

CHAPTER 1

ORIENTATION

“Traditionally, it has been thought that a product life cycle is as irreversible as a biological life cycle. Now there is mounting evidence that a turnabout in management thinking is underway. The new thinking is that it is actually possible to reverse the product life cycle” (Ayres & Steger, 1980: 66).

1.1 INTRODUCTION

The marketplace is changing at a radical pace as a result of major societal forces such as technological advances, globalisation, consumerism and increased competition (Kotler, 2000: 26). Organisations are doing a great deal of soul-searching, and many highly respected organisations around the globe are changing in a number of ways by following one or a combination of the following practices – re-engineering, outsourcing, e-commerce, benchmarking, forming alliances, becoming more market-centred, becoming global and/or local and decentralising.

According to Kotler (1997: 37) today’s organisations are facing their toughest competition ever and organisations should strive to retain customers by outperforming their competitors. To outperform the competition and to cater for the above-mentioned developments, organisations may utilise a decision-making tool such as the product life cycle concept. These developments increase the necessity for organisations to develop and monitor strategies and tactics in a formalised way.

Marketers are also rethinking their philosophies and concepts (Kotler, 2000: 34) and the major current themes are – relationship marketing, customer lifetime value, customer share, target marketing, individualisation, customer databases, integrated marketing communications, channels as partners, every employee being a marketer of the organisation, and model-based decision-making.

Various decision-making models exist, many marketing instruments are available to marketing decision-makers and various concepts such as the product life cycle have been developed and are available to assist marketing decisions. Marketing decisions are often based on models such as the Boston Consulting Group Matrix and the General Electrical Strategic model. Marketers of physical products and services furthermore use the marketing mix variables for tactical decision-making. Marketers manage their offerings through the various phases of the product life cycle using inter alia, the marketing mix variables in their decision-making.

The product life cycle concept allows marketing managers to plan for forecasting and strategic planning to manage their products and/or services through the various phases of their product life cycles. The purpose of the concept is to establish in which phase of its life cycle an organisation's product is and then to select the strategy best fitting the sales, cost, profit, competitor and customer conditions in that phase. The product life cycle concept is a valuable instrument available to **mainly large organisations** the management of their product(s) after commercialisation.

This study will investigate the product life cycle concept theory and its applicability as an instrument in the marketing decision-making for small manufacturing and small service organisations in South Africa. The empirical part of this study will be executed among small manufacturing organisations and small dealer organisations in Gauteng, South Africa. The product life cycle concept's marketing characteristics, marketing objectives and marketing strategies described by Kotler (2000: 316) will be tested within this target group.

1.2 THE PROBLEM STATEMENT

The product life cycle concept has been formulated as an explicit, verifiable illustration of sales behaviour and tested against actual data in many studies. The product life cycle concept is depicting sales over time and it is a relative good predictor of sales behaviour in certain market situations but there are

however certain questions pertaining to its practical applicability. When tested in an explicit form for given categories of goods, the product life cycle concept can be a useful tool for marketing planning and sales forecasting (Polli & Cook: 1969). Various writers in the academic and in the business press have however questioned the product life cycle concept (Dhalla & Yuspeh, 1976; Thorelli & Burnett, 1981; Midgley, 1981; Sproles, 1981; Tellis & Crawford, 1981; Mercer, 1993 and Grantham, 1999). There are furthermore different arguments against the application and validity of the product life cycle concept as a marketing instrument in the current constantly changing/dynamic environment.

As indicated in the literature search in paragraph 1.6 the product life cycle still seems to be the dominant component of marketing theory. However, there are many unanswered questions and criticism about the practical application of the product life cycle as a strategic marketing and marketing decision-making instrument in the current dynamic environment. For instance (Grantham, 1997: 4 – 10):

- There is still doubt about the applicability and validity of the product life cycle concept as a marketing instrument.
- No evidence exists of the efficacy of the product life cycle as a product life cycle concept / instrument to predict marketing strategy.
- It is still difficult to determine which phase of the product life cycle a product or service is in.

The application of the product life cycle concept for marketing decision-making has been tested in **mainly large organisations** around the globe but has not yet been researched and tested in South Africa among large or small organisations. The detailed literature review in chapter three reveals that the product life cycle concept has been applied to mainly large organisations and to a variety of products, industries and situations for instance: industrial products, houseware products, high technological products, fashion products, pharmaceutical products, international trade, functional strategic alignment, financial management, benchmarking and growth purposes (Rink, 1976; Ayal,

1981; Harrel & Taylor, 1981; Qualls, Olshavsky & Michaels, 1981; Thorelli & Burnett, 1981; Tigert & Farivar, 1981; Birou, Fawcett & Magnan, 1998; Grantham, 1999; Roden & Fox, 1999; Magnan, Fawcett & Birou, 1999 and Shankar, Carpenter & Krishnamaruthi, 1999).

It is evident from the literature that the product life cycle concept has been applied to many situations ranging from the manufacturing industry to financial management. These applications together with the results and recommendations will be discussed in chapter three.

1.3 THE PURPOSE OF THE STUDY

The purpose of the study is to test the underlying theory of the product life cycle concept. The literature study will be expanded by extensive empirical research to test the applicability of the product life cycle concept as a decision-making instrument among small organisations in Gauteng, South Africa. The identification of the marketing **characteristics**, marketing **objectives** and the application of marketing **strategies** within each phase of the product life cycle by small manufacturers and small dealer organisations in Gauteng form be the **core** of the empirical research.

1.4 RESEARCH OBJECTIVES

1.4.1 Primary objective

The primary objective of this study is to establish what the use and practical value of the product life cycle concept is in marketing decision-making in small manufacturing and small dealer organisations.

1.4.2 Secondary objectives

The secondary objectives of this study are:

- (a) To **determine** whether marketing decision-makers in small organisations in South Africa can identify in what phase of the product life cycle an individual product or a product range is.

- (b) To **identify** the application of marketing decision-making variables in the various phases of the product life cycle concept by small organisations.
- (c) To **determine** whether there are differences between small manufacturing and small dealer organisations with regard to the application of marketing decision-making variables in the various phases of the product life cycle concept.
- (d) To **identify** the importance of elements of the marketing mix variables by small manufacturing and small dealer organisations in the different product life cycle phases.
- (e) To **investigate** the **ability** of small organisations to **describe** the **marketing objectives** within the various product life cycle phases as indicated in the theory.
- (f) To **establish** the **ability** of small organisations to **identify** product life cycle **characteristics** as depicted in marketing literature.
- (g) To **investigate** the **ability** of small organisations to **link marketing strategies** with phases of the product life cycle theory according to the theory classification.
- (h) To **identify** the different **marketing objectives** that small organisations formulate for their products in each phase of the product life cycle.
- (i) To **establish** whether there are differences in the application of the product life cycle theory between small manufacturing and small dealer organisations.
- (j) To **identify** the factors influencing a product through the various phases of the product life cycle among small organisations in South Africa.
- (k) To **determine** the potential of the product life cycle concept for decision-making among small manufacturing and small dealer organisations in South Africa.
- (l) To **determine** who is responsible for marketing decision-making in small manufacturing and small dealer organisations

1.4.3 Research propositions

The following propositions are formulated and will be comprehensively motivated in the research design in chapter six and addressed in the analysis in chapter seven:

- **Proposition 1:**

There is a difference in the application of the product life cycle concept theory assumptions of small organisations in South Africa compared to Kotler's theory.

- **Proposition 2:**

Marketing managers of small organisations in Gauteng, South Africa use the product life cycle concept to strategically plan and manage their products through the various phases of the product life cycle.

- **Proposition 3:**

Small manufacturing organisations in Gauteng apply and use the product life cycle concept for marketing decision-making purposes.

- **Proposition 4:**

Small dealer organisations in Gauteng apply and use the product life cycle concept for marketing decision-making purposes.

- **Proposition 5:**

There is a significant difference between small manufacturing and small dealer organisations when applying and using the PLC concept for marketing decision-making purposes.

- **Proposition 6:**

Small manufacturing organisations and small dealer organisations in Gauteng, South Africa don't have a marketing function responsible for applying the product life cycle concept when marketing strategy is developed and marketing decisions are taken.

1.5 THE DEMARCATION AND SCOPE OF THE STUDY

This is an exploratory study aimed at investigating the use and application of the product life cycle concept as an instrument in marketing decision-making among small manufacturing organisations and small dealer organisations in Gauteng, South Africa. The following aspects should be noted:

- The study covers the theory on the product life cycle concept as revealed in the literature review.
- The empirical part of this study will focus on the use and application of the product life cycle concept theory in practice.
- The investigation will focus on the product life cycle assumptions derived from the literature namely characteristics, marketing objectives and marketing strategies. These assumptions based on the literature review are:
 - (a) The described characteristics associated with each phase of the product life cycle concept theory.
 - (b) The proposed marketing objectives associated with each phase of the product life cycle concept theory.
 - (c) The suggested marketing strategies associated with each phase of the product life cycle concept theory.
- Selected small manufacturing organisations and small dealer organisations will be used to test the use and applicability of the product life cycle concept as a marketing decision-making instrument.
- There will be no investigation into and questioning of the shape of the sales curve associated with the product life cycle concept.

Small organisations will include manufacturers of physical products and dealers, including wholesalers and retailers who rely heavily on the provision of the service component of their offering. The reasons for the decision to use small organisations and to execute the empirical study in Gauteng will be discussed and defended in the research design and procedure (chapter six).

1.6 LITERATURE REVIEW

The product life cycle concept represents a core element of marketing theory and has been so for the past 40 years. According to Kotler (2000: 315), Walker, Boyd & Larréché (1999: 146) and Churchill & Peter (1998: 234) every product or service has, by definition, a life cycle and how this is managed is the key to survival in business. The product life cycle has represented a central element of marketing theory for four decades, from its development in the 1950s, and its subsequent popularisation in the 1960s. The product life cycle concept has remained a stable feature of marketing teaching, despite evidence of its limited applicability.

Mercer (1993: 269) states that the product life cycle theory has been subjected to relatively little public criticism and only 20 percent of 271 papers published on this subject between 1971 and 1991 undertook further research into this subject and challenged its basic assumptions. Grantham (1999: 4) posits that attempts to validate the life cycle concept on an empirical basis have been restricted by the lack of definition as to which life is being examined, since different authors have different understandings of the product life cycle concept.

It is therefore necessary to do an extensive literature search on the product life cycle concept in order to derive the views of the majority of researchers. These views will be debated by the researcher and will make an important contribution to the foundation of the proposed study.

1.6.1 Description of the product life cycle

Many definitions of the product life cycle concept exist in marketing theory but with one common assumption - the product life cycle concept is a time-dependent model of sales. Kotler (1997: 344) describes the product life cycle as an important concept that provides insights into a product's competitive dynamics.

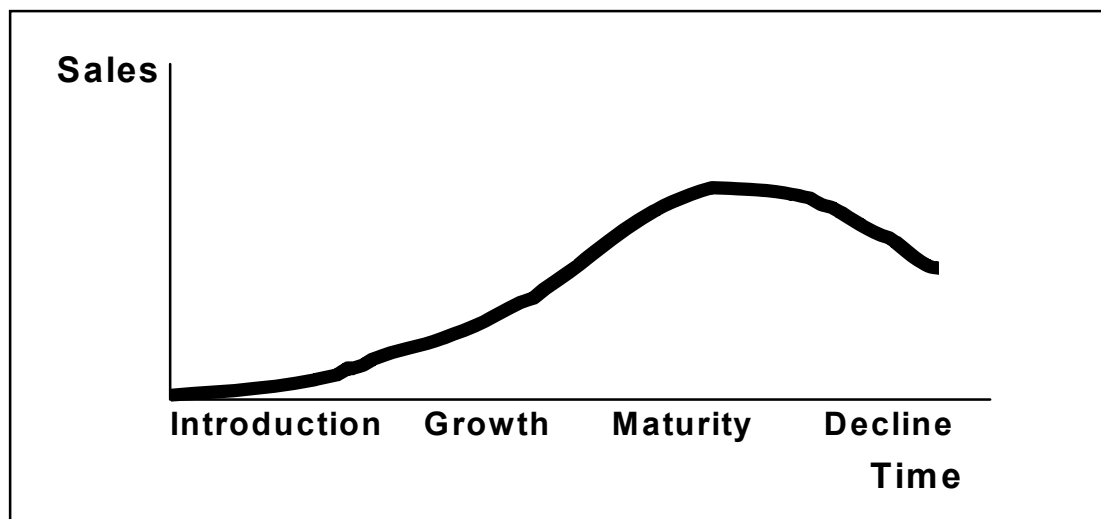
A definitional problem needs to be clarified to distinguish between *product category*, *product form* and *product brand*. Kotler (1997: 346) distinguishes

among these various concepts and reiterates that the product life cycle concept can be used to analyse a product category (e.g. liquor), a product form (e.g. white liquor) or a brand (e.g. Smirnoff Vodka).

The above-mentioned definitional problem will not be debated. These definitions will be used during the empirical part of this study where small manufacturing organisations and small dealer organisations will be asked to describe their best selling products/brands irrespective of whether they are a product category, product form and/or product brand.

According to Kotler (1997: 363) the product life cycle can be divided into four distinct phases – introduction, growth, maturity and decline phase (see Figure 1.1).

Figure 1.1: Phases in the product life cycle



Adapted from: Kotler (1997: 363)

Kotler (2000: 316) provides various characteristics, marketing objectives and strategies linked to the four phases in the product life cycle concept. These characteristics, marketing objectives and strategies are the culminated result of the work done mainly by Weber (1976: 13) and Doyle (1976: 5). A summary table will be provided in chapter three and the contents of this will be an important component of the empirical part of this proposed study.

Kotler (2000: 316) provides the following marketing characteristics, marketing objectives and marketing strategies within each of the product life cycle phases:

- **Characteristics**

The characteristics identified by Kotler (2000: 316) are classified according to sales, costs, profit, competitors and customers for each phase in the product life cycle. The characteristics can be described as follows:

- (a) **Sales characteristics** – sales are low in the introductory phase, rapidly rising in the growth phase, peaking in the maturity phase and decreasing in the decline phase.
- (b) **Cost characteristics** – high cost per customer in the introductory phase, average cost per customer in the growth phase, and low cost per customer in the maturity and decline phases.
- (c) **Profit characteristics** – profits are negative in the introductory phase, rising in the growth phase, high in the maturity phase and decreasing in the decline phase.
- (d) **Competitor characteristics** – few competitors in the introductory phase, increasing in the growth phase, stable in the maturity phase and decreasing in the decline phase.
- (e) **Customer characteristics** – innovators are testing the product in the introductory phase, early adopters trying the product in the growth phase, a middle majority testing the product in the maturity phase and the laggards trying the product in the decline phase.

- **Marketing objectives**

The marketing objectives described by Kotler (2000: 316) are linked to each of the four phases of the product life cycle. The main marketing objectives in each phase of the product life cycle can be illustrated as follows:

- (a) **Introductory phase** – to create awareness and trial by means of an intensive advertising and promotion campaign.
- (b) **Growth phase** - to maximise the market share.
- (c) **Maturity phase** - defending market share while profits can still be maximised.

- (d) **Decline phase** - marketing expenditures linked to the product will be reduced during the decline phase while the aim will be to milk the product.

- **Strategies**

The marketing strategies proposed by Kotler (2000: 316) are linked to various phases of the product life cycle. The different marketing strategies in each phase of the product life cycle are as follows:

- (a) **Product strategy** – a basic product will be offered in the introductory phase, product extensions and warranties will be offered during the growth phase, brands and individual product items will be diversified in the maturity phase and the weak models will be phased out during the decline phase.
- (b) **Price strategy** – a cost plus price will be charged during the introductory phase, prices will be set to penetrate the market during the growth phase, prices will be set to meet competitive prices during the maturity phase while prices will be cut during the decline phase.
- (c) **Distribution strategy** – distribution will be built selectively during the introductory phase, it will be intensive during the growth phase, distribution will be further developed during the maturity phase and the distribution will be more selective during the decline phase with the phasing out of unprofitable outlets.
- (d) **Advertising strategy** – building awareness of the product among early adopters and dealers in the introductory phase, building the awareness and interest in the mass market during the growth phase, stressing brand differences and benefits during the maturity phase and reducing the advertising level needed to retain hard core-loyal customers in the decline phase.
- (e) **Sales promotion strategy** – using heavy promotions to entice trial during the introductory phase, reducing the promotions to take advantage of the heavy consumer demand during the growth phase, increasing promotion to encourage brand switching in the maturity phase and reducing promotions to the minimum during the decline phase.

1.6.2 Criticism of the product life cycle concept

Some criticisms have been made against the product life cycle concept. Dhalla and Yuspeh (1976: 102) contended that the product life cycle concept is more misleading than useful. From a slightly different view there are organisations that have ignored the product life cycle concept and achieved great success through an imaginative marketing strategy. A classic example of the latter is the success achieved by DuPont's nylon during the 1940's and 1960's (Dhalla & Yuspeh, 1976: 107). This product, whose original uses were primarily military, would have gradually faded into oblivion had DuPont believed that the decline sales curve signalled death. Instead the management of DuPont boldly decided to enter the volatile textile market. Women were first induced to switch from silk to nylon stockings and the market was later expanded by converting teenagers and sub-teens to start wearing hosiery. Sales grew further when DuPont introduced tinted and patterned hosiery, thereby converting hosiery from a neutral accessory to a central element of fashion.

Other well-known brands such as Listerine Antiseptic, Marlboro and Seven-up in contrast to DuPont, stretched their brands over many decades by sound planning based on the application of the product life cycle concept (Dhalla & Yuspeh, 1976: 107 - 108).

- Listerine succeeded in retaining its lion's share of the mouthwash market despite heavy competitive pressures and the introduction of strongly supported new brands.
- Marlboro edged up to a top place in a highly segmented filter cigarette market by focusing on the same basic theme – only developing different variations of it.
- Seven-up's growth had been impeded because of its image strictly as a mixer. They had more room for expansion as a result of taking the "Uncola" position against Coke and Pepsi.

In Kotler (2000: 315) the critique is raised that the product life cycle concept lacks what living organisms have, namely, a fixed sequence of phases and a

fixed length of each phase. Marketers can therefore seldom tell in what phase of the product life cycle an individual product or a product range is.

Underlying the above-mentioned criticisms, are five basic issues that must be faced in any meaningful application of the life cycle concept (Day, 1981: 60):

- How should the product-market be defined for the purpose of life cycle analysis?
- What are the factors that determine the progress of the product through the phases of the life cycle?
- Can the present life cycle position of the product be unambiguously established?
- What is the potential for forecasting the key parameters, including the magnitudes of sales, the duration of the phases and the shape of the curve?
- What role should the product life cycle concept play in the formulation of competitive strategy?

The controversy over whether or how marketing decision-makers actually apply the product life cycle concept to their own individual decision-making needs resulted in a series of articles in the *Journal of Marketing* (1981). This series dealt with the theoretical product life cycle concept for product life cycle analysis (Thorelli & Burnett, 1981: 98–108; Midgley, 1981: 109-115, Sproles, 1981: 116-124 and Tellis & Crawford, 1981: 125–132). The above-mentioned articles together with Mercer's view (1993: 269-274) have a common theme of criticism on the value of the product life concept in practice, doubt about the validity of the product life cycle concept and the need for further investigation into the product life cycle concept in practice.

Midgely (1981: 114) identified the need for the development of a more sophisticated theory of the product life cycle in order to know more about the shape of the product life cycle and duration of each phase, the magnitude of adoption and inter-purchase time distributions.

Mercer (1993: 269) argued that the product life cycle of the brand leaders is indeed more stable, and much longer, than some previous work might have suggested.

Sproles's (1981, 116 - 124) view is that the clear value of life cycle analysis is still to be proven. Tellis and Crawford (1981: 131) identified the problem of the product life cycle concept as being that sales are modelled primarily as a function of time and are expected to produce curves that display growth, and levelling and decline.

Grantham (1997: 9) explored the arguments for and against the validity of the product life cycle concept used as a marketing instrument in this present, dynamic environment and made the following conclusions:

- There is serious doubt about the validity of the product life cycle as a marketing instrument.
- It is still difficult to determine in which phase of the cycle the product is.
- The value of the product life cycle for forecasting purposes is limited.
- There is still doubt and no evidence of the efficacy of the product life cycle as an instrument to prescribe marketing strategies.

The above-mentioned criticism and doubt about the product life cycle concept theory and its practical application is indicative that the product life cycle concept debate is still continuing (Sproles, 1981: 116–124; Tellis and Crawford, 1981: 131; Mercer, 1993: 269 and Grantham, 1997: 9). There are still questions about the effectiveness of the product life cycle concept as a marketing decision-making instrument and there is a definite need for empirical proof of the application of the product life cycle concept theory in practice.

1.6.3 Identified problems with the product life cycle concept

Many gaps have been identified in marketing literature that link very closely with the criticism raised during the previous four decades. The following **gaps** were identified and will be motivated in chapter three:

- The product life cycle theory has been exposed to comparatively little suspicion (Grantham, 1997: 4).
- On-going scepticism over the product life cycle theories (Dhalla and Yuspeh, 1976: 102 - 105). It is interesting to note that this article is one of the most quoted on this specific topic.
- There is a definite need for the development of a more sophisticated theory of the product life cycle in order to know more about the shape of the product life cycle (Midgely, 1981: 114).
- The clear value of the product life cycle analysis for entrepreneurs is still to be proven (Sproles, 1981: 123).
- The application of the product life cycle theory for strategic planning across functional areas has been overlooked (Birou, Fawcett & Magnan, 1998: 38).
- The product life cycle itself is insufficiently uniform to provide a basis for decision-making and therefore for planning (Doyle, 1976: 3).
- The product life cycle is empty of empirical generality and positively dangerous if used as a guide for action (Grantham, 1997: 9).

The marketing characteristics, marketing objectives and strategies provided by Kotler (2000: 316) are restricted to the marketing of physical products and no published evidence could be found where this has been evaluated for the marketing of services, given their intangible nature.

The research design will be discussed in the next part of this chapter.

1.7 RESEARCH DESIGN

A research design is a blueprint for conducting a research project. It details the procedure necessary for obtaining the required information, and its purpose is to design a study that will test hypotheses or propositions of interest, determine possible answers to the research questions and provide the information needed for decision-making (Malhotra, 1996: 21–22). Formulating a research design involves the following steps:

- Secondary data analysis
- Qualitative research
- Definition of the information needed
- Methods of collecting quantitative data
- Questionnaire design
- Sampling process and sample size
- Plan of data analysis

The researcher will make use of exploratory research to clarify the exact nature of the problem at hand: the applicability of the product life cycle as a marketing decision-making instrument by small organisations in Gauteng. The steps mentioned above would be briefly explained in the next section and a detailed description of each step will be done in chapter six.

1.7.1 Secondary data analysis

An extensive literature search on the product life cycle concept and its strategic application will be conducted by consulting a wide range of relevant scientific journals and research publications. The literature on strategy, product management, and the product life cycle will be discussed in chapters two to four.

1.7.2 Qualitative research

No qualitative research will be conducted, as the questionnaire will be based on the information obtained from the literature search as discussed in chapters two to four.

1.7.3 Definition of the information needed

Views on the applicability of the product life cycle concept will be derived from the extensive literature research. The literature research will include information on strategy, empirical results conducted on the PLC concept, PLC application areas, problems and criticism associated with the PLC concept.

1.7.4 Methods of collecting quantitative data

According to Dillon et al (1993: 158 - 172) versatility, quantity of data, sample control, quality of data, response rate, speed, cost and uses, influence the choice of a survey method. After considering all the advantages and disadvantages of the various methods (mail intercept, personal interview, mail, telephone and e-mail), a decision was taken to make use of personal face-to-face interviews. A comprehensive discussion on the various methods and the reason(s) for the selection of personal face-to-face interviews will be done in chapter six.

1.7.5 Questionnaire design

The questionnaire has been developed from the literature derived from chapters one to four and the principles associated with questionnaire design was applied. Before the questionnaire was finalised it was pre-tested among marketing decision-makers in the selected survey population and the industry standard for pre-testing was applied. Questionnaire design will be described in chapter six.

1.7.6 Sampling process and sample size

The purpose of sampling is to obtain a representative sample and is often referred to as being more of an art than a science. Sampling decisions are often complex and there is no single "right" way to make them. Two general sample categories are available according to Dillon et al (1993: 221-230):

- (a) *Probability samples* where each element in the sample frame has a known probability and equal chance to be selected (Dillon et al, 1993: 221).
- (b) *Non-probability samples* where the researcher is not able to determine the chance of a single element from the sample frame of being selected (Dillon et al, 1993: 229).

Probability sampling methods share two important characteristics according to Dillon et al (1993: 221):

- (a) Before the selection of the sample, it is possible to determine each potential sample of a certain size that can be chosen from the population and what the probability will be for selecting each sample.
- (b) Each sample unit has a known, non-zero chance of being selected.

A **probability sampling design** will be used in this research to draw a representative sample of small organisations from an existing database. This design guarantees that every individual in the target population has an equal chance of being selected. The sample units will be randomly selected where after, the personal face-to-face interviews will be conducted.

- **Sample size**

A representative sample obtained from a selected database of small organisations in Gauteng will be drawn and each individual organisation will be selected according to predetermined criteria. Preliminary criteria for inclusion in the sample can vary from annual turnover, number of staff, years in existence and market share to the type of business (manufacturers and dealers). The most stringent criteria will be used and the following sample size related issues will be discussed in chapter six:

- Defining the population
- Identification of the sample frame
- Selection of the sampling method
- Determination of the actual sample size

1.7.7 Plan of data analysis

The plan for data analysis will be done after the questionnaire has been developed and all the aspects associated with data analysis will be discussed in chapter six.

The following aspects will be addressed:

- **Data capturing and coding**

Coding involves the assignment of numerical values (codes) to represent a specific response to a specific question (Dillon et al, 1993:37). Data codes

will be assigned and the data will be captured on Microsoft Access to ensure that no data capturing mistakes will be made. After data capturing the data will be exported to SPSS and/or Microsoft Excel and/or Statistica Computer Software for processing purposes.

- **Cross-tabulation**

Cross-tabulation is a statistical procedure commonly used to describe the responses of two or more variables. A frequency distribution describes one variable at a time, but cross tabulation is a statistical technique that describes two or more variables simultaneously. Critical aspects in the questionnaire will be cross-tabulated with classification or demographical questions in the questionnaire.

- **Validity and reliability testing**

Reliability is a necessary but sufficient condition for validity (Dillon et al, 1993: 294). Reliability refers to the extent to which measures are reproducible (Dillon et al, 1993: 293). A reliability coefficient can be determined where the sum of item variances will be compared to the variance of the sum scale. This coefficient can vary from 0 to 1 and a value of 0.7 (70%) or less will indicate unsatisfactory internal consistency reliability (Malhotra, 1996: 305 - 306). The Cronbach's alpha score for the measurement of internal consistency in the proposed study will test the construct reliability.

Validity, according to Malhotra (1996: 306), is the extent to which differences in observed scale scores reflect true differences among objects on the characteristic being measured, rather than systematic or random errors.

A researcher can utilise various types of validity to prove whether he/she has measured the truth. Researchers can use content validity, criterion validity, and construct validity to measure the validity of research results.

According to Grimm and Yarnold (2000: 104) content validity is concerned with the degree to which an instrument assesses all relevant aspects of the conceptual or behavioural domain that the instrument is intended to measure. Criterion validity concerns how accurately an instrument predicts a well-accepted indicator of a given concept, or a criterion (Grimm & Yarnold, 2000: 106). Construct validity determines whether a given measure, or operational definition, actually assesses the underlying conceptual variable, or construct, that the measure is intended to represent (Grimm & Yarnold, 2000: 111).

The subsequent choice of a validity assessment method by the researcher will be dependent on the type of question format used in the questionnaire. This will be discussed in chapter six after the questionnaire has been compiled.

1.8 THE IMPORTANCE AND VALUE OF THE STUDY

1.8.1 Importance of this study

It is important to test the applicability of the product life cycle theory in the current dynamic environment because surveyed literature indicates that the application of the product life cycle is being questioned, based on empirical studies conducted mainly among **large** manufacturing organisations internationally. Yet, to date no empirical research has been undertaken on the applicability of the product life cycle concept and the use thereof for marketing decision-making in any South African industry.

1.8.2 Value of this study to small organisations

The literature study conducted indicates that no empirical research on the applicability of the product life cycle for decision-making has been undertaken in South Africa. It revealed that empirical research mainly concentrated on large organisations internationally. No published research could be found which specifically focused on small organisations in South Africa.

This study will make a contribution to the body of knowledge with respect to marketing theory in general and the product life cycle concept theory in particular.

The researcher intends to investigate the application of the product life cycle concept among marketing decision-makers in small manufacturing organisations and small dealer organisations to effectively use the product life cycle to manage a single product and/or a product range through the various phases of the product life cycle.

1.9 CLARIFICATION OF KEY CONCEPTS

Before the outline of the different chapters can be discussed it is necessary to clarify the following key concepts that will be used as an integral part of the literature and empirical parts of this study:

- **Organisation**

The term organisation will be used in this study as an all inclusive term for the various types of companies, businesses or enterprises ranging from manufacturing, services, business-to-business to non-profit sectors.

- **Dealer**

Dealers as intermediaries in the distribution channel, can be divided into two categories - retailers and wholesalers. These two dealer categories can be classified according to how they derive their gross sales income (Van der Walt, Strydom, Marx & Jooste, 1993: 270).

Dealers are establishments, which derive more than 50% of their gross sales income from sales to the general public for private and household consumption. Wholesalers are establishments, deriving 50% or more of their gross sales income from wholesale sales, i.e. sales to other businesses and organisations. The term *dealer* in this study will be used as an inclusive term

for *retailers* and *wholesalers* who rely extensively on customer service to develop a sustainable competitive advantage.

Dealers and manufacturers as part of the environment in which this study will be executed will be discussed and described in chapter four.

- **A product**

A product is any offering that can satisfy a need or want (Kotler, 2000: 11). According to Kotler (1997: 467) five categories of product offers can be distinguished:

- (a) A pure tangible product with no service accompanying it.
- (b) A tangible product with accompanying services where the offer consists of a tangible good accompanied by one or more services to enhance its consumer appeal.
- (c) A hybrid product where the offering consist of equal parts of services and goods.
- (d) A major service with accompanying minor products and services.
- (e) A pure service where the offering consists primarily of a service.

- **Service**

A service is any act or performance that one party can offer to another that is essentially intangible and does not result in the ownership of anything. Its production may or may not be tied to a physical product (Kotler, 1997: 467).

- **Business-to-business marketing**

The term business marketing has evolved from what historically has been known as industrial marketing. Business marketing involves the performance of those marketing activities directed toward organisational customers rather than toward consumers who buy goods and services for personal consumption (Haas, 1995: 5). What distinguishes business marketing from consumer goods marketing is the intended use of the product and the intended consumer. Sometimes the products are identical, but a

fundamentally different marketing approach is needed to reach the organisational buyer (Hutt & Speh, 1998: 5).

- **Marketing mix variables**

Marketing mix variables are strategic tools organisations use to create value for customers and achieve organisational objectives. Marketing mix variables include the marketing mix instruments (4Ps) of the traditional marketing mix: product, price, place and promotion (Churchill & Peter, 1998: 22). Marketing mix variables also include the marketing mix instruments (7Ps) of the expanded marketing mix for services: product, price, place, promotion, people, processes and physical evidence (Lovelock, 1996: 37-233).

- **Marketing decision-making variables**

The researcher views marketing decision-making variables as a much broader concept than just the marketing mix variables (Ps). Marketing decision-making variables can include variables such as segmentation, targeting and positioning that the marketer can use as a basis for decision-making.

1.10 CHAPTER OUTLINE

The current chapter described the problem statement, objectives, propositions and literature linked to the investigation of the application of the product life cycle concept for marketing decision-making purposes. The rest of this thesis will be divided into the following chapters:

Chapter 2: Theoretical foundation: Strategy and the role of marketing strategy

This chapter will provide a theoretical discussion on strategy, strategy planning and formulation on corporate, business and functional levels in large and small organisations. The role of the marketing function will be highlighted together with the marketing decision-making variables for both physical products and services.

Chapter 3: Literature survey: Product management and the product life cycle

This chapter will explain the processes of product and market development with an emphasis on the utilisation of the product life cycle concept as a management instrument to manage products through the various phases of the product life cycle. The chapter will include literature on the different application areas, criticisms, application gaps and the validity of the product life cycle concept.

Chapter 4: Small business environment in South Africa

This chapter will be devoted to the environment in which the empirical research will be conducted. It will include a universal perspective on the importance of small organisations to global economies. The chapter will include a discussion on the White Paper for the Development and Promotion of SMMEs (Small, Medium and Micro Enterprises) in South Africa. The chapter will conclude with a description of the small manufacturing organisations and dealer organisations to be used in the empirical part of this study.

Chapter 5: Problem statement and research propositions

This chapter will provide a description of the problem statement and the various research propositions linked to the primary and secondary objectives associated with this study.

Chapter 6: Research design and procedure

The research methodology will be discussed with special reference to the population, sample, measuring instrument, and qualification of the variables and the proposed statistical analysis.

Chapter 7: Results and interpretation

This chapter will present the findings from the empirical research ranging from general research findings to more specific results. The results will be reported on a question-by-question format for the total sample and will then be broken

down into results per organisational type – small manufacturing organisations and small dealer organisations.

Chapter 8: Conclusions, implications and recommendations for future research

The final chapter will present all the major findings. The chapter will be concluded by a discussion on the limitations of the study and will be enhanced by recommendations for future research.

1.11 CONCLUSION

The dynamic nature of today's marketplace places a responsibility on organisations to anticipate, to plan and to respond effectively to customer needs. Within this environment the development of a marketing strategy can be critical to the organisation's profitability and sustainable competitive advantage. This study will investigate the potential of the product life cycle concept as a marketing decision-making instrument and an instrument used in marketing decision-making.

The next chapter will be devoted to strategy, strategy development and the role of the marketing function.