

CHAPTER 5

PROBLEM STATEMENT AND RESEARCH PROPOSITIONS

“The problem statement contains the need for the research project. The problem is usually represented by a management question. It is followed by a more detailed set of objectives” (Cooper and Schindler, 1998: 600).

5.1 INTRODUCTION

The problem statement and the various research propositions will be discussed and special reference will be given to the different research propositions formulated in the introductory chapter.

5.2 PROBLEM STATEMENT

Defining the research problem is perhaps the most important responsibility of the researcher (Dillon et al, 1993: 25). It is the responsibility of the researcher to assure that the problem at hand is defined accurately and precisely.

The product life cycle concept has been formulated as an explicit, verifiable model of sales behaviour. While the product life cycle concept leaves some question as to its applicability, it is clearly a realistic model of sales behaviour in certain market situations. It is quite eminent from the literature review presented in chapters two and three that the applicability of the product life cycle concept was tested in **mainly large organisations**, globally but no published research on the application of the product life cycle concept in South Africa was found.

When tested in an explicit form for given categories of products, the product life cycle concept can be a useful tool for marketing planning and sales forecasting (Polli and Cook, 1969: 385). Various writers in the academic and in the business press have however questioned the product life cycle concept. There are

furthermore major criticisms and problems against the application of the product life cycle concept as a marketing tool as depicted in Table 3.2 in chapter three.

The application of the product life cycle concept for marketing decision-making has been tested in mainly large organisations around the globe but not yet researched and tested locally. This **gap** provides substance and relevance to the execution of local research on the applicability of the product life cycle for marketing decision-making purposes. The White Paper (1995: 15) discussed in chapter four further strengthens the need of research by indicating that the volume of research with practical application on small organisations in South Africa is still limited.

The product life cycle concept has many application areas, ranging from product management, forecasting, and international trade, linking manufacturing to marketing, and strategic planning as indicated in Table 3.1 in chapter three.

Evidence from the literature search in chapter three indicates that the product life cycle seems still 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 marketing decision-making tool in the current dynamic environment:

- There is still doubt about the practical use of the product life cycle concept as a marketing tool.
- There is still doubt about the practical value of the product life cycle concept in practice.
- No evidence of the efficacy of the product life cycle concept as a tool to assist in formulating marketing strategy has been found.

- It is still difficult to determine in which phase of the product life cycle a product or service is in.
- The problem with the product life cycle concept is that sales are modelled primarily as a function of time and are expected to produce curves that display growth, levelling and decline.
- The product life cycle concept is still empty of empirical generality.
- The product life cycle concept itself is insufficiently uniform to provide a basis for decision-making.

By exploring the potential of the product life cycle to act as a marketing decision-making tool the empirical part of this exploratory study will endeavour to identify the ability of marketing decision-makers in small organisations in South Africa to apply the product life cycle concept.

5.3 RESEARCH PROPOSITIONS

According to Cooper and Schindler (1998: 43) the research literature disagrees about the meaning of the terms proposition and hypothesis. A research proposition is a statement about the concepts that may be judged as true or false if it refers to observable phenomena. When a proposition is formulated for empirical testing, it is called a hypothesis. As a declarative statement, a hypothesis is of a tentative and conjectural nature (Cooper et al: 1998: 43).

The researcher decided to use research propositions rather than hypotheses for the following reasons:

- The empirical part of this study is of an exploratory nature.

- The research is not based on previous models and can therefore be approached from a more pragmatic view, which will be more meaningful.

The following propositions were formulated in chapter 1 and will be motivated in the next section:

5.3.1 Proposition 1

The dynamic nature of today's global market places a premium on an organisation's ability to anticipate and to respond to customer needs as well as changing pressures. By using the product life cycle within this environment a marketing strategy can be developed and marketing decisions can be taken. As highlighted in the literature review the application of the product life cycle concept was empirically tested in mainly large manufacturing organisations (Agarwal: 1997, 571-585 and Magnan et al, 1999: 239-253). For this reason the following proposition was formulated:

- **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.

5.3.2 Propositions 2, 3, 4 and 5

Much has been written about the product life cycle concept and its implication for marketing strategy. Yet the subject remains a controversial one. Most people would agree that products pass through various phases over time (i.e. introduction, growth, maturity and decline).

The controversy that exists is whether the product life cycle concept has any utility for marketing planning and decision-making and whether the product life cycle concept has any practical use for the marketing manager (Doyle, 1976: 1 and Mercer, 1993: 274).

Apart from the criticism against the practical use and application of the product life cycle concept Thorelli & Burnett (1981: 97-108) and Magnan (1999: 239-253) is of the view that the product life cycle concept is a useful tool to be utilised by marketing managers.

Magnan et al (1999: 240) strongly emphasise that the product life cycle patterns provide an underlying structure to the life of products, allowing the product life cycle concept to serve as a planning framework in strategy development and as a common denominator for the co-ordination of functional strategies. Once the life cycle phases have been identified, predictive guidelines can be drawn to aid in the strategic planning process.

Thorelli and Burnett (1981: 108) pointed out that an intriguing and valuable characteristic of the product life cycle is that it is highly normative, which allows practitioners and researchers to make fairly strong statements regarding strategies to implement under the various phases.

Kotler (2000: 316) provides valuable information on product life cycle characteristics, objectives and strategies within the various product life cycle phases as described in chapter one and summarised in Table 3.5.

By using these characteristics, objectives and strategies the researcher wants to determine whether:

- Marketing managers of small organisations know the different **characteristics** in each of the four product life cycle phases as identified by Kotler (2000: 316).
- Marketing managers of small organisations set different **marketing objectives** during the four phases of the product life cycle as identified by Kotler (2000: 316).

- Marketing managers of small organisations apply the different **marketing strategies** during the four phases of the product life cycle as identified by Kotler (2000:316).

The following research propositions were formulated in the context of Kotler's view as described above:

- **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.

In order to determine whether small manufacturing and small dealer organisations use and application of the product life cycle concept for marketing decision-making purposes as formulated in propositions 3 and 4 differ significantly the following research proposition was formulated:

- **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.

5.3.3 Proposition 6

The literature review in chapter three clearly indicated that the product life cycle concept is applied by large organisations in developing marketing strategies and used as the basis for marketing decision-making. The application of the product life cycle concept as decision-making tool was empirically tested in mainly large organisations.

The following proposition was set in the context of the above-mentioned:

- **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.

Research proposition 6 will be important for cross-tabulation purposes to determine whether there are significant differences in the application of the product life cycle concept as decision-making tool between small manufacturing and small dealer organisations with a marketing function and small organisations without a marketing function.

5.4 CONCLUSION

This chapter reiterated and summarised criticism against the product life cycle concept as indicated in the literature review in chapters one, two and three. The problem statement formulated in chapter one together with the propositions formulated in this chapter will form the basis of the empirical study to follow.

The research design and procedures will be discussed in the next chapter.