit margin by 0,5% on average. Pharmacists with a written mission statement are associated with above-average gross profit margins, while pharmacists without written mission statements were associated with below-average gross profit margins.

Total trading hours came close to being significant on a 5% confidence level, and it can be said that for every additional business hour per week the gross profit margin may increase by 0,08%.

Crowther<sup>14</sup> developed indices which measure the status of the partial influence (or relative influence) of continuous independent variables  $X_i$  and of categorical independent variables. The idea is to determine the relative importance of each explanatory variable relative to other explanatory variables by assuming the other variables to remain constant while the variance in one particular variable is related to the variance in the dependant variable. The calculation of these indices is explained in equations 7.1 and 7.2:

$$\text{Index of } X_i = b_i \cdot \frac{V_x}{V_y} \cdot 100 \quad \text{equation 7.1}$$

where:

$b_i$  = the regression coefficient of variable  $X_i$

$V_x$  = the range of variable  $X_i$

$V_y$  = the range of variable  $Y$

The status of the partial influence (or relative influence) of a categorical independent variable with regression coefficients of the dummy variables  $b'_1, \dots, b'_{r-1}$  for  $r$  categories is measured by:

$$\text{Index} = \frac{\max(b') - \min(b')}{V_y} \cdot 100 \quad \text{equation 7.2}$$

These indices reflect the maximum partial influence that the explanatory variable can exert on the dependent variable. The indices for the variables listed in table 7.9 appear below.

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<sup>14</sup> These indices were developed by Crowther while he was employed by the HSRC and documented in an internal training document of the HSRC. No mention is made in the document of the date of publication, nor is any other bibliographical information available concerning the training document containing these indices.



The maximum gross profit margin<sup>15</sup> was 49.5345% and the minimum 8%. Therefore  $V_y = 41,5345$ .

Indices for continuous variables:

$$\begin{aligned} \text{Number of management courses} &= 0,93 \cdot \frac{16}{41,5345} \cdot 100 \\ \text{attended} & \\ &= 35,8\% \end{aligned}$$

$$\begin{aligned} \text{Total trading hours per week} &= 0,08 \cdot \frac{95}{41,5345} \cdot 100 \\ &= 18,29\% \end{aligned}$$

$$\begin{aligned} \text{Discount to medical aid schemes} &= -0,51 \cdot \frac{25}{41,5345} \cdot 100 \\ &= -30,7\% \end{aligned}$$

Index for categorical variable:

$$\begin{aligned} \text{Mission statement in writing} &= \frac{2,05 - (-2,05)}{41,5345} \cdot 100 \\ &= 9,87\% \end{aligned}$$

The indices can be interpreted as follows:

- \* If two pharmacists have the same total trading hours, offer the same discount to medical aid schemes, and both have written mission statements, then the

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<sup>15</sup> One respondent reported a gross profit margin of 96%. This was regarded as unrealistically high and not in line with other observations. If this observation had been used, the variance range would have been much larger and would have influenced the indices which were calculated. It was therefore decided to ignore this one observation for the calculation of indices.

difference in the number of management courses attended by the respective pharmacists could result in a maximum difference of 35,8% in their gross profit margins.

- \* Two pharmacists who both have written mission statements, have attended the same number of management courses and who allow the same discount to medical aid schemes, but who differ in respect of the number of trading hours could show a maximum difference of 18,29% in their gross profit margins.
- \* Two pharmacists who have attended the same number of management courses, and who both have written mission statements and have the same number of trading hours per week, but who differ in respect of the discount offered to medical aid schemes could show a maximum difference of 30,7% in their gross profit margins. High discounts to medical aid schemes are associated with low gross profit margins.
- \* Two pharmacists who have attended the same number of management courses, have the same total trading hours per week and allow the same discount to medical aid schemes, but who differ in that one has a written mission statement and the other not could show a maximum difference of 9,87% in their gross profit margins.

The four main effects mentioned in table 7.9 and their interactions were included in a further run to construct a more complex model. This model<sup>16</sup> resulted in an adjusted  $R^2$  of 0,4419. A residual analysis was performed to determine the aptness of the model and to assess the validity of the approach followed in the construction of the models for this study. The residuals were plotted and confirmed that:

1. The residuals are independent.
2. The mean is zero and the variance of the residuals is constant over the range of the independent variables.
3. The residuals are normally distributed.

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<sup>16</sup> Without interaction the model provided a  $R^2 = 0,139$ .

The model with an adjusted  $R^2$  of 0,4419 may be used for predictive purposes. However, the more complex model for predictive purposes would have to be used with circumspection. The adjusted  $R^2$  value of 0,4419 suggests that there are variables which have not been identified in this study that should be added to the model.

The independent variables - number of management courses attended by the pharmacist, trading hours and mission statement - were positively associated with relatively higher gross profits. The attendance of management courses makes the retail pharmacist a better manager of his pharmacy. The pharmacist's training at undergraduate level is aimed primarily at gaining knowledge about the composition of pharmaceuticals, their interaction with one another and the response of the human body to pharmaceuticals. By gaining knowledge of how a business functions, a retail pharmacist is able to better utilise the personnel and financial resources at his disposal in his endeavour to satisfy the health needs of customers (patients) by marketing pharmaceutical products and related services effectively to them.

The attendance of management courses exposes the pharmacist to a strategic management approach which, *inter alia*, requires the formulation of a mission statement for the pharmacy. A written mission statement indicates that the pharmacist is applying a formal strategic management approach. It provides a basis for allocating the pharmacy's resources. It also provides a starting point for the formulation of objectives, goals, global strategy and functional strategies which may be used for planning and control purposes. This results in improved management skills and consequently higher profitability figures. The association of a mission statement with relatively higher gross profits confirms the influence a mission statement may have on the profitability of a retail pharmacy. The lack of a mission statement has the opposite effect on profitability - it leads to poor management in a dynamic environment and could influence profitability negatively (as can be seen from the gross profit model).

As part of the marketing function the retail pharmacist establishes trading hours which are convenient to the customer but which at the same time must justify the costs of being open at certain hours. Convenient trading hours influence the dispensing of prescriptions and sales of front-shop items positively. If trading hours are established judiciously, profitability may be improved.

An independent variable which had a significant association with profitability, but which influences profitability negatively is discounts allowed to medical schemes. Discounts reduces the income from sales so that the income available to cover selling and administrative expenses is reduced, which eventually results in lower gross and net profits.

#### **7.4.2 Regression model for gross profit per square metre**

Gross profit per square metre is a measure of profitability which takes the size of the pharmacy into consideration. It does not, however, form part of the DuPont method of financial analysis.

It was found that the following independent variables had a significant association (on a 5% level) with the gross profit per square metre of retail pharmacies:

- location in a medical centre
- prescriptions dispensed per day
- the existence or absence of a written mission statement
- the total trading hours per week
- location in a shopping centre
- location on the street front

The regression model for the dependent variable gross profit per square metre is summarised in table 7.10.

**Table 7.10**  
**Results of the regression model for gross profit per square metre**

Independent variable	Regression coefficient	Exceedence probability <sup>17</sup>	Standardised regression coefficient
Intercept	1287,21	0,0008*	0,00
Total trading hours	12,09	0,0823	0,12
Prescriptions dispensed per day	15,33	0,0001*	0,37
Premises:			
Medical centre	1374,34	0,0001*	0,42
Shopping centre	-475,87	0,0013*	-0,22
Street front	-654,66	0,0001*	-0,33
Written mission statement:			
Yes	374,99	0,0005*	0,21
No	374,99	0,0005*	0,21

\* Significant at a confidence level of 5%                      Adjusted R<sup>2</sup> = 0,4454 or 44,54%

The maximum gross profit per square metre was R 7241,79 and the minimum R109,30. Therefore  $V_y = R\ 7\ 132,49$ . The indices for the independent variables were calculated according to equations 7.1 and 7.2. These indices are as follows:

Indices for continuous variables:

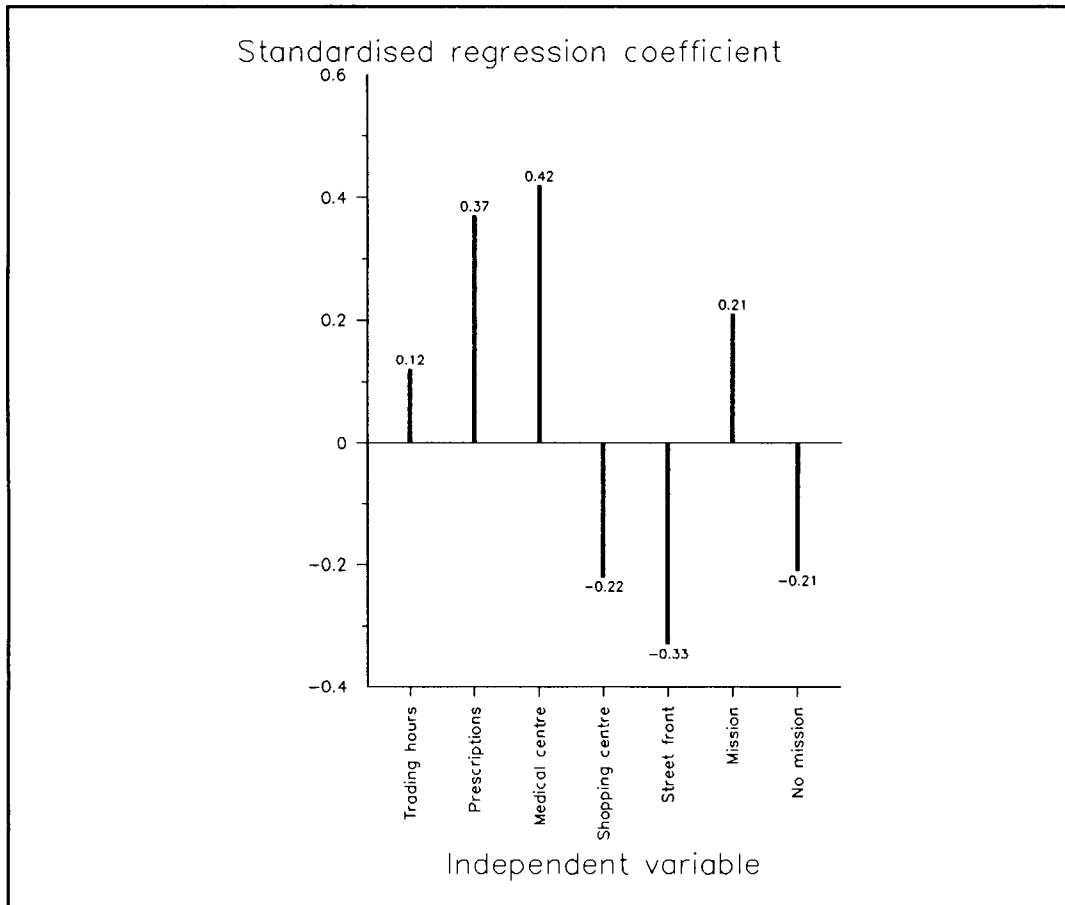
$$\begin{aligned} \text{Trading hours per week} &= 12,09 \cdot \frac{95}{7132,49} \cdot 100 \\ &= 16,1\% \end{aligned}$$

$$\begin{aligned} \text{Number of prescriptions per day} &= 15,33 \cdot \frac{353}{7132,49} \cdot 100 \\ &= 75,87\% \end{aligned}$$

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<sup>17</sup> For the significance of the regression coefficient.

**Figure 7.7**  
**Standardised regression coefficients for the gross profit per square metre**



Indices for categorical variables:

$$\begin{aligned} \text{Location in a medical centre} &= \frac{1374,34 - (-1374,34)}{7132,49} \cdot 100 \\ &= 38,54\% \end{aligned}$$

$$\begin{aligned} \text{Location in a shopping centre} &= \frac{-475,87 - (475,87)}{7132,49} \cdot 100 \\ &= -13,34\% \end{aligned}$$

$$\begin{aligned} \text{Location on the street front} &= \frac{-654,66 - (654,66)}{7132,49} \cdot 100 \\ &= -18,35\% \end{aligned}$$

$$\begin{aligned} \text{Mission statement in writing} &= \frac{374,99 - (-374,99)}{7132,49} \cdot 100 \\ &= 10,52\% \end{aligned}$$

The indices which have been calculated above will now be interpreted.

- \* Two pharmacists who have different trading hours per week may attain a maximum difference in gross profit per square metre of 16,1% if both have written mission statements, both dispense the same number of prescriptions per day (on average), and both are situated in the same type of location.
- \* Two pharmacists who differ concerning the average number of prescriptions dispensed per day may attain a maximum difference in gross profit per square metre of 75,87% if both have written mission statements, both have the same trading hours per week, and both are situated in the same type of location.
- \* If two pharmacists both have written mission statements, have the same number of trading hours per week, and dispense the same number of prescriptions per day (on average), the pharmacist situated in a medical centre may achieve a maximum gross profit per square metre that is 38,54% higher than that of a pharmacist not situated in a medical centre. Pharmacies situated in medical centres are associated with above-average profits.
- \* A pharmacist situated in a shopping centre may attain a gross profit per square metre that is a maximum of 13,34% lower than other pharmacists who also have written mission statements, have the same number of trading hours per week, and dispense the same number of prescriptions per day (on average).
- \* A pharmacist situated on the street front may attain a gross profit per square metre that is a maximum of 18,35% lower than that of other pharmacists who

also have written mission statements, have the same number of trading hours per week, and who dispense the same number of prescriptions per day (on average).

- \* If a pharmacist has a written mission statement and another pharmacist does not, the maximum difference in their gross profit per square metre may be 10,52%, provided both have the same number of trading hours per week, both dispense the same number of prescriptions per day (on average), and both are situated in the same type of location.

The independent variables - trading hours, the average number of prescriptions dispensed per day, location in a medical centre and the existence of a written mission statement - were associated significantly with gross profit per square metre and had a positive influence on said profit. The influence of trading hours and a written mission statement on gross profit per square metre is the same as their influence on gross profit. The role of the average number of prescriptions dispensed per day and location in a medical centre will therefore be examined.

The role of the number of prescriptions dispensed per day is explained by the fact that the higher the number of prescriptions dispensed, the greater the contribution made by the proceeds from prescription medicine to the profitability of the pharmacy. Consumers who enter the pharmacy to have their prescriptions dispensed may also impulsively buy front-shop items. The pharmacy therefore benefits not only from the sale of prescription medicines, but also from the sale of front-shop items, thereby increasing sales volume and the profitability of the pharmacy. Because pharmacies in medical centres are able to meet customers' immediate needs, they are able to achieve relatively higher sales and profitability despite the higher rent.

The independent variables - location in a shopping centre and location among other shops on the street front - were associated significantly with gross profit per square metre, but had a negative influence. This could possibly be ascribed to these pharmacies not being able to achieve the same level of sales as pharmacies situated in medical centres, which are more convenient for customers, especially those who wished to have their prescriptions dispensed.



### 7.4.3 Regression model for net profit margin

The regression model for the dependent variable net profit margin is summarised in table 7.11.

**Table 7.11**  
**Results of the regression model for net profit margin**

Independent variable	Regression coefficient	Exceedence probability <sup>18</sup>	Standardised regression coefficient
Intercept	3,03	0,0016*	0,00
Purchase ratio <sup>19</sup>	0,00	0,0242*	0,16
Form of business organisation:			
Sole proprietorship	4,15	0,0001*	0,46
Partnership	0,81	0,6284	0,05
Close corporation	-2,61	0,0115*	-0,25

\* Significant at a confidence level of 5%

Adjusted R<sup>2</sup> = 0,1981 or 19,81%

These standardised regression coefficients are presented graphically in figure 7.8.

Indices to reflect the maximum partial influence that the explanatory variable may exert on the dependent variable were calculated. The indices for the variables listed in table 7.11 follow. The maximum net profit margin was 29,711% and the minimum -11,21%. Therefore the range (Vy) = 40,9185.

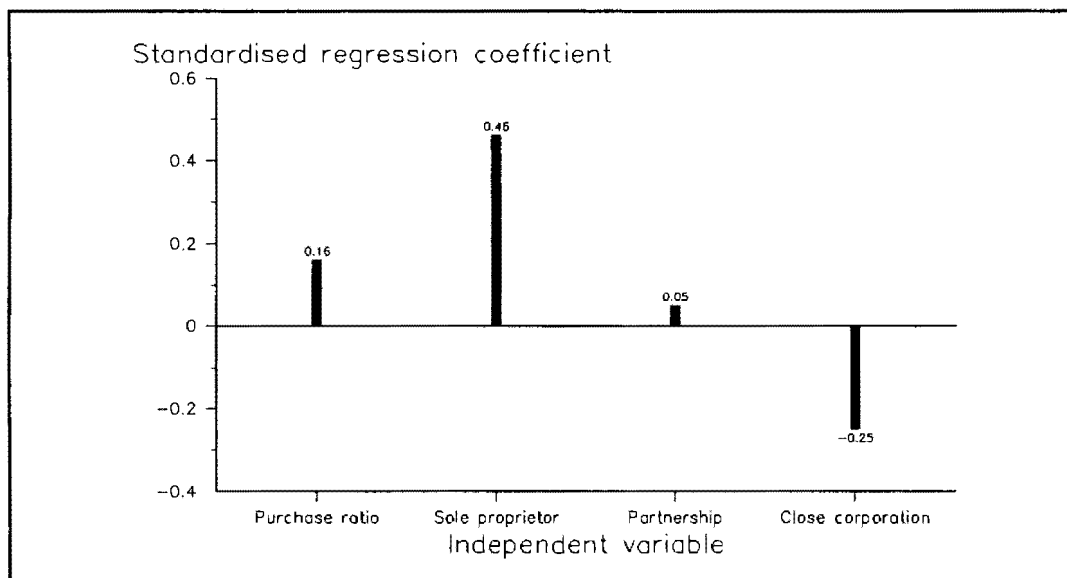
Index for continuous variable:

$$\begin{aligned} \text{Purchase ratio} &= 0,000005 \cdot \frac{2153000}{40,9185} \cdot 100 \\ &= 26,31\% \end{aligned}$$

<sup>18</sup> For the significance of the regression coefficient.

<sup>19</sup> 
$$\text{Purchase ratio} = \frac{\text{monetary value of orders placed}}{\text{number of buyers}}$$

**Figure 7.8**  
**Standardised regression coefficients for the net profit model**



Indices for categorical variables:

$$\begin{aligned} \text{Sole proprietorship} &= \frac{4,15 - (-4,15)}{40,9185} \cdot 100 \\ &= 20,28\% \end{aligned}$$

$$\begin{aligned} \text{Partnership} &= \frac{0,81 - (-0,81)}{40,9185} \cdot 100 \\ &= 3,96\% \end{aligned}$$

$$\begin{aligned} \text{Close corporation} &= \frac{-2,6 - (2,6)}{40,9185} \cdot 100 \\ &= -12,71\% \end{aligned}$$

- \* Therefore, if two pharmacists have the same form of business organisation<sup>20</sup> but different purchase ratios, the maximum difference in their net profit margins would be 26,31%.
  
- \* Pharmacists who operate their pharmacies as single proprietorships may attain a net profit margin that is a maximum of 20,28% higher than that of pharmacies operated as partnerships or close corporations and which have the same purchase ratios. If the pharmacy is operated as a partnership, the maximum difference in net profit will be 3,9% over pharmacies operated as single proprietorships or close corporations and which have the same purchase ratios. If a pharmacy is operated as a close corporation, its net profit will be a maximum of 12,71% lower than that of pharmacies operated as single proprietorships or partnerships and which have the same purchase ratios.

The purchase ratio gives an indication of how effectively purchasing is done. Depending on the level of sales of the pharmacy, decisions about the purchasing of items of stock may either be delegated to sales assistants or be centralised in the hands of the pharmacist. The delegation of authority to sales assistants to make purchasing decisions may be appropriate for pharmacies with high levels of sales because it leaves the pharmacist with more time to manage the dispensary and the functional strategies. The time the pharmacist spends on managing the dispensary and controlling the execution of the functional strategies may positively influence the profitability of the pharmacy. The difference in profitability may also be ascribable to the productive use of personnel and the effective management of stock levels.

The influence of the single proprietorship and partnership on net profit could possibly be ascribed to the tax rate, which is lower for these forms of business organisation than that of close corporations. At the time of this study a 50% tax rate applied to the earnings after interest but before tax of close corporations.

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<sup>20</sup> The forms of business organisation are sole proprietorships, partnerships, close corporations or private companies.

#### 7.4.4 Regression model for return on assets (ROA)

**Table 7.12**  
**Results of the regression model for return on assets (ROA)**

Independent variable	Regression coefficient	Exceedence probability <sup>21</sup>	Standardised regression coefficient
Intercept	0,20	0,0001*	0,00
Purchase ratio	1,89E-07	0,0276*	0,17
Percentage mark-up pricing	-0,06	0,0458*	-0,16
Form of business organisation:			
Sole proprietorship	0,12	0,0007*	0,35
Partnership	0,01	0,87540	0,02
Close corporation	-0,07	0,0776*	-0,18
Analysis of strengths & weaknesses	0,034	0,1571	0,11

\* Significant at a confidence level of 5%

Adjusted R<sup>2</sup> = 0,1602 or 16,02%

Indices to reflect the maximum partial influence that the explanatory variable may exert on the dependent variable were calculated. The indices for the variables listed in table 7.12 follow.

The maximum return on assets was 1,42577 (or 142%) and the minimum -0,3221 (or -32,21%). Therefore the range (Vy) = 1,74787.

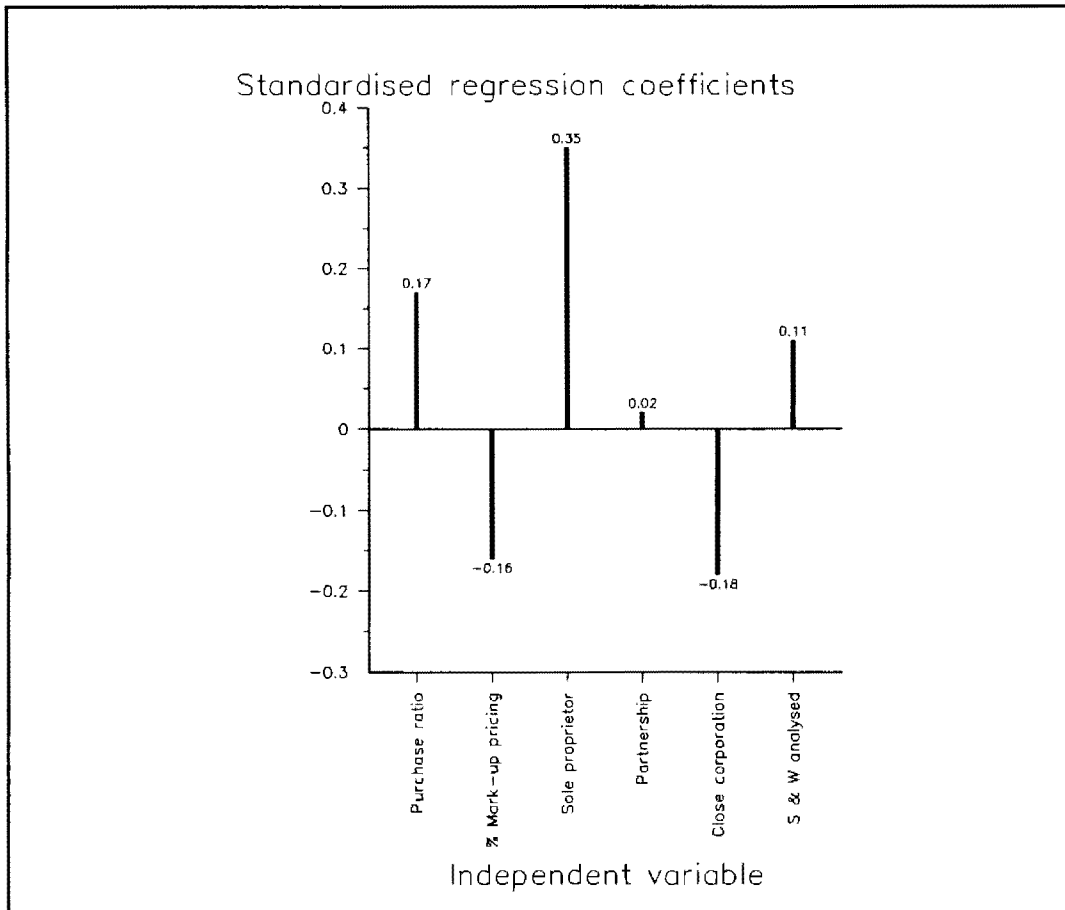
#### Index for continuous variable:

$$\begin{aligned} \text{Purchase ratio} &= 0,000000189 \cdot \frac{2153000}{1,74787} \cdot 100 \\ &= 23,28\% \end{aligned}$$

The regression coefficients for the return on assets model are presented graphically in figure 7.9.

<sup>21</sup> For the significance of the regression coefficient.

**Figure 7.9**  
**Regression coefficients for the return on assets model**



Indices for categorical variables:

$$\begin{aligned} \text{Percentage mark-up pricing} &= \frac{-0.06 - (-0.06)}{1.74787} \cdot 100 \\ &= -6.87\% \end{aligned}$$

$$\begin{aligned} \text{Sole proprietorship} &= \frac{0.12 - (-0.12)}{1.74787} \cdot 100 \\ &= 13.73\% \end{aligned}$$

$$\begin{aligned} \text{Partnership} &= \frac{0,01 - (-0,01)}{1,74787} \cdot 100 \\ &= 1,14\% \end{aligned}$$

$$\begin{aligned} \text{Close corporation} &= \frac{-0,07 - (0,7)}{1,74787} \cdot 100 \\ &= -8\% \end{aligned}$$

$$\begin{aligned} \text{Analysis of strengths and weaknesses by} \\ \text{pharmacist} &= \frac{0,034 - (0,034)}{1,74787} \cdot 100 \\ &= 3,89\% \end{aligned}$$

Based on the above indices, the following interpretations can be made:

- \* If two pharmacies with the same form of business organisation both apply the percentage mark-up as a method of pricing and both have analysed their respective strengths and weaknesses, but differ with regard to the purchase ratio, then the maximum difference in their returns on assets would be 23,28%.
- \* If, however, the two pharmacists have the same purchase ratio, both operate their pharmacies as a sole proprietorship, a partnership or a close corporation, and both have analysed their respective strengths and weaknesses, but one of them applies percentage mark-up as a method of pricing, then his return on assets would be a maximum of 6,87% lower than that of the pharmacies using different methods of pricing.
- \* If two pharmacists have the same purchase ratio, both apply the percentage mark-up as a method of pricing and both have analysed their respective strengths and weaknesses, but one of them operates his pharmacy as a sole proprietorship, then he could attain a return that is a maximum of 13,73% higher than that of the pharmacist using another form of business organisation. Similarly, if two pharmacists have the same purchase ratio, both apply the percentage mark-up as a method of pricing and both have analysed their strengths and weaknesses, but one of them operates his pharmacy as a

partnership, then he could expect to attain a 1,14% (at maximum) higher return on assets than pharmacies operated as either single proprietorships or close corporations.

- \* If two pharmacists have the same purchase ratio, both apply the percentage mark-up as a method of pricing and both have analysed their strengths and weaknesses, but one of them operates his pharmacy as a close corporation, then he could expect to attain a 8% lower return on assets than pharmacies operated as either single proprietorships or partnerships.
- \* If two pharmacies are compared and both have the same form of business organisation, apply the percentage mark-up as a method of pricing and have the same purchase ratio, but one of them has analysed the strengths and weaknesses of his pharmacy, then the latter pharmacist could attain a return on assets that is 3,89% higher than that of his counterpart.

The role of the purchase ratio and whether the pharmacy is operated as a single proprietorship or a partnership have been discussed as significantly associated with the net profit model and as having a positive influence. A similar association and influence are evident from the regression model for the return on assets model. The possible explanation for the association of these independent variables will therefore not be repeated here. The other independent variable which has a significant association with and positive influence on the return on assets is the analysis of strengths and weaknesses. This association could be ascribed to the use of a strategic management approach which is aimed at maintaining and improving the profitability of the pharmacy through the effective use of the strengths of the pharmacy. The strengths of the pharmacy may include effective purchasing decision making, location in a medical centre, and the operation of the pharmacy as a sole proprietorship.

As in the net profit model, the close corporation had a significant association with and a negative influence on return on assets. This may possibly also be explained by the tax rate to which close corporations are subject. Another independent variable - percentage mark-up pricing - emerged as a significant explanatory variable of return on assets. Percentage mark-up may be convenient for the pharmacist to use, but it does not take costs such as carrying cost and delivery costs, the required rate of return of the pharmacy or the prices being charged by competitors for the same

products into account. This could lead to a decrease in sales because of consumer resistance to a pharmacy that is perceived to be "more expensive". Such a decrease in sales could negatively influence profitability.

## **7.5 SUMMARY**

This chapter focused on the second hypothesis of the study, namely the study of internal, controllable variables which universally and significantly influence the profitability of South African retail pharmacies. This was achieved by a statistical analysis of the data collected and a discussion of the results of the statistical analysis. The purpose of chapter 7 was to:

- explore the data which had been obtained by means of the questionnaire
- study the results of multiple regression models and to offer possible explanations for the findings of these models which were constructed to assess the relationship between internal, controllable variables and the profitability of retail pharmacies

The data which had been collected was examined.

Multiple regression analysis was used to evaluate the association of internal, controllable variables and the following measures of profitability of retail pharmacists:

- gross profit margin
- gross profit per square metre
- net profit margin
- return on assets (ROA)

### **7.5.1 Findings concerning gross profit margin**

The attendance of management courses and a written mission statement were associated significantly with the gross profit margins of retail pharmacies. Discounts to medical funds and the lack of a mission statement were also associated significantly with gross profit margins. However, on average these two variables led to lower gross profit margins.



The fact that both management courses and the use of written mission statements were associated with gross profit margin is probably not accidental. In all likelihood those pharmacists with written mission statements utilised formal strategic management, which they learnt about in management training courses. This enabled them to increase their gross profit margins.

#### **7.5.2 Findings concerning gross profit per square metre**

Gross profit per square metre was associated with formal mission statements. Other variables associated with higher than average gross profit per square metre figures were location in a medical centre, trading hours and the number of prescriptions dispensed per day.

Variables which had a significant negative influence on gross profit per square metre are location in a shopping centre or on the street front, and the lack of a mission statement.

#### **7.5.3 Findings concerning net profit margin**

Net profit margin was associated significantly with the purchase ratio, and the sole proprietorship and partnership as forms of business organisation of retail pharmacies. This tends to indicate that pharmacists who achieve good net profit margins make effective purchasing decisions. The form of business organisation influences the tax position of the pharmacy. Pharmacies operated as close corporations and companies at the time of this study were still subject to a 50% tax rate on their earnings before tax (EBT).

#### **7.5.4 Findings concerning return on assets (ROA)**

Return on assets was significantly associated with the sole proprietorship and partnership as forms of business organisation, the purchase ratio as well as the analysis of strengths and weaknesses of pharmacies. The use of mark-up pricing and the close corporation as a form of business organisation were negatively related to return on assets.

The influence of the form of business organisation on ROA is similar to its influence on the net profit margin. The analysis of strengths and weaknesses forms an integral part of strategic management. The pharmacist who utilises a strategic management concept is bound to achieve higher rates of return than pharmacists who do not. The strategic management concept enables the pharmacist to use the resources at his disposal more judiciously to achieve predetermined objectives and goals than would otherwise be the case.

From the various regression models a few variables appear frequently as statistically significant explanatory variables related to profitability. These are:

- the formal mission statement
- the form of business organisation
- the location of the pharmacy
- the method of pricing
- the purchase ratio

From the above discussion it can be concluded that there are internal, controllable aspects related to the functional management strategies of South African retail pharmacies which universally and significantly affect their profitability either positively or negatively.

The second research hypothesis of the study is, therefore, accepted.

## **CHAPTER 8**

### **FINDINGS AND RECOMMENDATIONS OF THE STUDY**

#### **8.1 INTRODUCTION**

The purpose of this chapter is to:

- evaluate the findings of the study in terms of its objective and research hypotheses
- contribute to management science by proposing recommendations - based on the research findings - which will influence the profitability of retail pharmacies positively
- synthesise these findings and recommendations
- suggest further research which may be undertaken concerning the management of South African retail pharmacies

#### **8.2 AN EVALUATION OF THE RESEARCH FINDINGS**

The overall objective of the study was to assess the functional strategies of retail pharmacies in South Africa with a view to identify and evaluate variables which universally and significantly influence their profitability.

Two research hypotheses were proposed, namely that:

1. The profitability of South African retail pharmacies is influenced by both external, uncontrollable variables and by internal, controllable variables.
2. There are particular internal, controllable variables related to functional management strategies which universally and significantly influence the profitability of South African retail pharmacies.

Various goals were derived from the hypotheses of the study and achieved by means of the various chapters of this study. Chapters 2 to 5 covered a literature review of variables which are either external or internal to South African retail pharmacies and which may influence their profitability. Although some variables were identified from the literature review, no conclusions could be reached on whether these variables were universally and significantly associated with the profitability of South African retail pharmacies.

Since no similar empirical research was found and since the study focused on internal, controllable variables of South African retail pharmacies, it was necessary to undertake empirical research to assess the relationship between various measures of profitability of South African retail pharmacies and these internal, controllable variables. Consequently, chapters 6 and 7 described the methodology used to perform the empirical research and the findings emanating from the study. The study surveyed a sample of 800 retail pharmacies and a response rate of 32,25% was achieved. The data obtained from the pharmacies surveyed was explored by means of the UNIVARIATE and FREQ procedures of the SAS system.<sup>1</sup> General linear models were constructed using the GLM and REG procedures as well as multiple regression models. Significant variables were identified from multiple regression models using an exceedence probability of 5%.

Given the objective and hypotheses which were set for this study the findings will now be summarised and evaluated.

### **8.2.1 Findings concerning the first research hypothesis**

The first research hypothesis stated that the profitability of South African retail pharmacies is influenced by both external, uncontrollable variables and internal, controllable variables.

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<sup>1</sup> The results of the UNIVARIATE and FREQ procedures were reported in tables 7.7 and 7.8.

This research hypothesis is accepted on the basis of the literature study which pointed to the following:

#### **8.2.1.1 External, uncontrollable variables**

The profitability of retail pharmacies is positively influenced by:

- the urbanisation of the population, which benefits mainly the urban pharmacy
- an increase in the beneficiaries of medical schemes

The profitability of retail pharmacies is negatively influenced by:

- the emergence of dispensing doctors
- new entrants to retail pharmacy
- the introduction of legislation aimed at combating cartels and stimulating competition in the economy
- discounts claimed by medical schemes and clearing houses
- dispensing by district surgeons

#### **8.2.1.2 Internal, controllable variables**

The strategic management approach is an internal and controllable aspect which may influence the profitability of South African retail pharmacies positively.

The formulation of global and business level strategies is part of the general management function of a retail pharmacist. According to the literature on strategic management, global and business level strategies should be supported by functional strategies. In the case of a retail pharmacist these functional strategies consist of marketing, personnel, purchasing and financial management strategies. These functional strategies were the focus of the second research hypothesis which was studied.

#### **8.2.2 Findings concerning the second research hypothesis**

The second research hypothesis stated that there are particular internal and controllable variables related to functional management strategies which universally and significantly influence the profitability of South African retail pharmacies.

This research hypothesis is accepted on the basis of the literature review in chapters 2 and 4 as well as the empirical study, in which multiple regression analysis was used.

By means of multiple regression analysis, internal and controllable variables of functional management strategies were related to various measures of profitability, such as the gross profit margin, the gross profit per square metre, the net profit margin, and return on assets. Specific findings concerning the relationships between internal, controllable variables and each of the said measures of profitability will now be discussed.

#### **8.2.2.1 Findings concerning gross profit margin<sup>2</sup>**

The attendance of management courses and written mission statements are associated significantly with the gross profit margins of retail pharmacies and have a positive influence on profitability. The fact that both management courses and the use of written mission statements are associated with gross profit margin is not accidental. Pharmacists with written mission statements have in all likelihood utilised formal strategic management, a knowledge of which they gained from management training courses. This enabled them to increase their gross profit margins. This also underscores the importance of management training and formal strategic management. A pharmacist who adopts a formal approach to strategic management will have a written mission statement that can serve as a guide to both his personnel and himself when making decisions and taking action which may affect the profitability of the pharmacy.

Variables which are also associated significantly with gross profit margin are discounts to medical funds and a lack of a mission statement. However, these two variables influence gross profit margins negatively.

#### **8.2.2.2 Findings concerning gross profit per square metre<sup>3</sup>**

Gross profit per square metre is positively associated with written mission statements. Other variables associated with higher than average gross profit per square metre figures are location in a medical centre, trading hours and the number of prescriptions

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2 These findings are discussed in greater detail in section 7.4.1.

3 These findings are discussed in greater detail in section 7.4.2.

dispensed per day. Pharmacists located in medical centres who undertook (formal) strategic management planning and took the opportunity of offering customer convenience achieved relatively higher profitability than pharmacists located in other premises.

Variables which have a significant negative influence on gross profit per square metre are location in a shopping centre or on the street front and lack of a mission statement. The decision to locate in either a shopping centre or on the street front may be the result of limited opportunities to locate in a medical centre or a lack of strategic management planning.

#### **8.2.2.3 Findings concerning net profit margin<sup>4</sup>**

Net profit margin is associated significantly with the purchase ratio, and the sole proprietorship and partnership as forms of business organisation for retail pharmacies. This indicates that pharmacists who achieved good net profit margins took effective purchasing decisions. The form of business organisation influences the tax position of the pharmacy. At the time of this study pharmacies organised as close corporations and companies were still subject to a 50% tax rate on their earnings before tax (EBT). The single proprietorship, on the other hand, is taxed at lower rates than that for close corporations and companies. The single proprietorship is also subject to less stringent legal requirements than close corporations and companies, resulting in cost savings on administrative expenses and relatively higher profitability.

#### **8.2.2.4 Findings concerning return on assets (ROA)<sup>5</sup>**

Return on assets is significantly positively associated with the sole proprietorship and partnership as forms of business organisation, the purchase ratio as well as the analysis of strengths and weaknesses of pharmacies. The use of mark-up pricing and the close corporation as a form of business organisation are negatively related to return on assets.

The influence of the form of business organisation on ROA is similar to that on the net profit margin. The analysis of strengths and weaknesses forms an integral part of strategic management. The pharmacist who adopts a strategic management

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4 These findings are discussed in greater detail in section 7.4.3.

5 These findings are discussed in greater detail in section 7.4.4.

approach is bound to achieve higher rates of return than pharmacists who do not. The strategic management concept enables the pharmacist to use the resources at his disposal more judiciously in order to achieve predetermined objectives and goals than would otherwise have been the case.

From the above discussion of the findings of the study it can be concluded that the study achieved its objective and confirmed the two research hypotheses.

Recommendations will now be proposed based on the above-mentioned findings.

### **8.3 RECOMMENDATIONS**

The discussion in this section will be structured as follows:

1. The research finding which form the basis of the recommendation will be stated briefly.
2. Based on the research finding, a recommendation on how the profitability of South African retail pharmacies may be influenced positively will be made.
3. The recommendation will be followed by a contribution by the author, consisting of either commentary on the recommendation or guidelines on circumstances under which the recommendation should be implemented.

However, before making any recommendations on how retail pharmacies can maintain and improve their profitability, a few remarks about the uniqueness of the situation of pharmacies are appropriate. The situation of each pharmacy is fairly unique for the following reasons:

1. Different types of medicines have to be dispensed for the treatment of diseases occurring with varying frequency and at different times each year in the various geographical areas because of differing environmental conditions and doctors' prescription preferences.



2. The lifestyle and spending patterns of consumers differ from town to town and suburb to suburb, thus influencing the sales of front-shop items and medicines of a retail pharmacy. A retail pharmacy in a prosperous suburb may sell more cosmetics than one in a relatively poorer suburb. The sales of prescribed medicines may, however, also be affected if the residents in the relatively poorer suburb cannot afford membership of a medical scheme and have to acquire their medicines from provincial hospitals.
3. The various promotional chains<sup>6</sup> may offer member retail pharmacies the opportunity of participating in the promotion of selected products during certain periods of the year.

In view of the unique circumstances of each pharmacy, not all of the following recommendations may apply equally to all pharmacies.

### 8.3.1 A strategic management approach

The finding of this study that a written mission statement is associated with above-average profitability indicates the importance of continuous, formal strategic management as opposed to sporadic, superficial environmental analysis.<sup>7</sup>

#### Recommendation 1:

*It is recommended that a strategic management approach be adopted by retail pharmacists to ensure the profitability and survival of their pharmacies.*

The strategic management approach ensures effectiveness (doing the right things) and efficiency (doing things right) in the pursuit of the profitability objective.

This study developed a strategic management model for South African retail pharmacies. The model is discussed in section 2.2.4. and presented graphically in figure 2.5.

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<sup>6</sup> Family Circle, Link, Plus, Bonus, etc.

<sup>7</sup> Strategic management approaches were discussed in chapter 2.

The strategic management model requires the formulation of a mission statement for the retail pharmacy.<sup>8</sup>

**Recommendation 2:**

*It is recommended that retail pharmacists formulate mission statements for their pharmacies and put them in writing.*

The retail pharmacist's basic mission is the preparation and distribution of pharmaceutical products and the counselling of clients on the correct use of such products with a view to maintaining and improving the health of the community in which the pharmacy is located. A pharmacist's mission statement needs to reflect:

1. The basic product or service that is sold. In this respect it should indicate whether the pharmacy exists solely to prepare and distribute medicines or whether other front-shop goods will also be sold.
2. The philosophies of the pharmacist and his personnel, such as ethicality (including a respect for people as individuals), professionalism, excellence, expediency, efficiency and effectiveness in providing the service.
3. The geographical area that is served.

A mission statement that is to give direction to and serve to motivate the pharmacist and his personnel should incorporate the above-mentioned aspects. In order to fulfil this role the mission statement should be formulated in such a manner that both personnel and customers can associate themselves with it. The mission statement should also be displayed prominently where the personnel and customers can observe it. Only 13,9% of the retail pharmacists surveyed in this study indicated that their mission statements were in writing.<sup>9</sup> Nevertheless, 68,3% of them indicated that their personnel were aware of the mission statement. If the mission statement is in writing and displayed prominently, it will serve its purpose of motivating employees and reinforcing customers' loyalty and their decision to buy their medicine and other requirements from the pharmacy.

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8 The nature and role of the mission statement in strategic management were discussed in chapter 2.

9 See table 7.7.

**Recommendation 3:**

*It is therefore recommended that a retail pharmacist formulate his mission statement according to the above-mentioned guidelines and display it prominently in the pharmacy.*

The mission statement is also a starting point for the formulation of long- and short-term goals and objectives.

In attempting to achieve his mission, goals and objectives, the retail pharmacist has to analyse external, uncontrollable variables in order to identify opportunities and threats. Very few opportunities and threats can be directly controlled by the retail pharmacist. This does not, however, mean that he should not anticipate and/or respond to opportunities and threats that manifest themselves in his operational, industry or remote environments.

**Recommendation 4:**

*It is recommended that retail pharmacists analyse the external, uncontrollable variables affecting their pharmacies with a view to determining the nature and intensity of the opportunities and threats facing them.*

In terms of the strategic management model which was developed in section 2.2.4 the pharmacist should also analyse the internal, controllable variables in his pharmacy. The pharmacist has control over the global, business and functional management strategies of his pharmacy. His managerial and leadership abilities influence the strengths and weaknesses of the pharmacy. His goal should be to enhance the strengths of the pharmacy and to overcome the weaknesses in order to ensure the profitability and survival of the pharmacy over the long term.

**Recommendation 5:**

*It is recommended that retail pharmacists analyse the internal, controllable variables affecting their pharmacies with a view to determining their strengths and weaknesses.*

Bearing in mind the mission of the pharmacy, the environmental opportunities and threats, and the strengths and weaknesses of the pharmacy, the pharmacist should decide upon global, business and functional management strategies and combinations thereof. The global strategies are summarised in table 8.1.

**Table 8.1**

**Global strategies which may be pursued**

- concentrated growth
- market development (selling present products in new markets)
- product development (developing new products for present markets)
- horizontal integration
- vertical integration
- concentric diversification
- conglomerate diversification
- joint venture
- retrenchment/turnaround
- divestiture
- liquidation

The global strategies - concentrated growth, market development, product development, integration and diversification strategies - are offensive strategies which may be used in circumstances in which the market outlook is positive (for example a growth in demand is expected) and/or the effectiveness or efficiency of the marketing efforts of competing suppliers can be overcome.

Joint venture as a strategy may be used by retail pharmacies as a defensive strategy in circumstances in which they wish to pool resources to the advantage of those participating in the scheme. An example of a joint venture is the establishment of a joint wholesaling operation which enables participants to negotiate lower purchasing prices or to qualify for bulk discounts.

Retrenchment and turnaround strategies may be regarded as defensive strategies which may be used to reduce costs and/or to overcome temporary set-backs until circumstances improve to such an extent that offensive strategies once again become

viable. Divestiture and liquidation may be considered in cases in which there is no prospect of the outlook for the future improving and in which all other strategies failed.

**Recommendation 6:**

*It is recommended that South African retail pharmacists adopt one or a combination of the global strategies suited to the circumstances of the pharmacy.*

The retail pharmacist may also adopt business level strategies such as overall cost leadership, differentiation and focus strategies.

Overall cost leadership may be appropriate where the products sold may be produced or purchased cheaply relative to competitors and where a pharmacy's sales may increase as a result of relatively lower prices (i.e. where demand is elastic). Overall cost leadership may, however, lead to an increase in competition based on price, which may influence profitability negatively. In this respect the differentiation strategy may be more appropriate, as it may be used as an offensive strategy against competitors, but without precipitating a price war. The products sold by retail pharmacies are standardised and prepacked and consequently provide little opportunity for differentiation. Therefore differentiation in the retail pharmacy environment may entail serving customers differently from the way competitors serve them (e.g. by friendlier and faster service) or by promoting products differently (e.g. a pharmacy having a different layout and appearance, as well as a different atmosphere from that of competitors).

The focus strategy may be used in circumstances in which demand is such that the turnover rates of certain types of stock result in the pharmacy not meeting its required rate of return on its investment in stock. It may also be used by a pharmacy which does not have the physical space to stock the full range of product lines which it could sell or where the stock levels are limited by the amount of financing which the pharmacy has available from equity, long-term debt or current liabilities.

**Recommendation 7:**

*It is recommended that South African retail pharmacists adopt one or a combination of the business level strategies which are compatible with the global strategy and which are suited to the circumstances of the pharmacy.*

The decision as to which strategy or combinations of strategies to implement will depend on the managerial abilities of the pharmacist; the human and financial resources at his disposal; and the nature and intensity of competition faced in the external environment. If, for example, opportunities exist which have not been exploited by other firms, the retail pharmacist may use a growth strategy<sup>10</sup> by adding products to the existing product range sold by his pharmacy if:

1. The ethical rules of conduct of the Pharmacy Council permits the selling of such products or services.
2. The pharmacy has the necessary finances and expertise to sell such products.
3. The products or service fit in with the image of the retail pharmacy.
4. A feasibility study proves that such products or services will be sufficiently profitable to offer a satisfactory rate of return.

On the other hand, if prospects in the external environment are accompanied by poor performance of the pharmacy, then retrenchment or turnaround strategies should be considered. If, however, the pharmacy has little prospect of recovering and there are few positive developments in the external environment which could make a turnaround strategy viable, then strategies such as divestiture or liquidation should be considered as a last resort. The decision to implement these strategies may, however, be difficult decisions if the pharmacist lacks management training.

**Recommendation 8:**

*It is recommended that in cases in which pharmacists have had little if any management training, a facilitator or a business consultant should be used to provide the necessary assistance in planning and implementing a strategic management approach.*

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<sup>10</sup> The growth strategies were discussed in sections 2.2.1 to 2.2.3.

Recommendations concerning specific functional management strategies which may contribute to improved profitability will now be made, starting with the marketing function.

### 8.3.2 Marketing management

The recommendations in the area of marketing management concern location, trading hours, number of prescriptions dispensed per day and methods of pricing.

The study found that retail pharmacies located in medical centres achieved significantly higher profitability than other pharmacies.<sup>11</sup>

#### Recommendation 9:

*It is recommended that retail pharmacists locate as near as possible to areas where medical practitioners are concentrated, preferably in medical centres.*

Locating as near as possible to areas in which medical practitioners are concentrated may increase the number of consumers entering the pharmacy to have their prescriptions dispensed. This may increase the profitability of the retail pharmacy as a result of not only the number of prescriptions dispensed per day, but also the increased sales of front-shop items.

The study found that pharmacies with relatively longer trading hours achieved above-average profitability.<sup>12</sup> This is in line with the marketing concept, which stresses that the consumer should be served according to his needs.

#### Recommendation 10:

*It is recommended that retail pharmacists determine which hours are convenient for customers in their area of operation and that they adjust their hours if necessary.*

The availability of employees and locums as well as profitability considerations will ultimately determine whether the pharmacy operates at times convenient to customers.

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<sup>11</sup> See sections 7.3.2 and 7.4.2.

<sup>12</sup> See sections 7.3.2, 7.4.1 and 7.4.2.

The study found that retail pharmacists who used percentage mark-up as a method of pricing attained below-average profitability.<sup>13</sup>

**Recommendation 11:**

*Although percentage mark-up is a very convenient method of pricing, it is recommended that the pharmacist consider adopting the breakeven method of pricing.*

The percentage mark-up merely adds a certain percentage to the cost price of the products, for example 50% to cost. As indicated in section 4.3.1.2, the breakeven method of pricing is used to determine the selling price of products in such a way that the pharmacy will break even on the costs of buying and marketing a product or earn a particular profit margin. The retail pharmacist should use a method of pricing which takes into account purchase prices, planned operating expenses, the required rate of return (profit margin), planned discounts and planned net sales.

Regardless of the method of pricing used, certain products may be expected not contribute to profit as planned. This may be the case with front-shop items.

**Recommendation 12:**

*Retail pharmacists could increase profitability by taking the following courses of action for low-profit front-shop items:*

- *replacing the merchandise with merchandise with relatively higher profit margins and turnover rates*
- *reducing the space allotted to the merchandise*
- *promoting the merchandise more effectively*

In certain cases, even low-profit front-shop items may be yielding a sufficient profit per square metre.

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<sup>13</sup> See section 7.4.4.



**Recommendation 13:**

*It is recommended that the retail pharmacists could increase the profitability of front-shop items by:*

- *increasing promotion and merchandising efforts for individual items*
- *expanding the selling space for these items of merchandise*
- *taking both courses of action*

**8.3.3 Purchasing management**

The purchase ratio represents the amount of purchases divided by the number of employees (sales assistants in the case of a retail pharmacy) authorised to make purchases. The purchase ratio therefore increases if the number of employees making purchases is reduced and/or the amount of purchases is increased. The study found that the purchasing ratio is positively associated with above-average profitability.<sup>14</sup> This finding indicates the importance of sound purchasing management and the effective use of employees to do purchasing. Any stock purchased ties up valuable cash resources and purchases need to be done sensibly if the required rate of return on the investment in stock is to be achieved.

**Recommendation 14:**

*It is recommended that retail pharmacists exercise more direct control over the purchasing of products.*

Control over the stock carried by the pharmacy is enhanced by limiting the number of employees doing the purchasing. Specific employees should be assigned responsibility for placing orders with suppliers. Employees should be allowed to order stock only if they have been trained and are experienced in purchasing, and are aware of the marketing and financial implications of their purchasing decisions. If the pharmacy achieves sales levels which makes it difficult for the pharmacist to do all the ordering and to manage other aspects of his pharmacy, he should consider organising the pharmacy into strategic business units. The strategic business units should be based on product categories and employees responsible for each unit may be allowed to make their own marketing and purchasing decisions within

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<sup>14</sup> See section 7.4.3.

predetermined limits. The latter may be more suitable for pharmacies with turnover figures which justify such purchasing by employees. In such cases a sales assistant may, for example, be appointed to manage the purchasing and marketing of all cosmetics and be remunerated by sharing in the profit of the cosmetics unit up to a predetermined percentage.

#### 8.3.4 Personnel management

The study found that the attendance of management courses positively influenced the profitability of retail pharmacies.<sup>15</sup>

##### **Recommendation 15:**

*It is recommended that retail pharmacists and their sales assistants enrol for management courses.*

Pharmacists who have not yet undergone any management training should consider doing so. The alternatives which are presently available to retail pharmacists are:

- an MBA course offered by the postgraduate business schools at South African universities
- the MPharm (community pharmacy) course at the Potchefstroom University for CHE
- a diploma course at either Damelin College or at the Centre for Business Economics at Unisa

Training at the above-mentioned institutions is, however, time consuming and shows results only over the long term. Pharmacists needing an improvement of results over the immediate short term should consider the option of a management consultant as indicated in recommendation 4.

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<sup>15</sup> See section 7.4.1.

### 8.3.5 Financial management

The study found that the pharmacies operated as sole proprietorships achieved relatively greater profitability than partnerships, close corporations and companies.<sup>16</sup>

#### Recommendation 16:

*It is recommended that pharmacies be operated as sole proprietorships and not as partnerships, close corporations or private companies.*

Close corporations and companies have to comply with the regulatory requirements of the Close Corporations Act (Act no. 69 of 1984) and the Companies Act (Act no. 61 of 1973) respectively. Although these forms of business organisation offer benefits such as perpetual succession, limited liability and the capacity and powers of a natural person in so far as these are appropriate to a legal person, the regulatory requirements result in costs to which the sole proprietorship is not exposed and which influence profitability negatively. The rate at which companies and close corporations are taxed also influences the profitability of these forms of business organisation. A final consideration is the dividend yield, which is affected by the sharing of earnings in a partnership, company or close corporation. In a sole proprietorship the owner carries all the risk, but has the net profit exclusively to himself - which is not necessarily the case if the partnership, close corporation or company is used as a form of business organisation.

The study also found that discounts to medical aid schemes influence profitability negatively.<sup>17</sup>

#### Recommendation 17:

*It is recommended that retail pharmacists should move away from price and discount-based competition. Competition should rather be based on service and on being different from other pharmacies and finding its own unique selling proposition.*

The strategic management model which was developed in this study may be used to achieve this objective. The strategic management model suggests, *inter alia*, cost

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<sup>16</sup> See section 7.4.3.

<sup>17</sup> See section 7.4.1.

leadership and differentiation as business strategies. In view of the above recommendation, strategies<sup>18</sup> other than cost leadership (and similar strategies which intensify price competition) are preferable.

#### 8.4 SYNTHESIS

In a free-market orientated system the survival of a retail pharmacy is dependent on profitability.

The profitability and survival of South African retail pharmacies are threatened by increasing competition in a rapidly changing environment (as was indicated in chapter 3). Section 3.3.3.2 specifically illustrated this point by showing that as a result of dispensing by doctors, retail pharmacists reported decreases in prescription work [the decrease in sales of a retail pharmacy affected by dispensing doctors was estimated by the Pharmacy College of Pretoria (1991: 5-8) to be as much as R245 400 per annum]. Since the profitability of a retail pharmacy is determined primarily by the difference between income from sales and total costs, the assertion can be made that such a decrease in sales impacts negatively on profitability.

Despite the threats facing South African retail pharmacists they may enhance the profitability of their pharmacies by adopting a strategic management approach. This assertion is based on several studies which reported improved profitability as a result of the implementation of a strategic management approach (Justis *et al.*, 1985: 13-14; Pearce & Robinson, 1988: 17-19; and Byars, 1987: 6; 8).<sup>19</sup>

A strategic management approach requires, *inter alia*, that the retail pharmacist should distinguish between external, uncontrollable variables and internal, controllable variables.

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18 An example of such a strategy is the differentiation strategy.

19 See chapter 1.

As far as external, uncontrollable variables are concerned the profitability of South African retail pharmacies is threatened by the following:

- an increasing number of dispensing doctors
- an increase in the number of retail pharmacies (new entrants)
- the introduction of legislation to stimulate competition
- discounts required by medical schemes on prescribed medicines dispensed by retail pharmacists
- medicines which are dispensed by district surgeons or provincial hospitals. (The study found that the State satisfies nearly 80% of the medical treatment requirements, including medicines, of South African society,<sup>20</sup> leaving retail pharmacists and dispensing doctors with only 20% of the market.)

These external, uncontrollable variables affect the profitability of South African retail pharmacies negatively and highlighted the significance of a strategic management approach. The strategic management approach is an internal, controllable variable which may be used by retail pharmacists to cope with the above-mentioned threats. If the suggested amendments to legislation enable medical schemes to operate their own dispensaries, the market for pharmaceutical products will become even smaller for retail pharmacists and dispensing doctors.<sup>21</sup> The retail pharmacist should therefore also prepare for such competition by using a strategic management approach.

From the discussion of the findings and recommendations of this study it can be concluded that there are several variables related to the functional management strategies of retail pharmacies which influence profitability either positively or negatively. The relationship of the variables with particular functional management strategies and their influence on profitability are summarised in table 8.2.

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<sup>20</sup> The supply of health services by the State was discussed in section 3.3.5.

<sup>21</sup> These amendments were referred to in section 3.4.1.2.

**Table 8.2**  
**Variables which influence the profitability of retail pharmacies**

	<b>Positive influences</b>	<b>Negative influences</b>
<b>Functional strategy</b>	<b>Variables</b>	<b>Variables</b>
General management	Written mission statement Strength and weaknesses analysed	Lack of a written mission statement
Marketing management	Location in a medical centre Trading hours Number of prescriptions dispensed	Location in a shopping centre Location on the street front Pricing by means of percentage mark-up*
Personnel	Number of management courses attended	-
Purchasing	Purchase ratio	-
Financial management	Single proprietorship Partnership	Discounts afforded to medical schemes Close corporation

\* Pricing may be regarded as a variable related to both marketing and financial management.

In order to enhance and improve their profitability, retail pharmacists should capitalise on those variables which influence profitability positively and modify those variables which were found to influence profitability negatively. Recommendations on how the above-mentioned variables should be used to influence the profitability of retail pharmacies positively have been proposed in section 8.3 of this chapter. These recommendations should be considered in conjunction with the literature on management.

The management literature postulates that a strategic management approach influences the profitability of a firm positively. The profitability of firms increased to levels which were not achieved prior to the introduction of such approaches.

Other cases are reported in which the profitability of firms using strategic management approaches is relatively higher than that of firms in the same industry but which did not use such approaches.

This study supports the assertion that a strategic management approach influences profitability positively. The study found that South African retail pharmacists who had written mission statements and who analysed the strengths and weaknesses of their pharmacies achieved relatively higher profitability than those who did not take such actions. However, the strategic management approach also requires that specific long- and short-term objectives should be set on the basis of the analysis of opportunities and threats. Such objectives did not appear as research results which were either positively or negatively associated significantly with the profitability of South African retail pharmacies. This indicates that retail pharmacists do not apply the strategic management approach in a comprehensive and integrated manner.

The lack of a comprehensive and integrated strategic management approach among South African retail pharmacists may be ascribed to a lack of management training. Pharmacists who have attended management courses achieved relatively better profitability than their counterparts with less or no management training. This corresponds with the view in strategic management literature that weaknesses should be transformed into strengths - in the case of the retail pharmacist, transforming the lack of management training (the weakness) to being trained in how to manage (a strength).

Management training should expose retail pharmacists to aspects of general management (including strategic management), marketing management, personnel management, purchasing management and financial management. The retail pharmacist and his staff cannot be financially naive in setting up and managing a pharmacy. In a free-market orientated economic system a pharmacy will be able to survive only if it can be managed at a profit over the long term.

This study contributes to the body of knowledge on pharmacy management by providing recommendations on how the profitability of retail pharmacies may be maintained and improved. Management training should convey these guidelines along with the management knowledge and skills that are necessary to manage a retail pharmacy in a free-market orientated system.

## 8.5 FURTHER RESEARCH

Further research on the management of retail pharmacies may be undertaken using multiple regression analysis. The variables found in this study to be significantly related to the profitability of retail pharmacies may be supplemented by other variables related to the management of retail pharmacies and be used to:

- determine whether the coefficient of determination ( $R^2$ ) of the models can be increased
- if the coefficient of determination ( $R^2$ ) can be increased to explain 80% or more of the variation in the dependent variable - profitability - to use such models for predictive purposes

Regression models for predictive purposes could be used advantageously by pharmaceutical groups to predict the expected profitability of pharmacies financed by them. The predicted profitability may be compared with the actual profitability with a view to taking corrective action, if necessary. The corrective action may consist in training, consultation, the selling of the pharmacy to another pharmacist or the closure of the pharmacy in order to protect their investment.

## 8.6 CONCLUSION

This study proposed that the retail pharmacist can manage in a competitive environment only if an integrated strategic management approach is adopted. A strategic management model for retail pharmacists is developed. The strategic management model suggests that in managing the retail pharmacy the pharmacist should distinguish between external, uncontrollable and internal, controllable variables. The internal, controllable variables involve global, business level and functional strategies (such as marketing, personnel, purchasing and financial management strategies). These strategies should be appropriate to the external, uncontrollable variables of the pharmacy and should be aimed at achieving the mission and objectives which have been set. One of these objectives is to maintain and increase profitability in order to survive in the competitive environment of a free-market orientated economy.



The variables which universally and significantly influence the profitability of South African retail pharmacies have not been researched before. This study consisted of a literature review and empirical research, involving a survey of retail pharmacists to collect data and their analysis by means of multiple regression models.

The study identifies and assesses several variables which are universally and significantly related to various measures of profitability of South African retail pharmacies. Recommendations on how these variables may be used advantageously are also proposed. This study therefore contributes to the management science by researching the said relationship.

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## The ethical code of conduct

THE SOUTH AFRICAN PHARMACY COUNCILRULES RELATING TO ACTS OR OMISSIONS IN RESPECT OF WHICH  
THE COUNCIL MAY TAKE DISCIPLINARY STEPS

The South African Pharmacy Council holds the view that a person registered with the Council should at all times endeavour to act in the interests of promoting public health. A pharmacist should maintain and enhance the honour and dignity of pharmacy and refrain from any activity which may discredit his profession.

The undermentioned acts or omission shall be deemed to be unethical or unprofessional conduct, subject to disciplinary steps by the Council under Chapter V of the Pharmacy Act, 1974: Provided that the said acts or omissions cannot be and are not intended to be a complete list of offences which may be punishable under the Council's disciplinary powers, since the Council is empowered by Chapter V of the Pharmacy Act, 1974, to inquire into and deal with any complaint, charge or allegation which may be brought before it:

**DISPENSING PRACTICES**

1. Failure to furnish advice or information for the safe and effective use of medicines supplied by him.
2. Substituting or omitting a medicine or ingredient of a medicine in a prescription without first obtaining the approval of the prescriber, unless the patient requests the omission of a medicine in a prescription: Provided that such omission shall be indicated indelibly on the prescription and the copy of the prescription: Provided further that the patient be advised of the implications of the omission of a medicine in a prescription as requested by him.

Page 2.

3. Failure, by a person dispensing a prescription, to indicate on the prescription that it was dispensed by him.
4. Failure to exercise proper and/or reasonable care in respect of and control over -
  - (a) the acquisition, storage, manufacture, dispensing, sale, supply or disposal of medicines, or of raw materials for the manufacture of medicines, for human or veterinary use;
  - (b) chemical and hazardous substances;
  - (c) access of the public to scheduled substances;
  - (d) the hygiene, cleanliness and neatness of a pharmacy;
  - (e) the appearance of a pharmacy, which failure may result in the dignity of the profession being harmed or potentially harmed.

#### ADVERTISING AND TOUTING

- 5 (1) Advertising of medicines or of his professional services in a manner -
  - (a) that is not factually correct;
  - (b) that is misleading;
  - (c) that harms the dignity or honour of the profession.
- (2) The advertising of medicines in a manner -
  - (a) that disparages any another product, medicine or substance;

Page /3.....

Page 3.

- (b) that refers to a discount on the price of medicine without also advertising the final price of the advertised medicine;
  - (c) that is aimed at, or may be interpreted or regarded as having as its aim, the promotion of the misuse or abuse or detrimental or injudicious or unsafe use of medicine.
- (3) The advertising of his professional service in a manner -
- (a) that disparages another pharmacist;
  - (b) that is calculated to suggest that his professional skill or ability or his facilities for practising his profession or rendering his professional services are superior to those of other pharmacists.
6. Touting or attempting to tout for prescriptions or business with regard to the sale of medicines by acting in a manner referred to in rule 5.

**RELATIONSHIP WITH COLLEAGUES AND OTHER  
HEALTH SERVICE PROFESSIONS**

- 7. Failure, in the interests of the patient, to co-operate with colleagues or members of other health service professions.
- 8. Criticism given in an unprofessional manner regarding the ability or professional competence of colleagues or members of other health service professions.
- 9. Disclosure of confidential information obtained in the course of his professional activities - except with the express consent of the patient or, in the case of a minor, with the consent of the parent or guardian, or where such information must be furnished to a person authorised by law to request it - unless such disclosure is in the interest of the patient.

Page /4.....

## GENERAL

10. Conducting his practice or himself in such a manner that the dignity or the honour of the profession is harmed.
11. *Repealed.*
12. Collusion with any person not registered with the Council to perform acts specially pertaining to the profession of a pharmacist.
13. Without first having obtained the approval of the Council -
  - (a) allowing a person who is not registered with the Council to conduct a separate practice or business in a retail pharmacy; and/or
  - (b) establishing a retail pharmacy in another practice or business; and/or
  - (c) conducting a retail pharmacy with or on behalf of a person who is not entitled to practise as a pharmacist; and/or
  - (d) allowing a person not entitled by law to practise as a pharmacist to use his name and qualifications.

Each application for approval in terms of this rule shall be considered on merit without reference to precedent, and each such approval may be granted on the terms and conditions the Council may determine, which approval may be withdrawn at the discretion of the Council without stating reasons.

14. Employment, in any capacity, in a pharmacy which he owns or manages or which is in his charge or which belongs to the body corporate or close corporation of which he is the managing director or manager, of a person whose name has been removed from the register of pharmacists or who has been suspended from practising his profession.

Page 5.

15. Practising as a pharmacist in premises -
  - (a) with direct access to such premises from the rooms of a medical practitioner, dentist or veterinarian;
  - (b) that permit of direct dispensing of medicines to patients in the rooms of a medical practitioner, dentist or veterinarian.
16. Failing, as the supervising pharmacist responsible for the practical training of a pharmacist intern or a pharmacist's assistant, to carry out his duties, or failing to attend in good time to the administrative duties attached to the registration of the pharmacist intern or the pharmacist's assistant.
17. Any act or omission which prevents or hinders or is calculated to prevent or hinder the Council or the Registrar from carrying out its or his statutory duties.
18. Failing to observe the provisions of any act, rule or regulation applying to pharmacists, or allowing a person under his supervision and control to contravene such provisions, or inciting, instigating, ordering or encouraging any person to contravene such provisions.
19. In any manner whatsoever bringing the Council or a member of the Council in his capacity as a member into disrepute.
20. Adopting and using a trading title for a retail pharmacy without the prior written approval of the Council.

Page /6.....

## Page 6.

21. Use by a retail pharmacy as its trading title or as a part of such title of the name of any other company, firm or business or any words indicating or suggesting that the pharmacy is associated with, belongs to or is in any way connected with such other company, firm or business, unless such other company, firm or business is registered with the Council as the owner or part owner of the pharmacy: Provided that the foregoing shall not prohibit the use by any pharmacy of any name, title or description under which such pharmacy carried on business immediately prior to 23 May 1975.
22. The performance by a pharmacist of professional acts for which he is inadequately trained or insufficiently experienced.
23. The sale or promotion of the sale of medicine in any manner which has its aim or may be interpreted or regarded as having as its aim, the promotion of the misuse or abuse or detrimental or injudicious or unsafe use of medicine.

(Published under Government Notice R.599 of 31 March 1989 and as amended on 5 July 1991 and 31 January 1992.)



## The questionnaire

**A GENERAL**

1. In which of the following two types of areas is your pharmacy situated? (Please circle the appropriate alternative.)

Central business district	1
Residential area	2

2. In which type of location is your pharmacy situated?

In a medical centre	1
In a shopping centre	2
Among other shops on the street front	3
Isolated from other shops	4

3. Please indicate whether your pharmacy is:

a Family Circle pharmacy	1
a Link pharmacy	2
a Plus pharmacy	3
a Bonus pharmacy	4
an independent pharmacy	5
none of the above	6

4. Indicate the form of business organisation of your pharmacy:

a sole proprietorship	1
a partnership	2
a close corporation	3
a private company	4

5. Please insert the postal code of your city or town:

--	--	--	--

**B MARKETING**

6. Please insert the business hours of your pharmacy:

Monday - Friday		to	
Saturday		to	
Saturday		to	
Sunday		to	
Sunday		to	

Total =

7. How much did you spend on each of the following types of promotion in the last financial year?

Rand

Advertising in newspapers	
Sponsorships	
Radio advertisements	
Other types of promotion (please specify) .....	

8. What percentage of total annual sales per year accounts for deliveries to your clients?

%

9. How many kilometres do your delivery vehicle(s) travel per day (on average)? (Please state the total km if you have more than one delivery vehicle):

kilometres

10. What is the total floor space of your pharmacy?

square metres (m<sup>2</sup>)

11. Which of the following methods of pricing do you apply? (If you apply more than one method of pricing, you may mark more than one "yes"). For explanations, see bottom of this page).

	YES	NO	n.a.
Percentage mark-up <sup>1</sup>	1	2	3
Recommended resale prices <sup>2</sup>	1	2	3
Breakeven analysis method <sup>3</sup>	1	2	3
Going-rate pricing <sup>4</sup>	1	2	3
None of the above	4		

12. Rank the following product lines according to stock turnover (velocity of circulation). 1 = highest stock turnover; 2 = 2nd highest stock turnover; .... 11 = lowest stock turnover.

Ranking

Prescribed medicines (schedules 3 - 7)	
Over the counter medicines (schedules 1 & 2)	
Patent medicines	
Health products (vitamins, natural products etc.)	
Baby products (other than medicines)	
Photographic products	
Cosmetics	
Toiletries	
Gifts (other than products already mentioned)	
Veterinary products	
Other types of products (please specify)	
.....	

13. How many prescriptions on average do you dispense per day?

--	--	--	--

prescriptions

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1 Means setting prices by adding a standard mark-up to the cost of the product.  
 2 Applying prices recommended by a manufacturer, a wholesale chain or other wholesaler.  
 3 Setting prices to break even on the costs of buying and marketing a product or to make the desired profit.  
 4 Basing prices largely on competitors' prices rather than on the pharmacy's costs or on demand.

**C PERSONNEL MANAGEMENT**

14. How many persons (including yourself) in each of the following categories are employed on a full-time basis by the pharmacy?

Qualified pharmacists	
Pharmacy assistants registered with the Pharmacy Council (SAPC)	
Pharmacy interns registered with the Pharmacy Council (SAPC)	
Sales personnel	
Nurses	
Administrative personnel	
Cleaner(s) / assistants	
Delivery personnel	

15. How many persons in each of the following categories are employed on a part-time basis by the pharmacy?

Qualified pharmacists / locums	
Pharmacy assistants registered with the SAPC	
Pharmacy interns registered with the SAPC	
Sales personnel	
Nurses	
Administrative personnel	
Cleaner(s) / assistants	
Delivery personnel	

16. During the past year, how many days' absenteeism were there for each of the following categories of employees?

Qualified pharmacists	
Pharmacy assistants registered with the SAPC	
Pharmacy interns registered with the SAPC	
Sales personnel	
Nurses	
Administrative personnel	
Cleaner(s) / assistants	
Delivery personnel	



21. How many of each of the following persons in your pharmacy actually place orders with wholesalers?

Qualified pharmacists	
Sales personnel	
Pharmacy interns registered with the SAPC	
Pharmacy assistants registered with the SAPC	

22. How many orders of stock do you place per day?

orders per day

23. How many of these orders could be regarded as urgent orders?

urgent orders per day

#### **E STRATEGIC MANAGEMENT**

24. Circle the number in the box that corresponds with your answer to each of the following questions:

	YES	NO
Have you defined the mission <sup>5</sup> of your pharmacy?	1	2
Is the mission stated in writing?	1	2
Do your personnel know what the mission of the pharmacy is?	1	2
Have you set long-term goals for the pharmacy? (for periods longer than a year) <sup>6</sup>	1	2
Have you set short-term goals for the pharmacy? (for periods shorter than a year)	1	2
Have you analysed the strengths and weaknesses of the pharmacy?	1	2
Have you analysed the opportunities of and threats to the pharmacy?	1	2
Do you have a management information system which can provide information at the end of each day on how well or badly the pharmacy is performing?	1	2
In your opinion, should pharmaceutical wholesalers provide training in pharmacy management as part of continued education?	1	2

5 The mission is a broad statement that defines the reason for the existence of the business by describing the products and services that are offered and the market to which they are supplied.

6 The goals can be incorporated in budgets.

**F FINANCIAL MANAGEMENT**

25. What percentage discount do you allow medical funds?

		%
--	--	---

**In order to measure the financial performance of your pharmacy we require information from your financial statements. Please staple a photocopy of the 1989/90 income statement and balance sheet of the pharmacy to the questionnaire. Alternatively, please answer questions 26 and 27.**

26. From your 1989/90 balance sheet, what was the value of each of the following items?  
(Note: Total assets = Total capital employed)

Fixed assets (after depreciation)	R.....
Plus: Stock	R.....
Plus: Accounts receivable	R.....
Plus: Cash	R.....
Plus: Other assets	R.....
	= Total Assets R

Capital employed	R.....
Plus: Loans/Borrowed funds	R.....
Plus: Current liabilities	R.....
	= Total Capital Employed R

27. From the 1989/90 annual income statement of your pharmacy, what were the figures for:

Sales	R.....
Less: Cost of goods sold	R.....
Less: Operating expenses	R.....
Less: Interest expenses	R.....
Less: Taxes	R.....
	= Net profit R

**G PARTICULARS OF PHARMACIST**

28. Your age?

29. Sex:

Male	1
Female	2

30. How many management courses have you attended so far?

management courses

31. How many years' experience do you have as a retail pharmacist?

years' experience

32. Is there any comment or remark you wish to make regarding the management of retail pharmacies:

.....

.....

.....

**THANK YOU VERY MUCH FOR YOUR PARTICIPATION.**

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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## Appendix C

## An example of the letter of notification to potential respondents

UNIVERSITEIT VAN SUID-AFRIKA

UNIVERSITY OF SOUTH AFRICA



UNIVERSITY OF SOUTH AFRICA

UNIVERSITY OF SOUTH AFRICA  
PO BOX 195  
MIDVALEDIE WERKSTAD  
VAN DIE WERKSTADDIE WERKSTAD  
VAN DIE WERKSTADDIE WERKSTAD  
VAN DIE WERKSTADDIE WERKSTAD  
VAN DIE WERKSTADTelephone no.(012) 429-4513 Fax no. (012) 429-4573  
1 October 1990

Mr MA Saad  
Sunray Chemists  
PO Box 55003  
NORTHLANDS  
2116

Dear Mr Saad,

**PROJECT: WHICH PHARMACIES ARE GOING TO SURVIVE?**

I refer to the article in the above regard which was published in the October issue of the *SA Pharmaceutical Journal* (page 342). The purpose of the above-mentioned project is to determine which retail pharmacies have the best chances of survival in the current competitive environment.

A scientific approach is necessary to achieve valid and reliable findings. For this reason a proportional stratified random sample has been selected. A questionnaire was drawn up based on proven methods used by the Human Sciences Research Council. The questionnaire was tested informally and formally.

The questionnaire concerns the management of retail pharmacies. Most questions merely require that the alternative that you agree with or that is applicable to your pharmacy should be encircled, or that a short answer be supplied. All information will be treated as strictly confidential and all participants will remain anonymous.

A summary of the research findings will be mailed to all participants on completion of the project.

You are one of the potential participants who have been selected by means of scientific sampling. Without your participation the findings of the study will be questionable. If you do not want to participate please notify me as soon as possible of your decision. If I do not hear from you within the next week I will assume that you are prepared to participate in the project.

Should you have any queries, you are welcome to contact me at tel. no. (012) 429-4513 (during the hours 8:00 to 16:00).

Yours faithfully,

Mr J Marx  
DEPARTMENT OF BUSINESS ECONOMICS

## Appendix D

## An example of the covering letter

UNIVERSITEIT VAN SUID-AFRIKA

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SOUTH AFRICAUNIVERSITY OF SOUTH AFRICA  
SOUTH AFRICATelephone no. (012) 429-4513 Fax no. (012) 429-4573  
16 October 1990

Mr MA Saad  
Sunray Chemists  
PO Box 55003  
NORTHLANDS  
2116

Dear Mr Saad,

**PROJECT: WHICH PHARMACIES ARE GOING TO SURVIVE?**

I refer to my letter dated 8 October 1990 in the above regard, as well as the article in the October issue of the *SA Pharmaceutical Journal* (page 342).

Included please find the questionnaire which is used in this project, as well as two prepaid envelopes. One prepaid envelope can be used to return the completed questionnaire. The second prepaid envelope should be used to confirm that you have completed and returned the questionnaire of Sunray Chemists. The confirmation slip should be mailed separately from the questionnaire to ensure that the information which you provide remains confidential and cannot be traced back to your pharmacy. The confirmation slip will also ensure that respondents receive the summary of the research findings, and will assist me in following up on non-respondents.

The questionnaire concerns the management of your pharmacy. Please complete the questionnaire as honestly and as objectively as possible. Most questions require that you simply circle the alternative which you agree with or which applies to your pharmacy, or that you fill in a short answer. The questionnaire may appear to be lengthy. It is, however, only because alternatives have been categorised to make the completion of the questionnaire more easy for you. If you are working under pressure at the moment I recommend that you spread the completion of the questionnaire over a couple of days rather than trying to fill it out in one session and eventually throwing it in the waste paper bin out of frustration (please do not succumb to this temptation). I would rather receive your questionnaire a few days later than not receive it at all.

If you incorrectly received an Afrikaans questionnaire I would appreciate it if you could notify me so that I can mail you an English copy. Should you encounter any difficulties in completing the questionnaire, please do not hesitate to contact me at the above-mentioned telephone number or to send me a fax.

Yours faithfully,

Mr J Marx  
DEPARTMENT OF BUSINESS ECONOMICS

*Hierdie brief is ook in Afrikaans beskikbaar*

## Appendix E

## An example of the follow-up letter

UNIVERSITEIT VAN SUID-AFRIKA

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SUID-AFRIKAUNIVERSITY OF SOUTH AFRICA  
SUID-AFRIKATelephone no.(012) 429-4513 Fax no. (012) 429-4573  
30 October 1990

Mr MA Saad  
Sunray Chemists  
PO Box 55003  
NORTHLANDS  
2116

Dear Mr Saad,

**PROJECT: WHICH PHARMACIES ARE GOING TO SURVIVE?**

I refer to my letter dated 16 October 1990 in the above regard and the questionnaire which accompanied it.

I note that I have not yet received your completed questionnaire and wish to enquire whether you have received the letter and the questionnaire, as well as whether you have had time to complete the questionnaire.

If you have not received the questionnaire, lost it or have incorrectly received an Afrikaans questionnaire I would appreciate it if you could notify me so that I can mail you another copy of the questionnaire. Should you encounter any difficulties in completing the questionnaire, please do not hesitate to contact me at the above-mentioned telephone number or to send me a fax.

Yours faithfully,

Mr J Marx  
DEPARTMENT OF BUSINESS ECONOMICS