8.1 INTRODUCTION

In the previous chapter the research results were discussed. This final chapter focuses on the main conclusions, recommendations and the limitations of this exploratory study. Specific emphasis will be placed on the application outcomes of the product life cycle concept. Final conclusions will be drawn on the use and application of the product life cycle concept as an instrument for marketing decision-making. Recommendations for future research will also be made.

8.2 PRODUCT LIFE CYCLE APPLICATION OUTCOMES

As mentioned in the description of this study’s purpose (paragraph 1.3 in chapter one) the focus of the study was to expose marketing decision-makers in small manufacturing organisations and small dealer organisations to Kotler’s PLC assumptions. These assumptions comprise of marketing characteristics, marketing objectives and marketing strategies within each phase of the product life cycle.

Table 8.1 illustrates how marketing decision-makers in small manufacturing organisations and small dealer organisations applied the product life cycle concept theory compared to the product life cycle concept theory provided by Kotler (2000: 316).
Table 8.1: Characteristics, marketing objectives and strategies in the various phases of the product life cycle as proposed by Kotler (compared to how marketing decision-makers from small manufacturers and small dealers in Gauteng apply this concept)

<table>
<thead>
<tr>
<th>Product life cycle phases</th>
<th>Introductory phase</th>
<th>Growth phase</th>
<th>Maturity phase</th>
<th>Decline phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales characteristics</td>
<td>Low Sales</td>
<td>Rapidly growing sales</td>
<td>Peak sales</td>
<td>Declining sales</td>
</tr>
<tr>
<td>- Kotler</td>
<td>Low sales</td>
<td>Rapidly growing sales</td>
<td>Peak sales</td>
<td>Declining sales</td>
</tr>
<tr>
<td>- Sample results</td>
<td>High cost per customer</td>
<td>Average cost per customer</td>
<td>Low cost per customer</td>
<td>High cost per customer</td>
</tr>
<tr>
<td>- Sample results</td>
<td>High cost per customer</td>
<td>Average cost per customer</td>
<td>Low cost per customer</td>
<td>High cost per customer</td>
</tr>
<tr>
<td>Cost characteristics</td>
<td>High cost per customer</td>
<td>Average cost per customer</td>
<td>Low cost per customer</td>
<td>High cost per customer</td>
</tr>
<tr>
<td>- Kotler</td>
<td>High cost per customer</td>
<td>Average cost per customer</td>
<td>Low cost per customer</td>
<td>High cost per customer</td>
</tr>
<tr>
<td>- Sample results</td>
<td>High cost per customer</td>
<td>Average cost per customer</td>
<td>Low cost per customer</td>
<td>High cost per customer</td>
</tr>
<tr>
<td>Profit characteristics</td>
<td>Negative profits</td>
<td>Increasing profits</td>
<td>High profit</td>
<td>Declining profits</td>
</tr>
<tr>
<td>- Kotler</td>
<td>Increasing profits</td>
<td>High profit</td>
<td>Declining profits</td>
<td></td>
</tr>
<tr>
<td>- Sample results</td>
<td>High profit</td>
<td>Declining profits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competitor Characteristics</td>
<td>Few competitors</td>
<td>Growing number of competitors</td>
<td>Stable number of competitors</td>
<td>Declining number of competitors</td>
</tr>
<tr>
<td>- Kotler</td>
<td>Growing number of competitors</td>
<td>Stable number of competitors</td>
<td>Declining number of competitors</td>
<td>Declining number of competitors</td>
</tr>
<tr>
<td>- Sample results</td>
<td>Growing number of competitors</td>
<td>Stable number of competitors</td>
<td>Declining number of competitors</td>
<td>Declining number of competitors</td>
</tr>
<tr>
<td>Marketing objectives</td>
<td>Create product awareness and trial</td>
<td>Maximise market share</td>
<td>Maximise profit while defending current market share</td>
<td>Reduce expenditure and milk the brand</td>
</tr>
<tr>
<td>- Kotler</td>
<td>Heavy/intensive advertising</td>
<td>High turnover</td>
<td>Maximise sales</td>
<td>Reduced prices</td>
</tr>
<tr>
<td>- Sample results</td>
<td>Heavy/intensive advertising</td>
<td>High turnover</td>
<td>Maximise sales</td>
<td>Reduced prices</td>
</tr>
<tr>
<td>Product strategy</td>
<td>Offer a basic product</td>
<td>Offer product extensions, service and warranties</td>
<td>Diversify</td>
<td>Phase out the weak performers</td>
</tr>
<tr>
<td>- Kotler</td>
<td>Diversify</td>
<td>Diversify</td>
<td>Phase out the weak performers</td>
<td></td>
</tr>
<tr>
<td>- Sample results</td>
<td>Diversify</td>
<td>Diversify</td>
<td>Phase out the weak performers</td>
<td></td>
</tr>
<tr>
<td>Price strategy</td>
<td>Charge cost plus</td>
<td>Price to penetrate the market</td>
<td>Price to match or beat competitors</td>
<td>Cut price</td>
</tr>
<tr>
<td>- Kotler</td>
<td>Charge cost plus</td>
<td>Price to match or beat the price of competitors</td>
<td>Cut price</td>
<td></td>
</tr>
<tr>
<td>- Sample results</td>
<td>Charge cost plus</td>
<td>Price to match or beat the price of competitors</td>
<td>Cut price</td>
<td></td>
</tr>
<tr>
<td>Distribution strategy</td>
<td>Build selective distribution</td>
<td>Build intensive distribution</td>
<td>Build more intensive distribution</td>
<td>Selective to phase out the unprofitable outlets</td>
</tr>
<tr>
<td>- Kotler</td>
<td>Build selective distribution</td>
<td>Build more intensive distribution</td>
<td>Selective to phase out the unprofitable outlets</td>
<td></td>
</tr>
<tr>
<td>- Sample results</td>
<td>Build selective distribution</td>
<td>Build more intensive distribution</td>
<td>Selective to phase out the unprofitable outlets</td>
<td></td>
</tr>
<tr>
<td>Advertising strategy</td>
<td>Build product awareness</td>
<td>Build awareness and interest in the market</td>
<td>Highlight brand differences and benefits</td>
<td>Reduce the level to retain loyal customers</td>
</tr>
<tr>
<td>- Kotler</td>
<td>Build product awareness</td>
<td>Build awareness and interest in the market</td>
<td>Highlight brand differences and benefits</td>
<td>Reduce the level to retain loyal customers</td>
</tr>
<tr>
<td>- Sample results</td>
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<td>Build awareness and interest in the market</td>
<td>Highlight brand differences and benefits</td>
<td>Reduce the level to retain loyal customers</td>
</tr>
<tr>
<td>Sales Promotion Strategy</td>
<td>Use heavy sales promotion to entice trial</td>
<td>Reduce to take advantage of heavy consumer demand</td>
<td>Increase to encourage brand switching</td>
<td>Reduce to a minimal level</td>
</tr>
<tr>
<td>- Kotler</td>
<td>Use heavy sales promotion to entice trial</td>
<td>Increase to encourage brand switching</td>
<td>Reduce to a minimal level</td>
<td></td>
</tr>
<tr>
<td>- Sample results</td>
<td>Use heavy sales promotion to entice trial</td>
<td>Increase to encourage brand switching</td>
<td>Reduce to a minimal level</td>
<td></td>
</tr>
</tbody>
</table>
The comparative information in Table 8.1 is based on:

- The application of the **marketing characteristics** identified by Kotler (2000: 316) in Table 3.5 in chapter one and the results depicted in Table 7.53 in chapter seven.

- The application of the **marketing objectives** proposed by Kotler (2000: 316) in Table 3.5 in chapter one and the results depicted in Table 7.46 in chapter seven.

- The application of the **marketing strategies** proposed by Kotler (2000: 316) in Table 3.5 in chapter one and from the results depicted in Table 7.68 in chapter seven.

- Marketing strategies on people, processes and physical evidence derived from the results on questions 15 and 19 [in paragraphs 7.4.3(e) and 7.4.4(b)].

The results in Table 8.1 illustrate how marketing decision-makers of small manufacturing organisations and small dealer organisations corresponded with Kotler’s theory and indicate where the sample differed from Kotler’s theory (indicated by ¹). It can be assumed that marketing decision-makers in small manufacturing organisations and small dealer organisations confused certain characteristics and marketing strategies [Major finding 7.5(56) in chapter 7].
Also in Kotler’s assumptions on sales, profit and competitor characteristics he posits that there must be low sales, negative profits and few competitors in the introductory phase. Declining sales, declining profits and declining number of competitors in the decline phase were cited by Kotler as sales, profit and competitor characteristics. The respondents might have interpreted the meaning of characteristics between the introductory and decline phases as similar (i.e. low sales = declining sales; negative profits = declining profits; and few competitors = declining number of competitors).

The results illustrated in Table 8.1 also provide an indication that the current product life cycle concept theory should be broadened to include the expanded marketing mix, especially the assumption on marketing strategy (indicated by ²). This will be further expanded in paragraph 8.3(d).

8.3 SUMMARY OF THE MAIN CONCLUSIONS AND IMPLICATIONS BASED ON THE MAIN FINDINGS

Based on the results provided in this study the major findings in chapter seven and conclusions in this chapter cannot be generalised beyond the circumstances and conditions in which they occurred. The results are only representative of small manufacturing and dealer organisations in Gauteng, South Africa who employ between 11 – 50 people.

It is furthermore important to reiterate that the objectives of this study did not include the questioning of the product life cycle’s s-shape and or bell shaped curves. The researcher will however make a recommendation on the exposition of the product life cycle curve appearing in current marketing literature and textbooks.

This study investigated the use and application of the product life cycle concept as a marketing decision-making instrument by testing it against the theory provided by Kotler (2000: 316) on the described characteristics, proposed marketing objectives and suggested marketing strategies linked to the different PLC phases.
The next section is devoted to the main conclusions and implications based on the main findings.

(a) Main finding 1

There is a difference in the importance of the marketing mix instruments in the various phases of the product life cycle concept.

Marketing decision-makers in the sample regarded people as the most important marketing mix instrument followed by physical evidence, product, promotion, processes, price and place [Major finding 7(85) in chapter seven].

Marketing decision-makers in the sample regarded promotion as the most important marketing mix instrument in both the growth and maturity phases, while product was regarded as the most important marketing mix instrument in the introductory and decline phases of the PLC [Major finding 7(80) in chapter seven].

The main conclusions are that place and price are not regarded as the most important marketing mix instruments in any of the product life cycle phases. Significant is the fact that people and physical evidence (part of the expanded marketing mix) are the two most important marketing mix instruments.

The implication is that marketing decision-makers should bear this in mind in developing strategies in the different PLC phases.

(b) Main finding 2

The product life cycle concept theory has application potential as a strategic tool and there is a high likelihood for its use as a marketing decision-making instrument in future.

When the product life cycle concept is applied by marketing decision-makers in small manufacturing and dealer organisations in Gauteng, South Africa, it
seems that the concept has a great application potential and incidence rate of use as a marketing decision-making instrument.

- More than three-quarters of small manufacturing and dealer organisations are using the product life cycle concept when they engage in strategic marketing planning and developing, primarily on an annual basis as listed in major finding 7.5(18) in chapter seven.

- Marketing decision-makers in small manufacturing and small dealer organisations indicated that the product life cycle concept influences marketing strategy and development on an above average extent [Major finding 7.5(21) in chapter seven].

- Marketing decision-makers in small manufacturing organisations and small dealer organisations indicated a high likelihood for the continued use of the product life cycle concept in future for marketing decision-making purposes [Major finding 7.5(61) in chapter seven].

The main conclusion is that marketing decision-makers in small manufacturing and dealer organisations in Gauteng, South Africa do realise the application value of the product life cycle concept. It will be recalled that one of the screening questions was that organisations should know and should apply the PLC. Sixty percent did not apply with this criterion.

The implication is that the 60% of small manufacturing organisations and small dealer organisations should be made aware of the product life cycle and its potential for marketing decision-making as reported by the sample.

(c) Main finding 3

Marketing decision-makers in small manufacturing organisations and small dealer organisations tended to display a marketing knowledge level that was not in total unison with the existing marketing theory.
The following major findings are collectively indicative of the level of marketing knowledge and application of existing marketing theory within small manufacturing and dealer organisations in Gauteng:

- Marketing decision-makers as depicted in major finding 7.5(8) in chapter seven did not indicate the application of the product life cycle concept to be a reason or instrument per se for creating a competitive advantage to their respective organisations. They revealed price to be the major reason for creating a competitive advantage for their organisations.

- Less than half of the marketing decision-makers in small organisations mentioned that they apply the product life cycle concept on each individual product within each product range [Major finding 7.5(13) in chapter seven].

- The majority of the marketing decision-makers indicated the necessity of the product to be the primary reason for individual products or product ranges to be their best sellers - listed as major finding 7.5(15) in chapter seven. A pure marketing related reason was not revealed as the primary reason.

- Marketing decision-makers in small manufacturing and small dealer organisations associated the marketing strategies in the PLC phases differently (more than 50%) from those marketing strategies predicated in theory [Major finding 7.5(94) in chapter seven].

- Marketing decision-makers in small manufacturing and small dealer organisations with a marketing department/function concurred slightly more with Kotler’s theory with regard to strategies used in the different phases of the PLC [Major finding 7.5(95) in chapter seven].
The main conclusion is that marketing decision-makers in small manufacturing and dealer organisations in Gauteng, South Africa use the PLC concept as a marketing mix instrument. These decision-makers however have different views and application practices of the PLC concept when compared to the existing marketing theory.

The implication is that the current product life cycle concept theory needs to be further re-evaluated and adapted through empirical research to test marketing practices and to compare it to theory.

(d) Main finding 4

The current product life cycle concept theory needs to be broadened to include strategies on the expanded marketing mix.

Paragraph 2.3.3(ii) indicated that products and services are different in many ways and unlike products or manufactured goods, services are intangible and can not be stored, transported or resold. In service organisations, flexibility of service delivery is the strength of the organisation and standardisation of output is sometimes not desirable. In goods manufacturing, on the other hand, repeatability and systematic controlled production are the key elements of success.

Marketing decision-makers in the sample regarded people as the most important marketing mix instrument followed by physical evidence, product, promotion, processes, price and place [Major finding 7(85) in chapter seven].

In addition, the marketing decision-makers regarded all the marketing mix related aspects pertaining to people, processes and physical evidence mix as important except for the marketing mix aspects linked to processes in the maturity phase [Major finding 7.5(37) in chapter seven].

Marketing decision-makers in both small manufacturing and small dealer organisations also attached a very high importance to the product, price,
place and promotion (traditional marketing mix) across all four phases of the product life cycle concept [Major finding 7.5(79) in chapter seven].

The following suggestions based on the results illustrated in Table 8.1 are provided for the possible broadening of the current product life cycle concept theory to include the additional three Ps:

- **People strategy**
  (a) *Introductory phase* – incentives to personnel are important to support the introduction of a new product on the market.
  (b) *Growth phase* – incentives to personnel and the knowledge of personnel are important to support the growth of a product after introduction on the market.
  (c) *Maturity phase* – incentives to personnel are important to support and maintain the product’s current position in the market as competition increases.
  (d) *Decline phase* – incentives to personnel are important to still provide support to current/loyal customers when a product is phased out.

The frequent mentioning of incentives and training of personnel are indicative of the importance of internal communications and employee relations.

It is suggested that management has to make decisions on the extent of investment in the training and knowledge of personnel to support their products and services while moving through the product life cycle phases. This decision can be driven or influenced by the internal capabilities of the organisation (e.g. finance) and by the nature of the product and/or the nature of the market (i.e. competitiveness). This is further strengthened by the total sample’s indication that relationships are the most important other marketing mix related aspect creating a competitive advantage [Major finding 7.5(10) in chapter 7].

- **Processes strategy**
  (a) *Introductory phase* – company policy and procedures can be used to
support the introduction of a new product on the market.

(b) *Growth phase* – complaints handling and by implication service recovery and a toll free number are important to provide support and back-up as sales grow after the introduction of a product on the market.

(c) *Maturity phase* – complaints handling and a toll free number are also important to provide back-up service and support in this phase. The successful management of these two aspects can provide a sustainable competitive advantage to an organisation.

(d) *Decline phase* – complaints handling and a toll free number are also important to still continue providing back-up support and service to current/loyal customers when a product is phased out.

Management has to make decisions on the extent they want to invest in customer service, support and satisfaction as their products or services move through the various product life cycle phases.

- **Physical evidence strategy**

  (a) *Introductory phase* – the organisation’s name and logo can be used to create the brand image and corporate image during the introduction of a new product on the market.

  (b) *Growth phase* – the organisation’s name and logo are elements to be used to grow/enhance the brand image and to support an existing corporate image after the introduction of a product on the market.

  (c) *Maturity phase* – the organisation’s name and logo are elements to be used to maintain and protect the brand image and to maintain and protect an established corporate image. The successful management of these two aspects can provide a sustainable competitive advantage to the organisation.

  (d) *Decline phase* – the organisation’s name and logo are elements to be used to maintain and protect the brand image and to maintain and protect an established corporate image during the phasing out process of a product.

Decisions on the extent that an organisation want to build and protect the
image of their products and the image and reputation of their companies as their products and services are moving through the various product life cycle phases are important.

It is suggested from the above-mentioned that the current product life cycle concept should be broadened to make provision for the intangible aspects associated with the marketing of a product and a service. It is therefore suggested that the current marketing strategy section of Kotler’s product life cycle concept be revised to include the marketing mix instruments of people, processes and physical evidence. This must however be tested and supported by further research.

These findings further strengthen the view of Rafiq and Ahmed (1995: 5), in paragraph 2.4 in chapter two, suggested the development of a generic marketing mix cutting across various industries ranging from services marketing, business-to-business marketing and the marketing of physical products.

The main conclusion is that the traditional marketing mix variables are no longer sufficient for the successful marketing of a physical product and a service. In many cases a service is part of the total offering and as such the expanded marketing mix should be added.

The implication is that current product life cycle concept theory needs to be adapted to include the proposed strategies on people, processes and physical evidence in all four phases of the product life cycle.

(e) Main finding 5

There were differences between small manufacturing organisations and small dealer organisations on marketing characteristics and marketing strategies in the different PLC phases.
Major finding 7.5(64) in chapter seven indicates the differences on characteristics:

- **Sales**
  Small manufacturers indicated peak sales in the growth phase while small dealers reported peak sales in the maturity phase.

- **Cost**
  Small manufacturers indicated low cost per customer in the maturity phase while dealers reported low cost per customer in the growth phase.

- **Profits**
  Small manufacturers indicated high profits in the maturity phase while dealers reported high profits in the growth phase.

- **Competitors**
  Small manufacturers indicated declining number of competitors in the maturity phase while dealers reported declining number of competitors in the decline phase.

The differences on strategies are indicated by major findings 7.5(81), 7.5(82), 7.5(83) and 7.5(84) in chapter seven.

(i) Product and place are mostly important to both small manufacturers and small dealers in the introductory phase of the PLC [Major finding 7.5(81) chapter seven].

(ii) Small manufacturers regard price as most important in the decline phase while small dealers regard price as the most important in the growth phase of the PLC [Major finding 7.5(82) chapter seven].

(iii) Small manufacturers regard promotion as most important in the maturity phase while small dealers regard price as most important in the introductory phase of the PLC [Major finding 7.5(83) chapter seven].

(iv) Product is regarded by the sample as the most important marketing mix instrument in the introductory phase and promotion as the most important marketing mix instrument in the growth phase [Major finding 7.5(84) chapter seven].
The main conclusion is that the significant differences in the application of the product life cycle concept listed in proposition 5 differ between the two samples from different industry categories in the different PLC phases.

The implication is that there are differences in the application of the current product life cycle concept between industries of the same category (employment size). This should be treated with caution when the application of the product life cycle concept is tested in different industries.

(f) Main finding 6

There are still many unanswered questions and doubt about the product life cycle concept as a marketing decision-making instrument.

The theory indicated that the product life cycle still seems to be the dominant component of marketing theory. There are however many unanswered questions and criticism about the practical application of the product life cycle as a strategic marketing and marketing decision-making instrument. The following criticisms listed in paragraph 1.6.2 are still prevalent:

- There is still doubt about the applicability and validity of the product life cycle concept as a marketing instrument.

- There is still no evidence of the efficacy of the product life cycle as a framework/instrument to predict marketing strategy.

- It is still difficult for marketing decision-makers to determine in which stage of the product life cycle a product or service is.

It can be concluded from the literature review and from the main findings listed above that all the above-mentioned criticisms still hold true.

The implication is that empirical evidence is still needed to address some of the criticisms and to provide justification on the value and the practical use of
the product life cycle concept theory as a marketing decision-making instrument. Certain criticisms in terms of organisation size and the South African environment were however addressed.

8.4 LINKING THE QUESTIONS AND RESEARCH RESULTS/MAJOR FINDINGS TO THE DIFFERENT RESEARCH OBJECTIVES

The results in chapter 7 enabled the researcher to support, or not support, the research propositions. Table 8.2 provides a linkage between the questions in the questionnaire, the secondary research objectives and the results/major findings.

Table 8.2: The linkage between the questions in the questionnaire, secondary research objectives and the major findings

<table>
<thead>
<tr>
<th>Secondary objectives</th>
<th>Questions</th>
<th>Major Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>(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.</td>
<td>8, 9 &amp; 10</td>
<td>12, 13, 14</td>
</tr>
<tr>
<td>(b) To identify the application of marketing decision-making variables in the various phases of the product life cycle concept by small organisations.</td>
<td>15 &amp; 19</td>
<td>27 to 45, 70 to 85</td>
</tr>
<tr>
<td>(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.</td>
<td>2, 15 &amp; 19</td>
<td>27 to 45, 70 to 85</td>
</tr>
<tr>
<td>(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.</td>
<td>2, 15 &amp; 19</td>
<td>27 to 45, 70 to 85</td>
</tr>
<tr>
<td>(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.</td>
<td>16</td>
<td>46 to 58</td>
</tr>
<tr>
<td>(f) To establish the ability of small organisations to identify product life cycle characteristics as depicted in marketing literature.</td>
<td>18</td>
<td>63 to 69</td>
</tr>
<tr>
<td>(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.</td>
<td>20</td>
<td>86 to 90</td>
</tr>
<tr>
<td>(h) To identify the different marketing objectives that small organisations formulate for their products in each phase of the product life cycle.</td>
<td>10.3</td>
<td>16 and 17</td>
</tr>
<tr>
<td>(i) To establish whether there are differences in the application of the product life cycle theory between small manufacturing and small dealer organisations.</td>
<td>2, 16, 18 &amp; 20</td>
<td>46 to 58, 63 to 69, 86 to 90</td>
</tr>
<tr>
<td>(j) To identify the factors influencing a product through the various phases of the product life cycle among small organisations in South Africa.</td>
<td>10.2</td>
<td>15</td>
</tr>
<tr>
<td>(k) To determine the potential of the product life cycle concept for decision-making among small manufacturing and small dealer organisations in South Africa.</td>
<td>2 &amp; 13</td>
<td>21 and 22</td>
</tr>
<tr>
<td>(l) To determine who is responsible for marketing decision-making in small manufacturing and small dealer organisations</td>
<td>2 &amp; 14</td>
<td>2</td>
</tr>
</tbody>
</table>

All the secondary research objectives as set out in paragraph 1.4.2 in chapter one were achieved.
8.5 LIMITATIONS

This thesis is the result of an exploratory investigation into the application and use of the product life cycle concept by small organisations in Gauteng, South Africa with between 11 and 50. Specific limitations were formulated in the literature review and during the empirical part of this study.

8.5.1 Limitations in the literature review

Based on the literature review the researcher has formulated the following limitations:

- The aim of the literature search was to include all relevant literature on the topic. It is possible that some important empirical research on the wider application of the product life cycle concept may have been done but not yet documented in literature (and therefore excluded).

- There is limited literature available on the application of the product life cycle concept in small organisations.

- The researcher attempted to conduct a literature search with the aim of including all relevant literature but identified a definite lack of literature on the application of the product life cycle concept by large and small organisations in South Africa.

8.5.2 Limitations in the empirical research

After the completion of the empirical research and the reporting of the results, the following limitations can be cited:

- The nature of the questionnaire did not allow the researcher to provide statistical proof on the validity and reliability of the measurement instrument used in the empirical part of this thesis.

- The study was limited to only two industries - the manufacturing industry and dealer industry in Gauteng, South Africa.
• The criteria for respondents to be included in the final sample were very stringent. This was necessary to test the actual application of the PLC and not allowing marketing decision-makers in small manufacturing and dealer organisations to report their perceptions on the use and application of the product life cycle concept.

• The major limitation of this study is that the sample frame was relatively inaccurate and the response rate was lower than anticipated.

Multiple-item methodology was not used to measure product life cycle aspects due to the length of the questionnaire.

8.6 RECOMMENDATIONS
The following recommendations based on the literature review and the empirical results achieved in this research are put forward.

8.6.1 Recommendation for future research
The following are recommendations for future research on the application and use of the PLC concept:

• A comparative study among medium and large organisations in South Africa by using the same methodology and measurement instrument, should be done to draw possible comparisons and to provide better clarity on the current debate on the practical application of the product life cycle concept.

• Research is needed to provide empirical evidence to contribute to the ongoing debate whether the current product life cycle concept theory is still sufficient to be used as a basis for marketing strategy.

• Research is needed to provide empirical evidence to determine whether the current product life cycle concept theory is applicable to and sufficient
for the successful marketing of services.

- Further research should be done to provide empirical evidence to determine whether the current product life cycle concept theory is sufficient for the successful marketing of a physical product.

- Empirical research on the use and applicability of the product life cycle concept should concentrate more on smaller organisations as the majority of the research in the past focused on larger organisations containing strategic business units (SBUs).

- Empirical research is needed on the use and applicability of the product life cycle concept in South Africa concentrating on smaller organisations, due to the contribution of small organisations to the local economy expressed by their contribution to the gross domestic product (GDP).

- More empirical research on the product life cycle concept is necessary to enable small business people globally to use the PLC concept as a foundation and guideline to improve marketing decision-making.

- Current literature should be broadened through empirical research to assist South African marketing decision-makers in large, medium and small organisations to accurately identify in which phase of the product life cycle their products or services are.

- Further empirical research is needed to develop a separate product life cycle concept for services to be inclusive of the intangible nature linked to the marketing of services.

- A replication study should be conducted in other third world countries (SADC, Latin America, Eastern Europe) as well as in other first world countries.
8.6.2 Recommendations based on the literature review

The researcher formulated the following recommendations for possible future empirical research in reaction to current available literature of the application and use of the PLC concept:

- The researcher observed during the literature search that marketing definitions in current marketing literature (example: strategic marketing planning) are not uniform. Therefore, it is recommended that academics and academic writers should attempt to standardise marketing definitions across the various marketing textbooks.

- Marketing literature illustrates the sales curve as part of the PLC concept without labelling the curve as cumulative (s-shaped) or non-cumulative (bell-shaped). As this is confusing to the reader it needs to be addressed in new editions of marketing textbooks and future literature.

- The literature on the product life cycle concept theory should be treated with greater responsibility in marketing curricula and teaching on pre-graduate and post-graduate levels to illustrate whether it can be applied successfully in practice.

- If the increase in the literature of four pages in Kotler’s first edition (1967) to a full chapter in his millennium edition (2000) is indicative of the importance and relevance of the product life cycle literature then empirical research is needed to critically analyse the current PLC concept theory.

- The current product life cycle concept literature in marketing textbooks need to be revised to include more empirical proof on the strategic value of the product life cycle concept to students, entrepreneurs and practitioners.

- Marketing case studies should be developed to illustrate how the current product life cycle concept theory can be translated into practice by
describing how it can be used by marketing managers in small and large organisations to develop marketing strategies.

- Literature needs to be developed on a generic marketing mix which is more inclusive across the multiple range of industries.

- The current literature on the **marketing strategies** in the product life cycle phases need to be revised to be inclusive of the intangible nature of the marketing of a service.

- More literature is needed on the application of the product life cycle concept by marketing decision-makers in small organisations globally, and in South Africa specifically.

- More literature is needed on the impact of the service component on the universal formulation of marketing objectives and marketing strategies by small organisations.

- The current product life cycle concept literature needs to be **broadened** to include the intangibility linked to the marketing of a physical product.

- The current product life cycle concept literature needs to be revised to include a **separate** product life cycle concept theory for services marketing.

- The current product life cycle concept theory should be revised to be more inclusive of the intangibility linked to services marketing.

### 8.7 SUMMARY
This study was conducted to investigate the product life cycle concept as an instrument in marketing decision-making among marketing decision-makers in small manufacturing organisations and small dealer organisations in South
Africa.

The primary objective and secondary objectives were achieved and it can therefore be concluded that the results added value to the body of knowledge on marketing theory in general and the product life cycle concept theory in particular.