

**THE VALUE OF THE PRODUCT LIFE CYCLE CONCEPT
IN SETTING UP MARKETING STRATEGY IN
SMALL MANUFACTURING ORGANISATIONS IN
NORTHERN CYPRUS**



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DEDICATED TO MY WIFE AND SON

Selen and Egemen

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Abstract

The product life cycle (PLC) emerged as one of the first important constructs in marketing. It is routinely presented as an important planning framework in numerous marketing textbooks. There is, however, much criticism on and doubt about the applicability of the product life cycle concept as a marketing decision –making instrument. Research on the product life cycle has been inconclusive and even controversial, with authors debating whether the concept is a mere heuristic, a simple descriptive model or a formal predictive model. In a classic article, Day (1981) raises several insightful questions about the meaning and relevance of the PLC. Yet, because of the controversy, research on the product life cycle has declined and those questions remain unanswered. No evidence exists of the efficacy of the product life cycle concept as an instrument to develop marketing strategy.

The purpose of this study was to test the underlying theory of the product life cycle concept with the primary objective of establishing what the use and practical value of the product life cycle concept is in making marketing decisions in small manufacturing organisations.

The main focus was to test the ability of marketing decision-makers in small manufacturing organisations to associate their application and use of the product life cycle concept with Kotler's assumptions on the identified marketing characteristics, described marketing objectives and proposed marketing strategies.

A major finding was that small organisations tended to display a marketing knowledge level that was not in total unison with the existing marketing theory. Another important conclusion

of the study was that the current product life cycle concept theory needs to be broadened to include strategies on the expanded marketing mix (people, processes and physical evidence).

Apart from the different use and application by marketing decision-makers in small organisations in Northern Cyprus, the product life cycle concept theory has potential as a strategic tool and a high likelihood for its future use as a marketing decision-making instrument.

TABLE OF CONTENTS

	Page
CHAPTER 1	1
DIRECTION	
1.1 INTRODUCTION	1
1.2 THE PROBLEM STATEMENT	3
1.3 THE PURPOSE OF THE STUDY	5
1.4 RESEARCH OBJECTIVES	5
1.4.1 Primary objective	5
1.4.2 Secondary objectives	6
1.4.3 Research Hypotheses	7
1.5 THE SCOPE OF THE STUDY	8
1.6 LITERATURE REVIEW	9
1.6.1 Description of the product life cycle	10
1.6.2 Criticism of the product life cycle concept	15
1.6.3 Identified problems with the product life cycle concept	18
1.7 RESEARCH DESIGN	19
1.7.1 Secondary data analysis	20
1.7.2 Qualitative research	21
1.7.3 Definition of the information needed	21
1.7.4 Methods of collecting quantitative data	21
1.7.5 Questionnaire design	22
1.7.6 Sampling process and sample size	22
1.7.7 Plan of data analysis	24

1.8	THE IMPORTANCE AND THE VALUE OF THE STUDY	26
1.8.1	The importance of this study	26
1.8.2	Value of this study to small organisations	26
1.9	CLARIFICATION OF KEY CONCEPTS	27
1.10	CHAPTER OUTLINE	30
1.11	CONCLUSION	32

CHAPTER 2 33

THEORETICAL FOUNDATION – STRATEGY AND THE ROLE OF MARKETING STRATEGY

2.1	INTRODUCTION	33
2.2	STRATEGY	34
2.3	VARIOUS LEVELS OF STRATEGY	35
2.3.1	Corporate level strategy	37
2.3.2	Business level strategy	41
2.3.3	Functional level strategy	54
2.4	USING THE 7Ps AS A GENERIC MARKETING MIX	56
2.5	STRATEGY IN SMALL ORGANISATIONS	59
2.6	CONCLUSION	74

CHAPTER 3 76

LITERATURE SURVEY: PRODUCT MANAGEMENT AND THE PRODUCT LIFE CYCLE CONCEPT

3.1	INTRODUCTION	76
3.2	THE FUNDAMENTALS OF THE PRODUCT LIFE CYCLE CONCEPT	76
3.2.1	Diffusion of innovation and the product life cycle concept	79
3.2.2	Different product life cycle patterns	81
3.2.3	Levels of aggregation for the product life cycle	86
3.2.4	Product life cycle extensions	88
3.2.5	Application areas of the product life cycle concept	95
3.2.6	Criticisms, gaps and the validity of the product life cycle concept	99
3.3	PRODUCT MANAGEMENT	104
3.3.1	New product development	107
3.3.2	Market development	115
3.4	PRODUCT LIFE CYCLE AND GROWTH STRATEGIES	122
3.5	THE PRODUCT LIFE CYCLE CONCEPT AND STRATEGIC PLANNING	125
3.6	THE PRODUCT LIFE CYCLE AND PORTFOLIO ANALYSIS	134
3.7	MARKETING IMPLICATIONS IN EACH PHASE OF THE PRODUCT LIFE CYCLE CONCEPT	136
3.8	THE PLC CONCEPT CONTRIBUTING TO MARKETING STRATEGY AND DECISION-MAKING IN SMALL ORGANISATIONS	141
3.9	THE PRODUCT LIFE CYCLE AND SMALL ORGANISATIONS	142

3.10	CONCLUSION	143
CHAPTER 4		144
	SMALL BUSINESS ENVIRONMENT IN NORTHERN CYPRUS	
4.1	INTRODUCTION	144
4.2	THE STRUCTURE OF SMALL ORGANISATIONS GLOBALLY	145
4.3	MANAGERIAL INFLUENCE AND CONTROL OF SMALL ORGANISATIONS GLOBALLY	146
4.4	GLOBAL IMPORTANCE OF SMALL ORGANISATIONS	147
4.5	THE ADVANTAGES AND DISADVANTAGES OF SMALL ORGANISATIONS OPERATING GLOBALLY	150
4.5.1	The advantages of small organisations	150
4.5.2	The disadvantages of small organisations	151
4.6	THE ECONOMY OF NORTHERN CYPRUS	152
4.7	THE SME SECTOR IN NORTHERN CYPRUS	155
4.8	THE MANUFACTURING SECTOR IN NORTHERN CYPRUS	157
4.9	SCOPE OF THE STUDY	158
4.10	THE STANDARD INDUSTRIAL CLASSIFICATION (SIC) AND THE STATE PLANNING OFFICE RESEARCH PUBLICATIONS	159
4.10.1	The Standard Industrial Classification and the SPO Registers	160
4.10.2	A description of the major division used in this study	161

4.11	CONCLUSION	163
CHAPTER 5		164
PROBLEM STATEMENT AND RESEARCH HYPOTHESES		
5.1	INTRODUCTION	164
5.2	PROBLEM STATEMENT	164
5.3	RESEARCH HYPOTHESES	167
5.3.1	Hypothesis 1	168
5.3.2	Hypotheses 2 and 3	168
5.3.3	Hypothesis 4	170
5.4	CONCLUSION	171
CHAPTER 6		172
RESEARCH DESIGN AND PROCEDURE		
6.1	INTRODUCTION	172
6.2	THE DATA RESOURCES	172
6.3	DATA COLLECTION METHODS	173
6.4	POTENTIAL SOURCES OF ERROR IN RESEARCH	176
	DESIGN	
6.4.1	Total error	177
6.4.2	Dealing with non-responses	178
6.5	SAMPLING	179
6.5.1	Defining the population	184

6.5.2	Identification of the sample frame	186
6.5.3	Sample size determination and the selection of the sampling method	187
6.5.4	Selection of the sampling elements	190
6.6	PERSONAL INTERVIEWING	191
6.6.1	Definition of a personal interview	191
6.6.2	Evaluation of a personal interview	192
6.6.3	Requirements for a successful personal interview	193
6.6.4	Personal interviewing techniques	194
6.6.5	Interview problems	196
6.7	MEASUREMENT AND MEASUREMENT SCALES	197
6.7.1	Measurement	198
6.7.2	Level of measurement	198
6.7.3	Scale types	200
6.7.4	Single-item versus multiple-item scales	204
6.8	QUESTIONNAIRE DESIGN	206
6.8.1	Preliminary considerations	206
6.8.2	Asking questions	207
6.8.3	Open-ended and closed-ended questions	208
6.8.4	Constructing the questionnaire	210
6.8.5	Pre-testing the questionnaire	211
6.8.6	Questions in the questionnaire	213
6.9	INTERVIEWING PROCEDURE	221
6.10	CODING AND EDITING	222
6.10.1	Coding	222

6.10.2	Editing	223
6.10.3	Transferring of data	223
6.11	STATISTICAL PROCEDURES AND STATISTICAL TREATMENT USED IN THE ANALYSIS	224
6.11.1	Missing responses	224
6.11.2	Descriptive statistics	225
6.11.3	Statistical techniques and procedures to be adopted in this research	228
6.11.4	Statistical treatment	230
6.12	CONCLUSION	231
CHAPTER 7		233
RESEARCH RESULTS AND ITERPRETATION		
7.1	INTRODUCTION	233
7.2	REALISATION RATE	234
7.3	THE REPRESENTATIVENESS, VALIDITY AND RELIABILITY OF RESULTS	237
7.3.1	Representativeness of the results	237
7.3.2	Validity of the results	237
7.4	RESULTS ON A QUESTION-BY-QUESTION BASIS	238
7.4.1	Section A	238
7.4.2	Section B	243
7.4.3	Section C	259
7.4.4	Section D	290

7.5	MAJOR FINDINGS	310
7.6	RESEARCH HYPOTHESES	320
7.6.1	Hypothesis 1	320
7.6.2	Hypothesis 2	321
7.6.3	Hypothesis 3	322
7.6.4	Hypothesis 4	323
7.7	CONCLUSION	324

CHAPTER 8		325
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**CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS FOR
FUTURE RESEARCH**

8.1	INTRODUCTION	325
8.2	PRODUCT LIFE CYCLE APPLICATION OUTCOMES	325
8.3	SUMMARY OF THE MAIN CONCLUSIONS	329
8.4	LINKING THE QUESTIONS AND RESEARCH RESULTS/MAJOR FINDINGS TO THE DIFFERENT RESEARCH OBJECTIVES	338
8.5	LIMITATIONS	339
8.5.1	Limitations in the literature review	339
8.5.2	Limitations in the empirical research	339
8.6	RECOMMENDATIONS	340
8.6.1	Recommendations for future research	340
8.6.2	Recommendations based on the literature review	342
8.7	SUMMARY	343

APPENDICES

Appendix 1	Questionnaire (English)
Appendix 2	Flash cards (English)
Appendix 3	Questionnaire (Turkish)
Appendix 4	Flash cards (Turkish)

LIST OF FIGURES

	Page
Figure 1.1	Phases in the product life cycle 11
Figure 2.1	Hierarchy of strategy 36
Figure 2.2	The BCG growth share matrix 45
Figure 2.3	GE's Strategic Business Planning Grid 48
Figure 2.4	Intensive growth strategies 50
Figure 2.5	Relating the marketing plan to the strategic plan 53
Figure 2.6	The goods-service continuum 61
Figure 2.7	The marketing planning process 72
Figure 3.1	Traditional product life cycle concept 78
Figure 3.2	The relationship between the cumulative and non-cumulative diffusion of innovation and the product life cycle curve 80
Figure 3.3	Style, fashion and fad life cycles 82
Figure 3.4	Growth-slumped maturity pattern 84
Figure 3.5	Cycle-recycle pattern 85
Figure 3.6	Scalloped pattern 86
Figure 3.7	Product petrification: A new phase in product life cycle theory 89
Figure 3.8	Life cycle phases of various products 92
Figure 3.9	Sequence and steps associated with the development process of a product 106

Figure 3.10	Growth of a new product	123
Figure 3.11	Relationship between product life cycle and product portfolio	134
Figure 3.12	Phases in the product life cycle	136
Figure 3.13	The inverted product life cycle	140
Figure 6.1	Errors in research design	176

LIST OF TABLES

	Page
Table 2.1	Strengths and Weaknesses of the 4Ps and 7Ps mixes 68
Table 3.1	Application areas of the product life cycle concept 95
Table 3.2	Major criticisms of and problems with the PLC concept 100
Table 3.3	Marketing implications of each stage of the product life cycle 129
Table 3.4	Implications of the product life cycle 130
Table 3.5	Summary of product life cycle characteristics, objectives and strategies 132
Table 4.1	Spread of the working population among economic sectors in Northern Cyprus 153
Table 4.2	Definition by size of business organisations in Northern Cyprus 155
Table 4.3	National distribution of Business organisations in Northern Cyprus based on employment size 156
Table 4.4	Definition of business under EU classification 157
Table 4.5	The codes and major divisions of the SIC 160
Table 4.6	SIC classification of manufacturing industries in Northern Cyprus 162
Table 6.1	A summary of the data collection methods 174
Table 6.2	SIC classification of manufacturing industries in Northern Cyprus according to business size 185

Table 6.3	Appropriate statistics for nominal, ordinal interval and ratio data	200
Table 6.4	The linkage between the questions in the questionnaire, secondary research objectives and research hypotheses	214
Table 6.5	The linkage between the different sections, questions, question formats and the different scale types	215
Table 7.1	A description of the sample frame	234
Table 7.2	The realisation rate	235
Table 7.3	Classification of organisations realised per region	239
Table 7.4	Classification of organisations by core business activities	240
Table 7.5	Departments and functions within manufacturer organisations	241
Table 7.6	Organisational size according to the number of employees	242
Table 7.8	Aspects of importance in the application of the PLC concept	244
Table 7.9	Factors providing a competitive advantage	247
Table 7.10	Marketing mix instruments and marketing related aspects responsible for providing a competitive advantage	248
Table 7.11	Other marketing related aspects responsible for providing a competitive advantage	249
Table 7.12	The nature of product assortment	250
Table 7.13	Application of the PLC on each individual product within each product range	251
Table 7.14	Positioning of primary products in each PLC phase for the total sample	252

Table 7.15	Verbatim representation of primary products/best sellers per organisational type	254
Table 7.16	Reasons why primary products or product ranges are best sellers	255
Table 7.17	Marketing objectives for primary products or product ranges in the PLC phases	257
Table 7.18	Strategic marketing planning and development by using the product life cycle phases	260
Table 7.19	Involvement in strategic marketing planning development for the total sample	261
Table 7.20	Influence of the PLC concept on marketing strategy planning and development for the total sample	262
Table 7.21	Degree of control over the marketing mix instruments for the total sample	263
Table 7.22	The importance of marketing mix related aspects (people, processes, and physical evidence) in the introductory phase of the PLC	265
Table 7.23	The importance of marketing mix related aspects (people, processes and physical evidence) in the growth phase of the PLC.	267
Table 7.24	The importance of marketing mix related aspects (people, processes and physical evidence) in the maturity phase of the PLC.	269

Table 7.25	The importance of marketing mix related aspects (people, processes and physical evidence) in the decline phase of the PLC.	271
Table 7.26	The importance of marketing mix related aspects in the various PLC phases	273
Table 7.27	Importance of the three expended marketing mix instruments	274
Table 7.28	The importance of the mix instruments in the different PLC phases	275
Table 7.29	Marketing objectives in the introductory phase of the PLC	278
Table 7.30	Marketing objectives in the growth phase of the PLC	279
Table 7.31	Marketing objectives in the maturity phase of the PLC	281
Table 7.32	Marketing objectives in the decline phase of the PLC	283
Table 7.33	The primary marketing objective in the different PLC phases put forward by the responding small manufacturers	284
Table 7.34	Comparison between the marketing objectives by Kotler (2000: 316) and the marketing objectives provided by the sample	285
Table 7.35	Likelihood of continuing with the use of the product life cycle in future for general management decision-making	287
Table 7.36	Likelihood of continuing with the use of the product life cycle in future for marketing decision-making	288
Table 7.37	Significance test of the likelihood of continuing with the use of the product life cycle in future for general management and marketing decision-making	288

Table 7.38	Likelihood of continuing with the use of the product life cycle in future by organisations with and without a marketing department	289
Table 7.39	Frequency distribution of the total sample with regard to the characteristics in each of the PLC phases	291
Table 7.40	Comparison of the total sample's responses of characteristics with the theory in each of the PLC phases	292
Table 7.41	Association of respondent's perceptions of marketing characteristics with Kotler's theory in each of the PLC phases for the total sample for organisations with a marketing department or function	293
Table 7.42	Importance of the traditional marketing mix related aspects	295
Table 7.43	The importance of marketing mix (product, price, place and promotion) related aspects in the introductory phase of the PLC	296
Table 7.44	The importance of marketing mix (product, price, place and promotion) related aspects in the growth phase of the PLC	298
Table 7.45	The importance of marketing mix (product, price, place and promotion) related aspects in the maturity phase of the PLC	299
Table 7.46	The importance of marketing mix (product, price, place and promotion) related aspects in the decline phase of the PLC	301
Table 7.47	The importance of the marketing instruments in the different PLC phases	303
Table 7.48	Frequency distribution of the sample in linking the theory on the marketing strategies in each of the PLC phases	305

Table 7.49	Comparison of the total sample response of marketing strategies with the theory in each of the PLC phases	308
Table 8.1	Characteristics, marketing objectives and strategies in the various phases in the product life cycle as proposed by Kotler (compared to how marketing decision-makers from small manufacturers and small dealers in Northern Cyprus apply this concept)	326
Table 8.2	The linkage between the questions in the questionnaire, secondary research objectives and the major findings	338

CHAPTER 1

DIRECTION

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 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 Consultancy 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 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 consumer conditions in that phase. The product life concept is a valuable tool available to mainly large organisations for the management of their product(s) after commercialisation.

This study will investigate the product life concept theory and its applicability as a tool in the marketing-decision for small manufacturing organisations in Northern Cyprus. The

empirical part of this study will be executed among small manufacturing organisations in Northern Cyprus. The product life 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. 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 literature have, however, questioned the product life concept (Dhala & Yuspeh, 1976; Thorelli & Burnett, 1981; Sproles, 1981; Tellis & Crawford, 1981; Mercer, 1993 and Grantham, 1999). There are further different arguments against the application and validity of the product life cycle concept as a marketing tool 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 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 lifecycle 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 Northern Cyprus 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 concept. The literature study will be expanded by extensive empirical research to test the applicability of the product life concept as a decision-making instrument among small organisations in Northern Cyprus. The identification of the marketing characteristics, marketing objectives and the application of the marketing strategies within each phase of the product life cycle by small manufacturer in Northern Cyprus will 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 organisations.

1.4.2 Secondary objectives

The secondary objectives of this study are:

- (a) To determine whether marketing decision-makers in small organisations in Northern Cyprus 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 identify the importance of elements of the marketing mix variables by small manufacturing organisations in the different product life cycle phases.
- (d) To investigate the ability of small organisations to describe the marketing objectives within the various product life cycle phases as indicated in the theory.
- (e) To establish the ability of small organisations to identify product life cycle characteristics as depicted in marketing literature.
- (f) To investigate the ability of small organisations to link marketing strategies with phases of the product life cycle theory according to the theory classification.
- (g) To identify the different marketing objectives that small organisations formulate for their products in each phase of the product life cycle.
- (h) To identify the factors influencing a product through the various phases of the product life cycle among small organisations in Northern Cyprus.
- (i) To determine the potential of the product life cycle concept for decision-making in small manufacturing organisations in Northern Cyprus.
- (j) To determine who is responsible for marketing decision-making in small manufacturing organisations.

1.4.3 Research hypotheses

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

- **Hypothesis 1:**

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

- **Hypothesis 2:**

Marketing managers of small organisations in Northern Cyprus use the product life cycle concept to strategically plan and manage their products through the various phases of the product life cycle.

- **Hypothesis 3:**

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

- **Hypothesis 4:**

Small manufacturing organisations in Northern Cyprus do not 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 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 in Northern Cyprus. 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 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 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 the offering. The reasons for the decision to use small organisations and to execute the empirical study in Northern Cyprus 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 1950's 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.

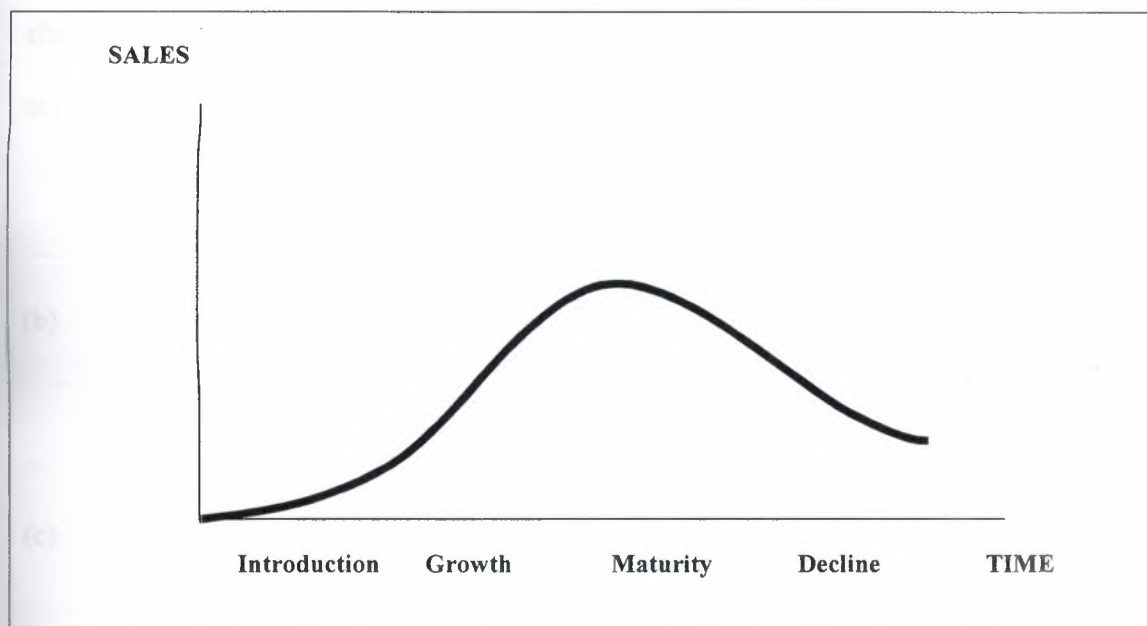
A definitional problem needs to be clarified to distinguish between product category, product form and product brand. Kotler (1997: 346) distinguishes among these various concepts and reiterates that the product life cycle concept can be used to analyse a product category (e.g. liquor), a product form (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

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 the 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 concept

Some criticisms have been made against the product life 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 the decline in sales curve signalled death. Instead, the management of DuPont boldly decided to enter the volatile textile market. Women were first introduced 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 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 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.

Merger (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 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, 1988: 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

This study 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 Northern Cyprus. The steps mentioned above will 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 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.

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.

- y) 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 Northern Cyprus 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). 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 other statistical 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. The 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 the 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 types 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 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 Northern Cyprus 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 Northern Cyprus. It is revealed that empirical research mainly concentrated on large organisations internationally. No published research could be found which specifically focused on small organisations in Northern Cyprus.

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

This study intends to investigate the application of the product life cycle concept among marketing decision-makers in small manufacturing 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.

- **Manufacturing organisations**

Manufacturing organisations transform inputs into identifiable, tangible goods, such as soft drinks, cars, or video cassette recorders (Bartol & Martin, 1994: 563).

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 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 variables**

This study views marketing decision-making variables as a much broader concept than just 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 Northern Cyprus

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 conclude with a description of the small manufacturing organisations to be used in the empirical part of this study.

Chapter 5: Problem statement and research hypotheses

This chapter will provide a description of the problem statement and the various research hypotheses 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 for the organisational type selected – small manufacturing 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 CONCLUSIONS

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 an instrument used in marketing decision-making.

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

CHAPTER 2

THEORETICAL FOUNDATION – STRATEGY AND THE ROLE OF MARKETING STRATEGY

2.1 INTRODUCTION

Strategy can provide an organisation with a reference-point for decision-making. Different levels of strategy exist in a large organisation, namely corporate strategy, business strategy and functional strategy. According to Du Plessis, Jooste and Strydom (2001. 4) corporate level strategy crystallises into strategies at lower organisational levels.

Du Plessis et al (2001. 4) view corporate level strategy as the organisation's sense of purpose, while business level strategy is concerned with the management of a specific division or business unit that must contribute to achieve corporate objectives. Functional level strategy refers to the contribution of marketing management to formulate and implement marketing programmes. Marketing managers can blend the marketing mix variables into a marketing offering and can manage the product and make marketing decisions by using the product life cycle concept.

Depending on the size and structure of the organisation, these levels of strategy can be executed on all three levels in large organisations, but in the case of smaller

organisations, these levels of strategy are executed on functional level by functional managers such as the marketing manager.

This chapter will provide a theoretical discussion on strategy, strategy planning and strategy formulation on both corporate, business and functional levels in large organisations specifically, and will also include a small organisation's perspective. The chapter will conclude with a discussion on strategy and marketing decision-making in small organisations and the role of the product life cycle concept in strategy formulation.

2.2 STRATEGY

Strategy is the fundamental pattern of present and planned objectives, resource developments and interactions of an organisation with markets, competitors and other environmental factors (Walker, Boyd, Mullins and Larréché, 2003. 9). Therefore, a good strategy should specify:

- What is to be accomplished,
- Where – which industries or product-markets will be the focus, and
- How – which resources and activities will be allocated to each product-market to meet environmental opportunities and threats and to gain a sustainable competitive advantage.

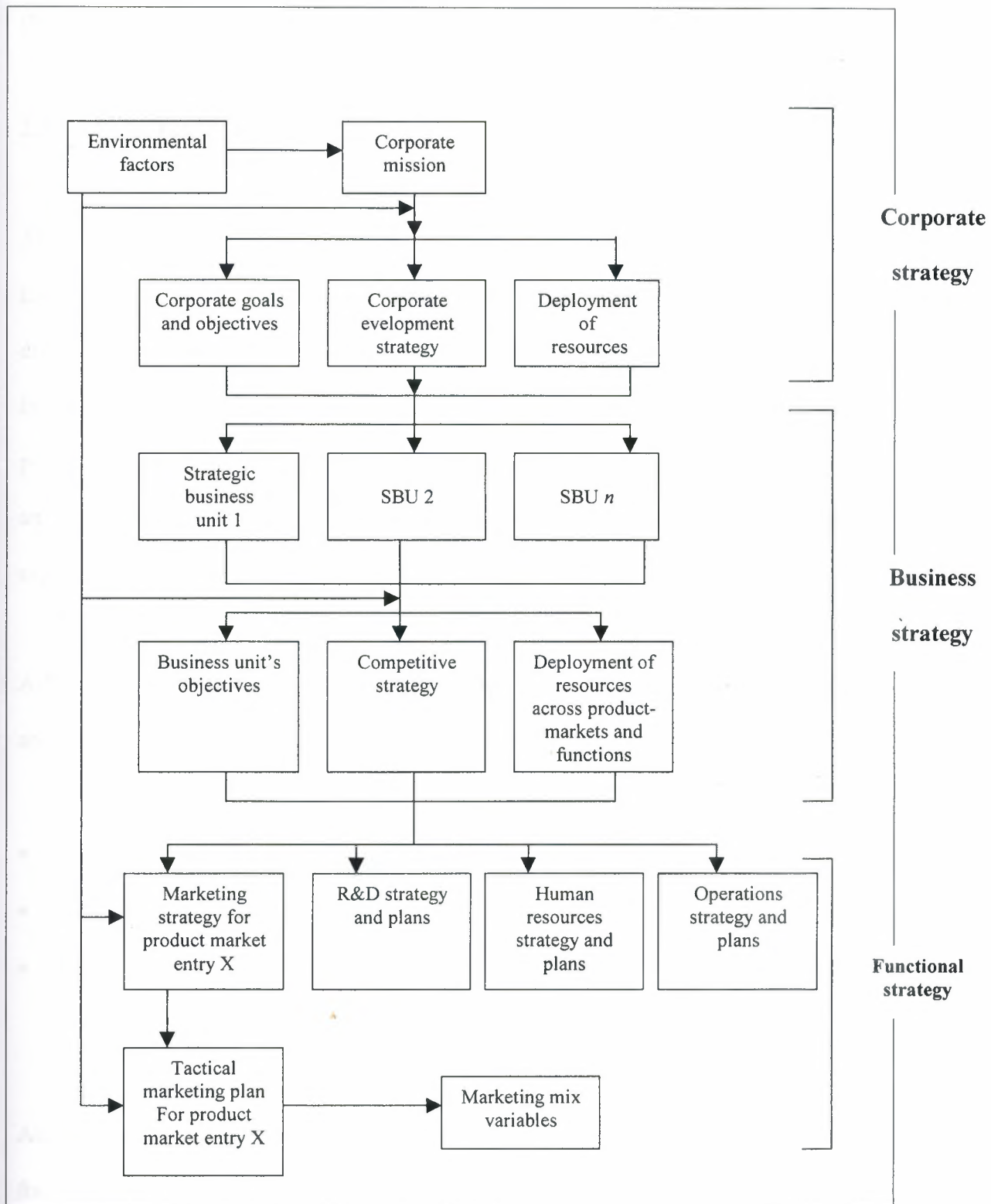
More specifically, there are five components or a set of issues within a well-developed strategy (Walker et al, 2003: 9):

- Scope,
- Goals and objectives,
- Resource deployment,
- Identification of a sustainable competitive advantage,
- Synergy.

The above-mentioned components will be included in the discussion of the various levels of strategy in the next section.

2.3 VARIOUS LEVELS OF STRATEGY

Strategy in an organisation is formulated according to a hierarchy of corporate, business and functional levels as illustrated in Figure 2.1.

Figure 2.1: The hierarchy of strategies

Adapted from: Boyd, Walker, Mullins and Larréché (2000: 10)

Each of the levels in the strategy hierarchy as depicted in Figure 2.1 will now be discussed.

2.3.1 Corporate level strategy

At corporate level, managers must co-ordinate the activities of multiple business units. Decisions about the organisation's scope and appropriate resource deployment across its divisions or businesses are primary focus of corporate strategy. The scope refers to the breadth of the organisation's strategic domain – the number of types of industries, product lines and market segments it competes in or plans to enter. The decisions about an organisation's strategic scope should reflect the view of management of the organisations mission and intent.

According to Walker et al (1999: 10) the essential questions to be answered at this level are:

- What business(es) are we in?
- What business(es) should we be in?
- What portion of total resources should be devoted to each of those businesses to achieve the organisation's overall goals and objectives?

Attempts to develop and maintain distinctive competencies at the corporate level tend to focus on:

- Generating superior financial, capital and human resources;
- Designing effective organisation structures and processes; and
- Seeking synergy among the organisation's various businesses.

According to Walker et al (1999: 10) synergy can become a major competitive advantage in organisations where related businesses reinforce one another by sharing corporate staff, research and development (R&D), financial resources, production technologies, distribution channels or marketing programmes.

Organisations define their objectives and strategies through the process of strategic planning that should be long-term focused. Strategic planning involves activities that lead to the development of a clear organisational mission, organisational objectives and the strategies that enable the organisation to achieve its objectives (Churchill & Peter, 1998: 84). Strategic planning lays the foundation for types of planning such as tactical planning and operational planning and the culmination thereof in appropriate strategic and tactical decisions as depicted in Figure 2.1.

(a) Strategic plan

The strategic plan for an organisation contains several components: the mission, the strategic imperatives, the strategic audit, SWOT analysis, objectives and strategies.

According to Kotler, Armstrong, Saunders and Wong (1996: 73) all of these feed from and feed into marketing plans.

(i) The mission

A mission states the purpose of an organisation and what it wants to accomplish in the larger environment. A mission statement should be developed formally and should address the following market-oriented questions (Kotler, 1997. 68):

- What is our business?
- Who is our customer?
- What is value to the customer?
- What will our business be?
- What should our business be?

These above-mentioned questions are extensions of what(?), where(?), and how(?) questions provided by Walker et al (1999: 10). They are essential questions to be answered at a corporate level and the mission statement should not be too narrow or too broad but should be realistic, specific, and based on distinctive competencies and act as a motivation tool in the organisation.

(ii) Strategic objectives

The organisation's mission as illustrated in Figure 2.1 needs to be turned into corporate goals and objectives to guide management. Strategies should specify the desired levels of accomplishment on one or more dimensions of performance such as volume growth, profit contribution or return on investment (ROI). The dimensions of performance should be spanned over specified periods for each of the organisations businesses and product-markets and for the organisation as a whole.

Each strategic business unit (SBU) manager on corporate level should have objectives and be responsible for reaching these objectives within a specific time frame.

(iii) Strategic audit

The strategic audit covers the gathering of vital information. According to Kotler et al (1996: 78-79), it is the intelligence used to build the detailed objectives and strategy of an organisation.

The strategic audit has two parts: the internal and external audit. The external audit or marketing environment audit examines the microenvironment and task environment of an organisation. The internal audit examines all aspects of the value chain in the organisation including the direct flow of goods and services through the organisation (inbound logistics, operations, outbound logistics, sales and marketing and after-sales service).

In addition, it also extends to the support activities on which the primary activities depend (procurement, technology development, human resource management, and the infrastructure of the organisation (Kotler et al, 1996: 78).

Every organisation has limited financial and human resources. Therefore, a strategy should specify how much resources are to be obtained and allocated across businesses, product-markets, functional departments or management teams and activities within each business or product-market.

As mentioned in paragraph 2.1, corporate strategy in an organisation is described as an organisation's sense of purpose. The business level strategy as depicted in Figure 2.1 is, however, concerned with the profitable management of the various divisions and Strategic Business Units (or specific divisions which must contribute to achieve corporate objectives) and also includes the contribution of marketing management to the formulation of the business strategy.

The business level strategy will be discussed in the next section.

2.3.2 Business level strategy

The most important part of any strategy is to specify how the organisation will compete in each business and product-market within its domain. The question on how it can position itself in order to develop and sustain differential advantage over current and

potential competitors needs to be answered. To answer such a question managers must examine the market opportunities for each business and product-market along with the organisation's core competencies or strengths relative to competitors.

As mentioned above the question of how business units will compete within its industry is the critical focus of business level strategy. According to Walker et al (2003: 12) the major issue to be addressed in business strategy is how to achieve and sustain a competitive advantage.

According to Walker et al (2003: 12) the essential questions to be answered at this level as illustrated in Figure 2.1 are:

- (i) What distinctive competencies can give the business unit a competitive advantage?
- (ii) Which of the competencies best match the needs and wants of customers in the business' target segment(s), e.g. strategic business unit 1.?

Different customer segments may want different benefits from the same category of products and a business unit may not have the competencies needed to compete effectively in all market segments.

Business-level strategy should furthermore deal with:

How many and which market segments to compete in, and

The breadth and depth of product offerings and marketing programmes needed to appeal to these segments.

inally, synergy should be sought across product-markets and across functional departments within the organisation. Synergy only exists when the organisation's businesses, product-markets, resource deployments, and competencies complement and reinforce one another. Synergy enables the total performance of the related businesses to be greater than it would otherwise be.

The collection of businesses and products in an organisation can be divided into different business or product portfolios and these portfolios will be discussed in the next section.

(a) The business portfolio

The business portfolio as depicted in Figure 2.1 (e.g. Strategic business unit 1) is a collection of businesses and products that constitute the organisation's portfolio (Kotler et al, 1996: 83-88). The business portfolio, however, is the one that fits the organisation's strengths and weaknesses to opportunities in the environment. The organisation must analyse its current business portfolio and develop growth strategies for adding new products or businesses to the portfolio.

The analysis of current business portfolios and the development of growth strategies as part of business level strategy will be discussed in the next section.

(i) Identifying the key businesses making up the organisation

Management's first step will be to identify the key businesses constituting the organisation. These key businesses are called strategic business units or SBUs as depicted in Figure 2.1. A strategic business unit is a self-standing unit in the organisation and has a separate mission. An SBU can be a company division, a product line within a division or sometimes a single product or brand.

(ii) Analysing the current business portfolio

Portfolio analysis helps managers to evaluate the relevant businesses of the organisation and to allocate strong resources into its more profitable businesses (Kotler et al, 1996: 83).

(iii) Assessment of the attractiveness of the various strategic business units

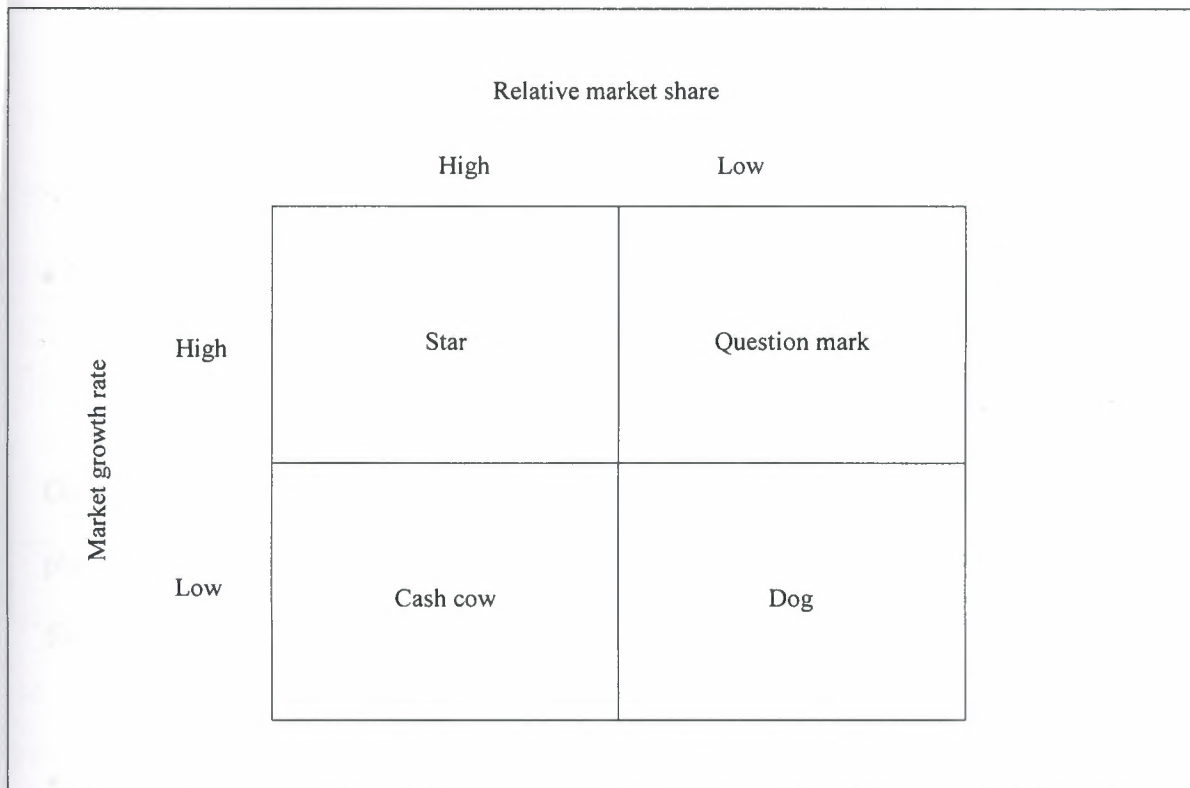
The second step in business portfolio analysis calls for management to assess the attractiveness of its various SBUs and to decide how much support each SBU warrants. According to Kotler et al (1996: 83), this occurs informally in some organisations while other organisations are using formal portfolio-planning methods. The best-known

portfolio-planning models are the Boston Consulting Group's (BCG) Growth-Share Matrix and General Electric's Strategic Planning Grid, which will now be discussed.

- **The Boston Consulting Group Matrix**

By using the Boston Consulting Group Matrix (BCG), an organisation classifies all its strategic business units (SBUs) according to the growth-share matrix illustrated in Figure 2.2.

Figure 2.2: The BCG growth share matrix



Adapted from: Kotler et al (1996. 84)

By dividing the growth-share matrix as depicted in Figure 2.2, four types of SBUs can be distinguished (Kotler et al, 1996: 83-84):

- Question mark – a low-share business unit in a high-growth market. It requires cash to maintain its share. Managers have to carefully decide which question marks should be turned into stars and which ones should be phased out.
- Star – a high growth, high-share business or product. It often needs heavy investment to finance its rapid growth. Eventually the market share decreases and will turn into a cash cow.
- Cash cow – a low-growth, high-share business or product. An established and successful strategic business unit needing less investment to maintain its market share. It produces cash that the organisation can use to subsidise and to support other strategic business units in the need of investment.
- Dog – a low-growth, low-share business or product. It may generate enough cash to maintain itself, but do not promise to be a large source of cash.

Once an organisation has classified its SBUs, it must determine what role each SBU will play in future. According to Kotler et al (1996. 84), there are four alternative strategies for each SBU:

- The organisation can invest more in the SBU to build its share.
- The organisation can invest just enough to hold the SBUs share at the current level.

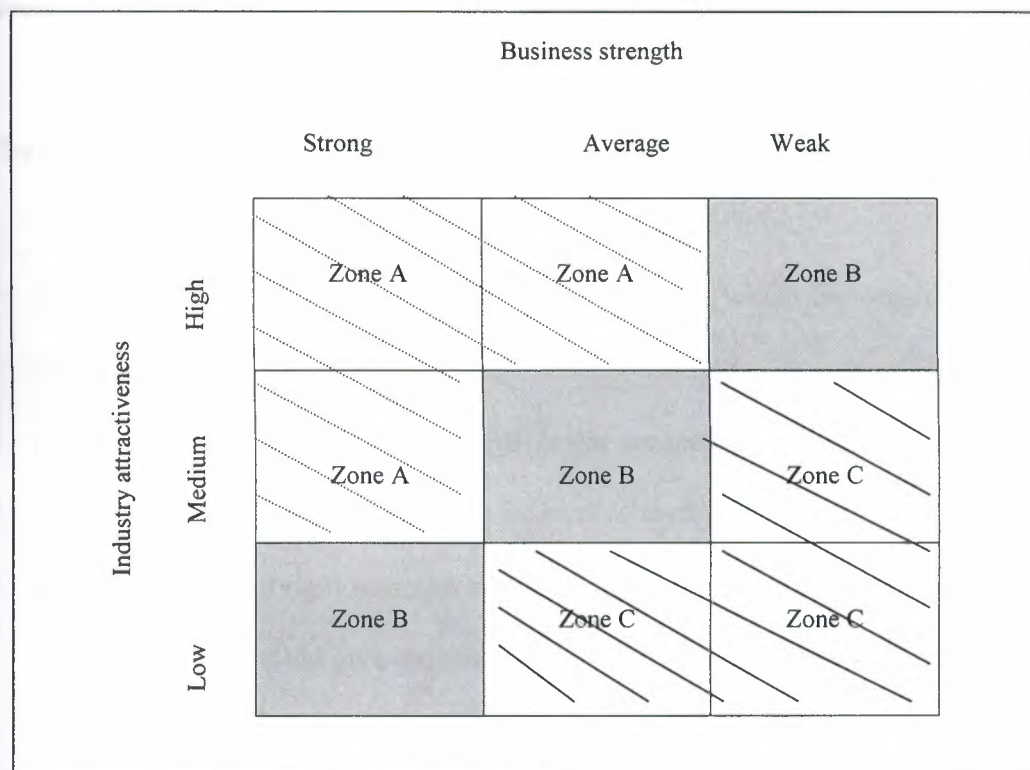
- The organisation can harvest the SBU, milking its short-term cash flow regardless of the long-term effect.
- The organisation can divest the SBU by selling it or phasing it out and using the resources elsewhere.

As time passes, SBUs change their position in the growth-share matrix. According to Kotler et al (1996. 84), each business unit has a life cycle. Many SBUs start out as question marks and move into the star category if they succeed. They later become cash cows as market growth falls, then finally die out or turn into dogs towards the end of their life cycle.

The relationship between the product life cycle concept and the BCG growth share matrix as depicted in Figure 2.2 will be discussed in chapter three.

(iii) **The General Electric's strategic planning grid**

A comprehensive portfolio planning tool called the strategic business-planning grid was introduced by General Electric and like the BCG approach, it uses a matrix with two dimensions – one representing industry attractiveness on the vertical axis and company strength in the industry on the horizontal axis. Figure 2.3 below is an illustration of the GE's strategic business-planning grid:

Figure 2.3: GE's strategic business-planning grid:

Adapted from: Kotler et al (1996: 85)

According to Kotler et al (1996: 85), the GE approach considers many factors besides market growth rate as part of industry attractiveness. It uses an industry attractiveness index that comprises of market size, market growth rate, industry profit margin, intensity of competition, seasonality and the cycle of demand, and industry cost structure. These factors are rated and combined in an index of industry attractiveness as high, medium and low. For business strength, it again uses an index that includes factors such as the organisation's relative market share, price competitiveness, product quality, customer and market knowledge, sales effectiveness and geographical advantages. These factors are

ted and combined in an index of business strengths described as strong, average or weak.

The GE grid has three zones as illustrated in Figure 2.3 and they are explained below.

Zone A – the upper left includes the Strong SBUs in which the organisation should invest and grow.

Zone B – the diagonal cells contain SBUs that are medium in its overall attractiveness and the organisation should maintain its level of investment in these SBUs.

Zone C – the lower right indicates that SBUs that are low in overall attractiveness and the organisation should give serious thought to harvesting or divesting these SBUs.

(b) Problems with the matrix approaches

According to Kotler et al (1996: 88), the BCG and GE methods have revolutionised strategic planning but such approaches have limitations. Management may find it difficult to define SBUs and measure market share and growth. In addition, these approaches focus on classifying current businesses but provide little advice for future planning. Management must still rely on its judgement to set the organisational objectives for each SBU, to determine what resources to allocate to each and to determine which business to add.



Development of growth strategies on business level

development of a growth strategy is essential for the any organisation not to stagnate, to grow, to develop and maintain a sustainable competitive advantage. Ansoff (1957: provides the following four growth strategies as illustrated in Figure 2.4. Depending the size and structure of an organisation, the growth strategy discussion can be on corporate level or SBU level.

Figure 2.4: Intensive growth strategies

	Present products	New products
Present markets	Market penetration	Product development
New markets	Market development	Diversification

Adapted from: Ansoff: (1957: 114)

Ansoff (1957. 114) defines the growth strategies as follows:

- Market penetration – the organisation seeks increased sales for its current products in its present markets through more aggressive promotion and distribution.

- Market development – the organisation seeks increased sales by taking its current products into new markets.
- Product development – the organisation seeks to grow by serving new customers through the delivery of new products.
- Diversification – the organisation seeks to grow by serving new customers through the delivery of new products.

In relation to Figure 2.4, diversification can be regarded as a growth strategy on corporate level based on research and development decisions, the various risks and uncertainties related to production, finance, personnel and whether to stay local and/or to go global.

(d) The role of marketing on business strategy level

All organisations need strategies to accommodate needs and changing markets. No one strategy is best for all organisations. Marketing plays an important role in strategic planning, as the strategic plan will guide the marketing function, which must be in unison with other functions in the organisation to achieve strategic objectives.

Marketing management's contribution to the formulation of business strategy, primarily entails inputs at top management level with regard to the internal and external marketing environment and joint decision-making in the area of competitive and investment decisions (Du Plessis et al. 2001: 4).

The marketing function fulfils a vital role in the successful execution of strategy in an organisation and it is, therefore, necessary to illustrate how the marketing plan is related to the strategic plan. This relation between the marketing plan and the strategic plan reiterates the importance of the strategic plan and the planning process within large, medium and small organisations.

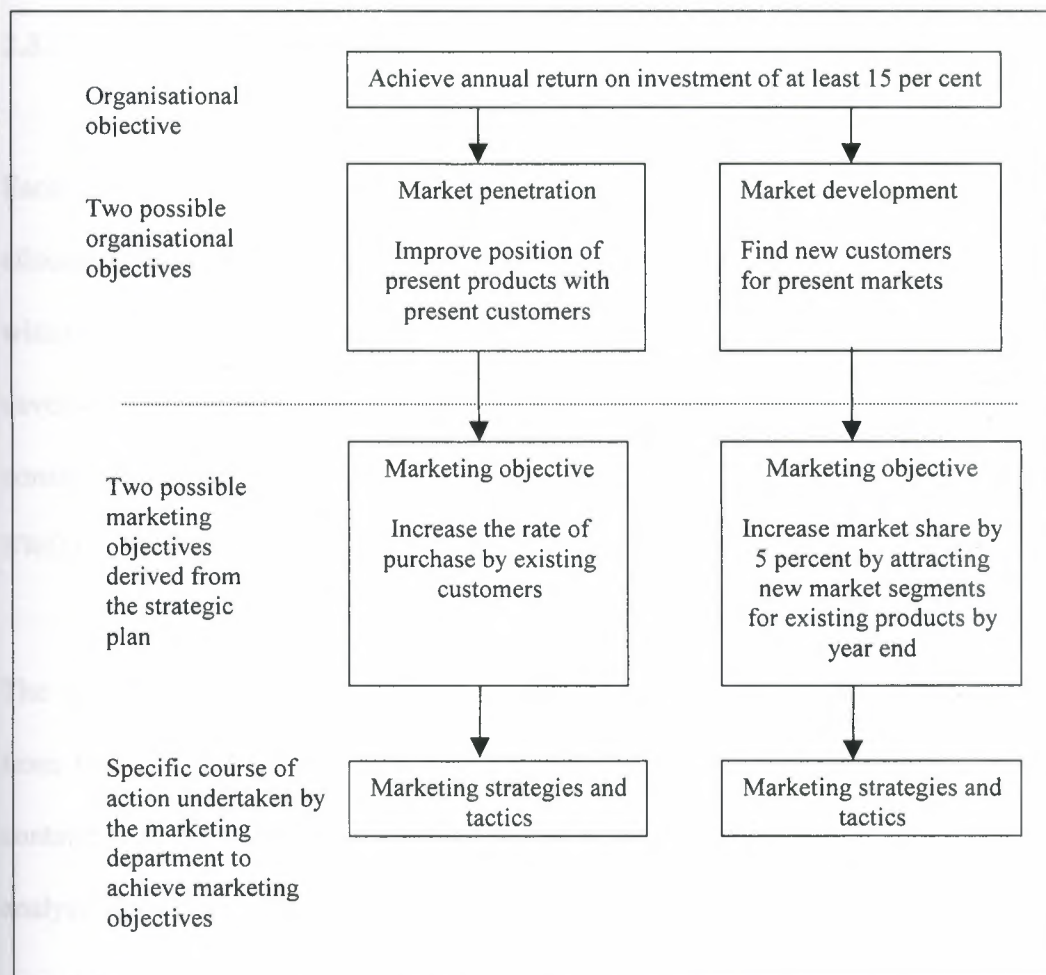
Every functional manager (e.g. Marketing, Research and Development, Human Resources and Operations) in a large organisation as depicted in Figure 2.1 should partake in the formulation of strategy and planning. Strategy and planning at the functional level is a derived effort and task from the objectives set during the previous level in the hierarchy of strategy. Thus the traditional role of the marketing manager might include projecting the number of potential customers for a given product or service and advising how to promote and distribute the product or service to them. Both are concerned with issues such as market share and how best to create value for existing and potential customers (Churchill & Peter, 1998: 95).

The contribution of marketing to strategy and planning in traditional organisations depends on the style and structure of planning process it uses. Organisations can use a top-down approach, where senior managers set broad objectives and strategies for all the levels in the organisation. Marketing managers follow these and develop marketing goals and plans to achieve them. Organisations use the bottom-up approach, where managers prepare goals for their own units, then submit the goals to senior management for approval. Senior managers may approve them or request that the plans be modified to

better reach organisational objectives. A middle of the road approach is for top management to specify the strategic guidelines, and then allow lower-level management to plan strategies to achieve them.

Figure 2.5 provides examples of how objectives in the marketing plan can support the organisational strategic plan.

Figure 2.5: Relating the marketing plan to the strategic plan



Adapted from: Churchill and Peter (1998: 96)

Despite the various approaches, marketing managers support the organisational strategic plan by developing marketing plans, which includes detail about the marketing objectives, marketing mix decisions as illustrated in Figure 2.5 and the marketing decision-making variables of segmentation, targeting, positioning and budgeting.

The functional level strategy will be discussed in the next section.

2.3.3 Functional level strategy

Each functional level in an organisation as illustrated in Figure 2.1 needs to effectively allocate and co-ordinate resources and activities to accomplish organisational objectives within a specific product-market. The guidelines that the marketing function will use to develop strategy in coherence with the organisational strategy and objectives are constituted in the strengths, weaknesses, opportunities and threats according to the SWOT analysis.

The SWOT analysis draws the critical strengths, weaknesses, opportunities and threats from the strategic audit. The strategic audit as discussed in paragraph 2.3.1(a)(iii) contains a wealth of data of different levels of importance and reliability. The SWOT analysis distils these data to show the critical terms in both the internal and external audit.

A marketing opportunity is an area of buyer need in which an organisation can perform profitably and an environmental threat is a challenge proposed by unfavourable trends or developments that will lead, in the absence of defensive marketing action, to deterioration in sales or profit (Kotler et al, 1996: 79). Opportunities and threats exist externally such as the economic and technology environment of the organisation and management has relatively little or no control over the events in the external environment. Once an organisation has performed its SWOT analysis, it can proceed to develop objectives and strategies for a specific planning period.

According to Sudharsan (1998: 1), the marketing function through marketing strategy creates pathways to a desired future. Marketing management is, therefore, travelling through these pathways to achieve a desirable future. The primary purpose of the marketing function through the marketing strategy is to effectively allocate and co-ordinate marketing resources and activities.

Decisions about the scope of marketing strategy involve specifying the target market segment or segments to be pursued and the breadth of the product line to be offered. The marketing function should, therefore, use the STP stages provided by Kotler (1997: 89) emphasising the processes of segmentation, targeting and positioning. Segmentation deals with an aggregated process that clusters people with similar needs into a market segment. Targeting deals with the process whereby a marketing mix is tailored to fit some specific target customers. Positioning deals with the way customers perceive proposed or present brands in a market.

Furthermore, the organisation seeks a competitive advantage and synergy through a well-integrated programme of marketing mix variables tailored to the needs and wants of customers in the market segment through segmentation, targeting and positioning. The concept the marketing mix variables for physical products was formally defined by Neil Borden (Van Waterschoot & Van Bultle, 1992: 83-93) and redefined over the years and are referred to as the traditional marketing mix. This traditional marketing mix consists of the following marketing mix variables (4Ps) – product, price, place, and promotion.

The traditional marketing mix has been extended to incorporate the nature of services based on its intangibility. It is known as the expanded marketing mix or 7Ps and consists of the following mix variables – product, price, placement, promotion, people, processes and physical evidence (Lovelock: 1996: 37-233).

On a functional level marketing is actively involved in the execution of the marketing process, marketing strategy and the development of the marketing mix variables. These aspects will be discussed in the next section.

(a) The marketing process

According to Kotler et al (1996: 927) the marketing process is the analysis of marketing opportunities, selecting target markets as part of the STP process, developing the marketing mix and managing the marketing effort. The marketing process will be

planned and executed against the strategic guidelines set at a corporate level as depicted in Figure 2.1. Planning at corporate, business or functional level is an integral part of the marketing process and to fully understand the marketing process it is important to understand how the organisation defines its business.

The organisation can apply a traditional physical process or it can create value through its delivery process. In order to create value, the marketing department needs to analyse markets, customers and competitors in the micro and macro environments before any product even exists. The marketing staff must segment the market, select the appropriate target market and develop the offer's value positioning. After the STP stages in paragraph 2.3.3 have been completed and once the organisation has chosen its overall competitive marketing strategy, it is ready to plan and develop the details of the marketing mix – whether a physical product or a service, the marketing mix would consist of 4Ps or 7Ps respectively.

(b) Marketing strategies for competitive advantage

Competitive advantage is an organisation's ability to perform in one or more ways that competitors will not or cannot match (Kotler, 2000: 56) and is realised by the organisation's marketing strategy, the implementation of this strategy and the context in which competition unfolds. The development and the sustainability of a competitive advantage is an important objective on corporate (paragraph 2.3.1), business (paragraph 2.3.2), and functional levels (paragraph 2.3.3), in an organisation.

target consumers will be the core and centre of the organisation's marketing strategy.

organisation should identify the total market and divide it into smaller segments and should select the segment(s) and focus on serving it/them. The organisation then engages in marketing analysis, planning, implementation and control to find the best marketing mix and take action.

Competitive advantage can be achieved in many ways through core competencies, resources, strengths as identified by the SWOT analysis, positioning and differentiation based on the marketing mix variables. Marketing strategy deals with relationships with the major publics, offerings with the type of product or service sold, timing when the product or service is sold and resources with resource allocation and management.

c) **Development of the marketing mix variables**

The marketing mix concept is regarded as a set of controllable variables at the disposal of marketing management that can be used to influence customers (Rafiq & Ahmed, 1995.

4).

The marketing mix variables for physical products and services will be discussed in the next section.

(i) **Marketing mix variables for physical products**

The variables of the marketing mix used for the marketing of physical products include the following:

- A product is something offered by marketers to customers for exchange (Churchill & Peter, 1998: 612). Product as a marketing mix variable consists of the following variables – physical variety, quality, design, features, brand name, packaging, sizes services, warranties and returns (Kotler, 1997: 92).
- A price is the amount of money, goods and services that must be sacrificed to acquire ownership or use of a product (Churchill & Peter, 1998: 612). Price as a marketing mix variable consists of the following variables – list price, discounts, allowances and payment period and credit terms (Kotler, 1997: 92).
- Placement is the channel of distribution used to get products and services to the market (Churchill & Peter, 1998: 610). Place as a marketing mix variable consists of the following variables – channels, coverage, assortment and locations, inventory and transport (Kotler, 1997: 92).
- Promotion is the personal and impersonal means used to inform, persuade, and remind customers about products and services (Churchill & Peter, 1998: 612). Promotion as a marketing mix variable consists of the following variables – sales promotion, advertising, sales force, public relations and direct marketing (Kotler, 1997: 92).

The four Ps represent the seller's view of the marketing mix variables available to influence buyers. From a buyer's perspective, each marketing tool is designed to deliver customer benefits. Lautenborn (1990: 26) suggested that the seller's 4Ps correspond to the customers 4Cs – product correspond with customer needs and wants, price corresponds with cost to the customer, place responds with convenience and promotion corresponds with communication.

(ii) Marketing mix variables for services

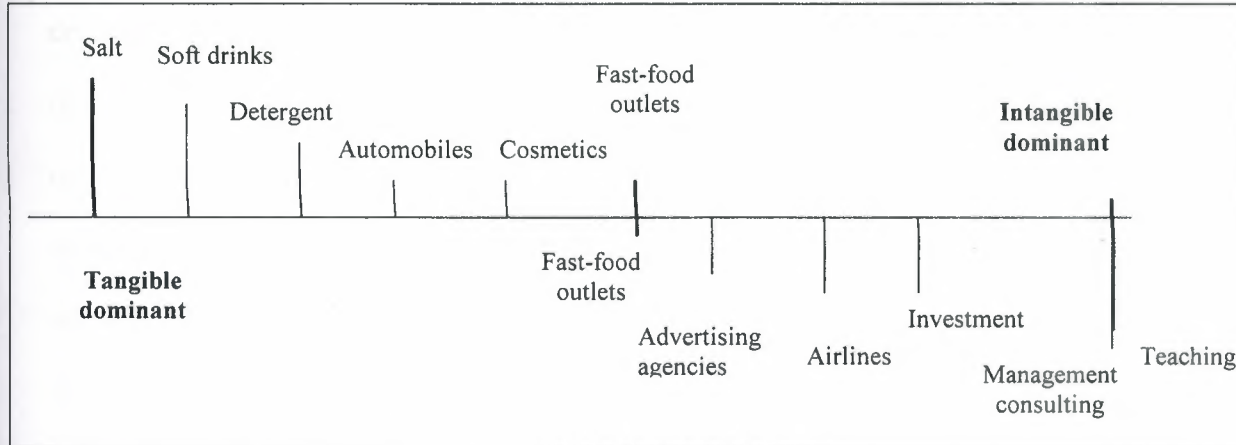
Products and services are different in many ways. Unlike products (manufactured goods), services are intangible and cannot be stored, transported or resold. In goods manufacturing, on the other hand, repeatability and systematically controlled production are the key variables of success.

The services marketing function in an organisation is much broader than the activities and outputs of the traditional marketing department, requiring close co-operation between marketers and those managers responsible for operations and human resources (Lovelock, 1996: 3). Therefore, the traditional marketing mix has been expanded by the addition of three new marketing mix variables – people, processes and physical evidence. This expanded marketing mix consists of the following instruments – product, price, place, promotion, people, processes and physical evidence.

The various variables of the marketing mix used for the marketing of products are provided in the next section. The discussion on the seven Ps will be based on the work of Booms and Bitner (1981: 47-51), as they were the first to publish an article on the broadening of the traditional marketing mix to make provision for the intangible nature of services marketing. The theories by Booms and Bitner (1981: 47 –51) will be supported by the views of other authors of general marketing literature – Lovelock (1996), Kurtz (1998), Palmer (1998), Churchill and Peter (1998) and Brassington & Pettit (2000).

Before the marketing mix variables for services are discussed, it is important to illustrate the goods-service continuum in Figure 2.6 to clarify the difference between goods and services.

Figure 2.6: The goods-service continuum



Adapted from: Du Plessis & Rousseau (1999:138)

It is evident from the continuum depicted in Figure 2.6 that an offering can vary from a tangible dominant (pure physical product) to intangible dominant (pure service).

The marketing mix variables for services will be discussed in the next section.

- Product as a marketing mix variable for services consists of the following variables – quality, brand name, service line, warranty, capabilities, facilitating goods, tangible clues and the process of service delivery. The service product (Lovelock, 1996: 312) can be viewed as the technical outcome of a service and comprises the “what” of a service (Kurtz & Clow, 1998: 22). Since services differ in the degree of tangibility and are highly influenced by the process and people involved when delivering the service, it is difficult to standardise services (Churchill & Peter, 1998: 295).
- Service pricing (Lovelock, 1996: 361-375) – price is one of the inputs used to form an expectation of a service before a customer makes a purchase decision. Price serves as a tangible cue that indicates what can be expected from a service provider. When determining a price, the service organisation should also view it from the viewpoint of the buyer. Pricing decisions made without concern for the customer will usually result in a decline of customer satisfaction, sales and profits. Pricing as a marketing mix variable for services consists of the following elements – price level, discounts, allowances, payment terms, customer’s perceived value, quality/price interaction and differentiation.
- Place (Lovelock, 1996: 311) – the distribution strategy for services needs to be efficient. Depending on the nature of the service and what the customers value, several distribution channels can be employed. The nature of the distribution channel employed depends on the type of service organisation. Place as a marketing mix

variable for services consists of the following variables – location, accessibility, distribution channels and distribution coverage.

Promotion (Lovelock, 1996: 168-169) – the service organisation communicates with its target groups with the aim to influence knowledge, attitude, and/or behaviour. Thus, the face-to-face interaction of especially front-line staff with customers plays a very important role in promoting the service. Marketers should actively support and enhance a good service by communicating the benefits of that service to its target audience with the help of various types of communication channels and media. Promotion as a marketing mix variable for services consists of the following variables: advertising, publicity, sales promotion, personal selling and direct marketing.

People (Lovelock, 1996: 312) – The organisation's contact personnel form an integral part of the process of service delivery. In the services industry, all the staff act as marketers of the organisation's offering because their actions have a direct effect on the output received by customers, (Palmer, 1998: 9). If the customer feels comfortable with the particular service provider, and has trust and rapport with the service provider, it is a relationship that a competitor would find hard to break into. This makes the entire task of people planning extremely important in a service organisation. People add value and dimension to the marketing package way beyond the basic product offering. People as a marketing mix variable for services consists of an internal and external component. The internal people component includes various staff aspects such as training, discretion, commitment, incentives, appearance, interpersonal behaviour and attitudes. The external component includes customers

who may be asked to participate/interact actively in the process of service creation, delivery and consumption.

The service process (Lovelock, 1996: 311) – the heart of the service is the experience by the customer of organisational policies, systems and procedures, which takes place in real time. The marketer, therefore, has to plan the process of service delivery carefully, and plan what quality controls can be built in to ensure that customers are confident in what about to expect each time they use the service product. This applies, for example, to banks, wholesalers, retailers, and other dealers in financial services, fast food outlets; hairdressers and other service providers and even to professional services such as attorneys and management consultants. Processes can also involve queuing mechanisms, preventing customers from getting so impatient while waiting that they leave without buying; processing consumer detail and payment as well as ensuring high professional quality of whatever service they are buying (Brassington & Pettitt, 2000: 27).

Physical evidence (Lovelock, 1996: 98-99) – this marketing mix instrument is of particular relevance to dealers (of any particular product), or those who maintain premises from which a service is sold or delivered. Physical evidence for dealers includes some of the place-related elements already mentioned in the discussion of the traditional marketing approach, such as exterior elements (e.g. parking and signage) and interior elements (e.g. design, layout, equipment and décor). In other service situations, these elements will be different. For example: the physical evidence would relate to the aircraft in which you fly, the hotel in which you stay, the stadium in which you watch a sport event or the lecture room in which you obtain a

learning experience. Physical evidence is furthermore linked to the reputation of an organisation, the physical state and appearance of office buildings, uniforms of personnel, furniture used in the offices, the organisation's letterheads and modern technology.

In addition to the changes in the marketing mix variables, the services marketing concept includes the recognition of a new role for marketing in service organisations as a result of the simultaneous production/consumption process and the resulting overlap in functional responsibility between operations, marketing and personnel. The services marketer must not only manage the exchange process and the variable of the marketing mix but must also be concerned with managing the total buyer/seller interaction process which encompasses other functional areas in the organisation.

The marketing mix variables for physical products and its applications will be tested during the empirical part of this study in the chapter six.

The ability of the marketing decision-makers in small manufacturing organisations to link these marketing mix variables to each phase of the product life cycle concept will be tested in the empirical part of this study.

USING THE 7PS AS A GENERIC MARKETING MIX

Booms and Bitner (1981: 47: 51) in their original article clearly indicated that the extended marketing mix as discussed in paragraph 2.3.3(c)(ii) is not to be limited to services marketing. Rafiq and Ahmed (1995: 4), however, posit a need for a generic marketing mix that cut across the boundaries of goods, services and business-to-business marketing.

Rafiq and Ahmed (1995: 8) suggested that the Booms and Bitner's framework as discussed in paragraph 2.3.3(c)(ii) should be extended to goods, services and industrial marketing. According to Rafiq and Ahmed (1995: 9) there has been no empirical research available to test the satisfaction of use by marketing academics with either 4Ps or 7Ps framework. In 1992, a survey was conducted to establish which of these frameworks marketing academics were using and how and why they were using them.

Rafiq and Ahmed (1995: 9) targeted delegates of the UK's Marketing Education Group (MEG) Conference held in Salford in 1992, and the European Marketing Academy (EMAC) Conference held in Aarhus, Denmark, in May 1992. A large majority of respondents (78% of EMAC and 84% of MEG delegates) felt that the 4Ps concept was deficient. While there was a great deal of dissatisfaction with the 4Ps framework, it was more difficult to assess how well Booms and Bitner's framework was accepted as a general framework for services marketing as no empirical research on this issue has been

conducted in the past. A very important empirical result on the 7Ps framework showed that it has at least some relevance for all types of marketing.

Rafiq and Ahmed (1995: 13) made the following conclusions:

- The results suggested that there is a high degree of dissatisfaction with the 4Ps framework among European academics. It is suggested that the 7Ps framework has already achieved a high degree of acceptance as a generic marketing mix among the respondents in the sample.
- Although there is general support for the 7Ps mix, there is no uniform support for the three new variables of people, process and physical evidence as discussed in paragraph 2.3.3(c)(ii). People/participants were most widely accepted as an element of the new variables and the process variable also received reasonable support. The physical evidence variable is the least supported of the new variables and it is probably because physical evidence is not as well conceptualised as people and process.

Rafiq and Ahmed (1995: 13) compiled the following Table 2.1 as a result of their empirical study to illustrate the difference between the 4Ps and 7Ps mixes.

Table 2.1: Strengths and weaknesses of the 4Ps and 7Ps mixes

	7Ps	4Ps
Strengths	<ul style="list-style-type: none"> • More comprehensive, more detailed and more defined • Broader perspective • Includes people, process and physical evidence • Signals marketing theory 	<ul style="list-style-type: none"> • Simplicity and ease of understanding • Good pedagogic tool, especially for introductory marketing • Useful conceptual framework • Ability to adapt to various problems
Weaknesses	<ul style="list-style-type: none"> • More complicated • Extra variables can be incorporated in 4Ps • Controllability of the three new variables 	<ul style="list-style-type: none"> • Too simple, not broad enough • Lacking people, process and physical evidence • Lack of connection between variables • Static nature of the 4Ps

Adapted from: Rafiq and Ahmed (1995: 13)

Rafiq and Ahmed (1995: 13) argued that while these results are based on a relatively small number of respondents, they believe that it is representative of the views of marketing academics. The above-mentioned results provide empirical support for the

theoretical reasons advanced for the extension of the 7Ps mix into a generic marketing mix. The literature review, however, provided no further evidence, critique or any substantiation on a generic marketing mix as proposed by Rafiq and Ahmed (1995: 4-15).

This study envisages testing the importance of generic marketing mix variables among small manufacturing organisations in the empirical part of this study.

2.5 STRATEGY IN SMALL ORGANISATIONS

It is important to note that small organisations are discussed in detail as part of the small business environment in Northern Cyprus in chapter four.

Small organisations do not normally have the organisational architecture that is found in large organisations as illustrated in Figure 2.1. Although small organisations have features common with larger organisations, they also have unique characteristics and attributes that are reflected in the manner in which they are organised and managed. The small-scale operations often indicate a lack of management depth. While small organisations usually employ staff to perform multiple tasks, large organisations tend to use people who specialise in functional activities.

Carson (1993: 89-205) is of the opinion that many of small organisation's characteristics stem from their relative size and the influence of the entrepreneur/owner-manager. The most common characteristics of small organisations include:

- Resource constraints, especially time and finance
- A personalised approach to management
- A survival mentality
- A lack of strategic planning

While size may create many problems for strategy and strategy formulation in small organisations, it also creates many advantages (Gilmore, Carson, O'Donnell & Cummins, 1999: 29). These advantages are:

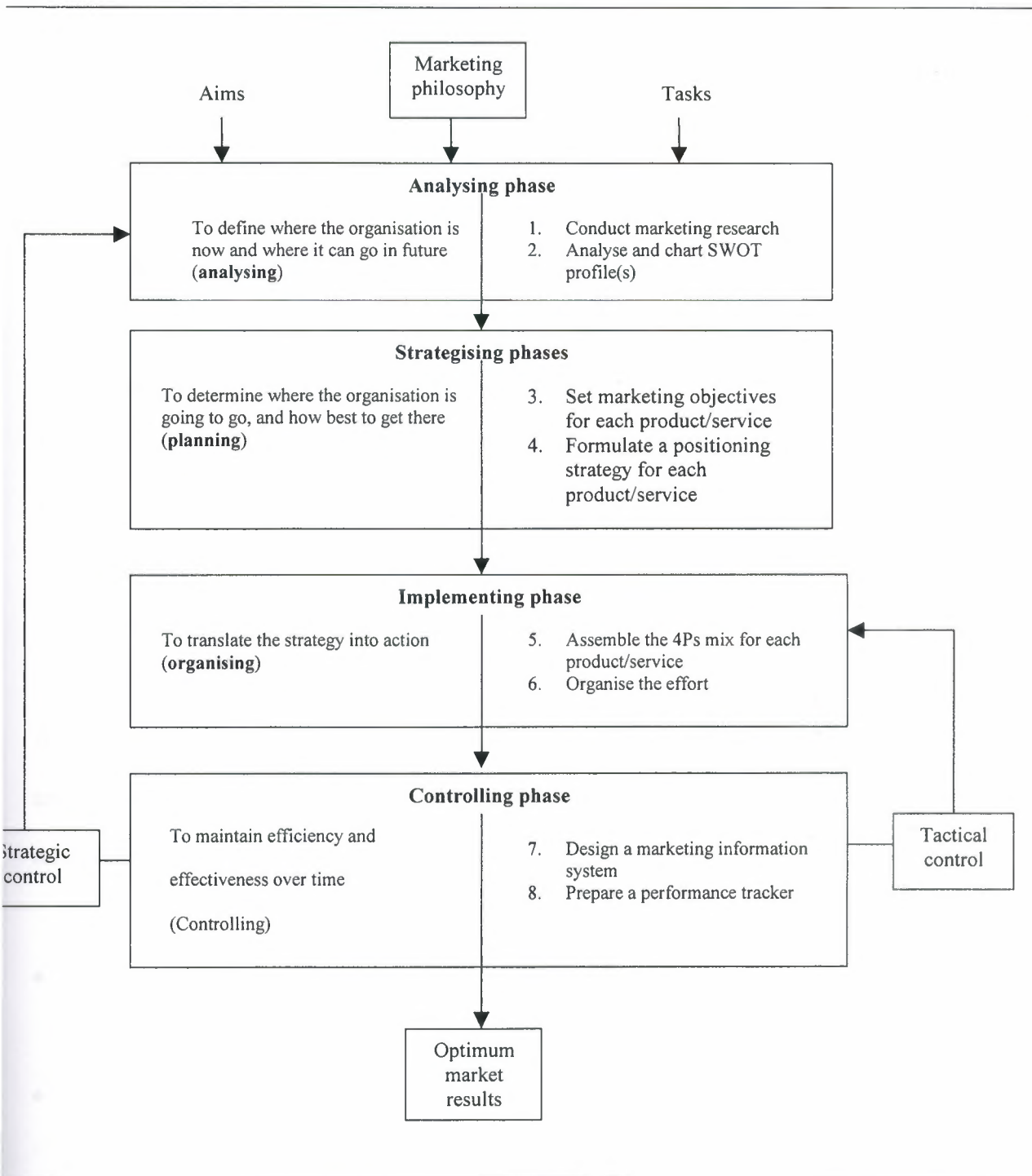
- Smaller organisations are better at serving specialist markets
- Entrepreneurial spirit, flexibility, innovativeness and responsiveness
- Fast and flexible

According to Blanchard (1994: 12-13), small entrepreneurial organisations with effective management can pose tough competition for any large organisation.

It was stated in paragraph 2.1 that strategy in large organisations are formulated on three different levels but it is surmised that no clear divide can be made between these three levels when strategies are formulated, implemented and monitored in small organisations. The entrepreneur/owner and/or owner/manager of a small organisation is therefore responsible for the formulation, implementation and monitoring of strategies on all three levels as depicted in Figure 2.1.

According to Brooksbank (1999: 78), the vast majority of books and articles deal with the subject of marketing planning as it relates to large organisations, citing big organisational cases and examples. Brooksbank (1999: 78-90) investigated key concepts and marketing tools such as the product life cycle in marketing textbooks with the aim of simplifying marketing plan development in smaller organisations.

Brooksbank's (1999: 799) effort resulted in the development of the following four-phase marketing planning model for small organisations as illustrated in Figure 2.7.

Figure 2.7: The marketing planning process

Adapted from: Brooksbank (1999: 79)

the four phases in the marketing planning process proposed by Brooksbank (1999: 79)

are:

The first phase is to do research and to analyse the organisation's competitive situation.

- The second phase is to define a set of marketing objectives, on both the demand and supply side, together with a positioning strategy for the achievement of the sustainable competitive advantage.
- The third phase involves the planning of the appropriate marketing mix variables.
- The fourth phase is concerned with the development of a marketing information system and the design of some of performance tracker for comparing events as they unfold against the plan.

As depicted in Figure 2.7 owners and decision-makers in small organisations perform tasks on all three levels – corporate, business and functional as depicted in figure 2.1. In relation to Figure 2.1 the aims and tasks depicted in Figure 2.7 can be related as follows:

- The analysing phase in Figure 2.7 can be related to both the corporate and functional levels in Figure 2.1.
- The strategizing phase in Figure 2.7 can be related to both the business and functional levels in Figure 2.1.
- The implementing and controlling phases in Figure 2.7 can be related to the functional level in Figure 2.1.

Brooksbank (1991: 91) recommend that small organisations can use this model as the basis upon which to dismantle and improve their existing marketing planning system, to restructure it and to inject fresh ideas into their organisations.

It is important to reiterate that the empirical part of this study will focus on the use and application of the product life cycle from a small organisation's perspective. The structure of small organisations, their advantages and disadvantages along with the business environment of the small organisations in Northern Cyprus will be discussed in chapter four.

2.6 CONCLUSION

The strategic planning process in an organisation (mainly large) consists of chronological steps and interrelated activities. This chapter defined strategy and discussed the various levels of strategy for large organisations as depicted in Figure 2.1. The strategic plan was highlighted and a discussion was provided on the role of marketing in the strategy and planning process.

The chapter concluded with the marketing planning process from a small organisation's perspective, as the empirical part of this study will be executed among small manufacturing organisations in Northern Cyprus.

next chapter will be devoted to a discussion on the product life cycle concept as part of product management.

CHAPTER 3

LITERATURE SURVEY:

MANAGING PRODUCTS OVER THEIR LIFE CYCLES – THE PRODUCT LIFE CYCLE CONCEPT

3.1 INTRODUCTION

This chapter will describe product development and the product life cycle concept as a marketing instrument to be used by marketing decision-makers and marketing strategists as discussed in chapter two. Ansoff's growth strategies will be employed to describe the different growth strategies to be used by a marketing manager, after commercialisation, for market development purposes by means of the product life cycle phases.

Special emphasis will be given to the characteristics, marketing objectives and various strategies to be employed during the different product life cycle phases that will be used in the empirical part of this study.

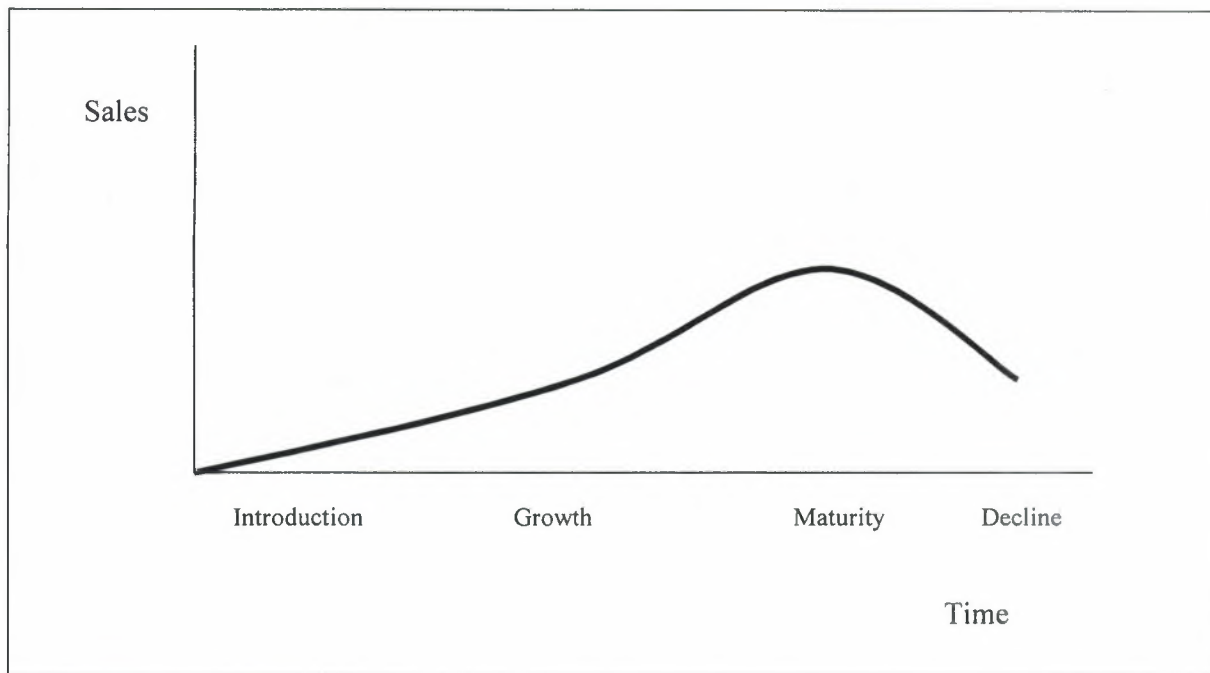
3.2 THE FUNDAMENTALS OF THE PRODUCT LIFE CYCLE CONCEPT

The product life cycle concept has represented a central element of marketing theory since its development in the 1950s. Following its development and its subsequent popularisation in the 1960s, it has remained a stable feature of marketing teaching. The

product life cycle concept is one of the most quoted and most frequently taught elements of marketing theory. According to Mercer (1993: 269), the influence of the product life cycle can be seen in other theories, from new product development to portfolio analysis.

Since the adoption by marketing, the product life cycle (PLC) has achieved universal acceptance because of its appeal and wide application. The PLC concept was extensively used in the fast-moving consumer goods sector, as a predictive tool to anticipate marketing requirements (Grantham, 1997: 4). The product life cycle represents a core element of marketing theory and according to marketing literature, every product or service has, by definition, a life cycle and how this is managed is the key to survival in business.

According to Weber (1976: 12), the product life cycle concept provides an intuitively appealing and readily understandable framework of analysis for considering future growth opportunities and pitfalls. As time passes sales increase slowly at first (introduction phase), then more quickly (growth phase), then once again more slowly (maturity and saturation phases), and finally decrease (decline phase). See the different phases of the traditional product life cycle in Figure 3.1.

Figure 3.1: Traditional product life cycle concept

Adapted from: Weber (1976: 120)

The product life cycle concept theory has been subjected to relatively little public criticism, with only 20% of 271 papers published on the subject between 1971 and 1991 undertaking further research into the subject and only a handful challenging the basic assumptions (Mercer, 1993: 269). This study provides a summary table (paragraph 3.10) later on in this chapter to show product life cycle concept research studies conducted after 1991.

Despite the praise for the product life cycle concept, very few publications contested the assumptions it makes (Grantham, 1997: 4). The substantiation of the concept has seemed surprisingly difficult to uncover. Despite all the criticism mentioned in the introductory

chapter, the product life cycle concept has become accepted and valued as an element of basic marketing theory and has become a building block for management theory.

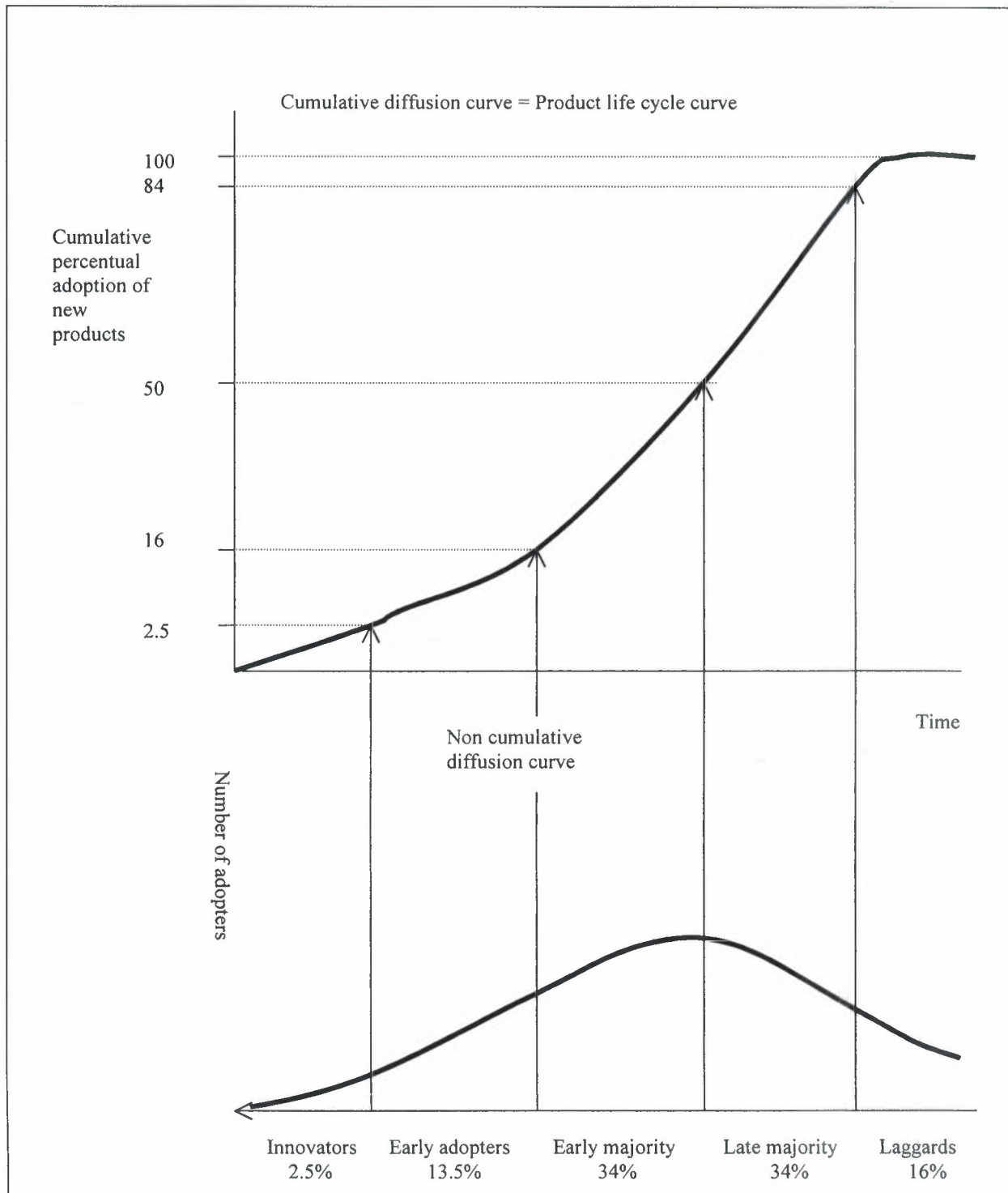
The product life cycle concept has mainly been applied to large corporations, businesses and organisations in empirical studies as derived from the literature study. This phenomenon, therefore, provides a gap and the definite need to test the applicability of the product life cycle concept in small organisations which will be the cornerstone of the empirical research and will be discussed in chapter six.

3.2.1 Diffusion of innovation and the product life cycle concept

The shape of the traditional product life cycle curve as depicted in Figure 3.1 is the direct result of the diffusion of innovation process.

Diffusion of innovation as depicted in Figure 3.2 starts where the organisation's innovation process ends. The diffusion of innovation deals with the following closely related aspects – the diffusion process, the acceptance process, the profile of innovators and the relationship between the diffusion and acceptance process and the product life cycles. The cumulative diffusion curve as depicted in Figure 3.2 is the result of all the individual sales of a product over time, while the non-cumulative diffusion curve illustrates the adoption rate by consumers over the life cycle of a product (Van der Walt et al, 1996: 213).

Figure 3.2: The relationship between the cumulative and non-cumulative diffusion of innovation and the product life cycle curve



Adopted from: Howard (1997. 198)

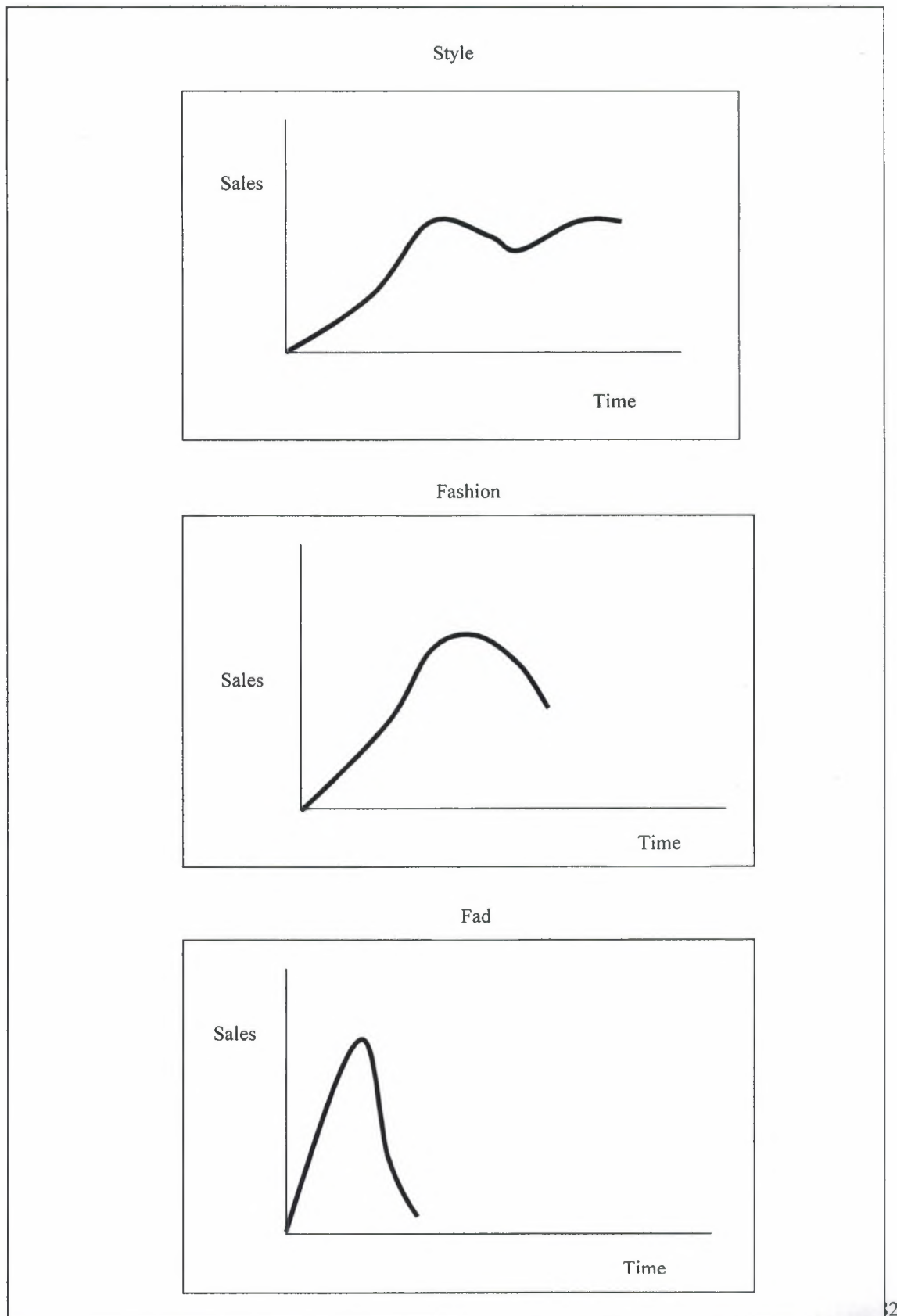
s illustrated in Figure 3.2, the product life cycle curve is directly derived from the non-cumulative diffusion curve and it represents the adoption of the product over time by the various adopter categories. The non-cumulative curve can thus be regarded as the product life cycle curve as it indicates the amount of sales over time along with the decline.

As indicated in general marketing literature, no author labels the vertical axis of the product life cycle curve depicted in Figure 3.1 as cumulative or non-cumulative (Kotler & Armstrong, 1989; Van der Walt et al, 1996; Kotler, et al, 1996; Kotler, 1997; Churchill & Peter, 1998; Walker et al, 1999; Perreault & McCharty, 1999; Lamb et al, 2000; and Kotler, 2000). This study, for its purposes, will label the vertical axis as non-cumulative sales based on the declining nature of the product life cycle curve in the decline phase.

3.2.2 Different product life cycle patterns

The aim of the empirical part of this study is not to test or question the product life cycle curve, but it is necessary to provide a short discussion on the various product life cycle patterns to illustrate the differentiation from the traditional curve illustrated in Figure 3.1.

Product life cycles differ widely with regard to the period as well as the course of the curve. Kotler (1997: 347) distinguishes among three special categories of product life cycle shapes as depicted in Figure 3.3.

Figure 3.3: Style, fashion and fad life cycles

- **A style life cycle**

A style is a basic and distinctive mode of expression appearing in a field of human endeavour. For example, styles appear in homes, clothing and art. Once a style is invented, it can last for generations, going in and out of vogue.

- **A life cycle for fashions**

A fashion is a currently accepted or popular style in a give field. For example, jeans are a fashion in today's clothing, and rap is a fashion in today's popular music.

The fashion cycle has some important managerial applications. According to Sproles (1981: 122), the fashion life cycle concept is widely applied by manufacturers and dealers but often at an intuitive rather than scientific level. For instance, in any new fashion season, a producer may propose hundreds of designs ranging from classics to established fashions (basic merchandise) to very innovative designs and a few exotic items. Similarly, dealers develop assortment policies stating a certain percentage of merchandise in each classification. For manufacturers and dealers who are involved in such assortment decisions, a systematic knowledge of the correct life cycle position of each style is crucial.

- **A fad life cycle**

Fads are fashions that attract public attention and awareness; they are adopted with great speed, peak early and decline fast. Their acceptance cycle is short, and

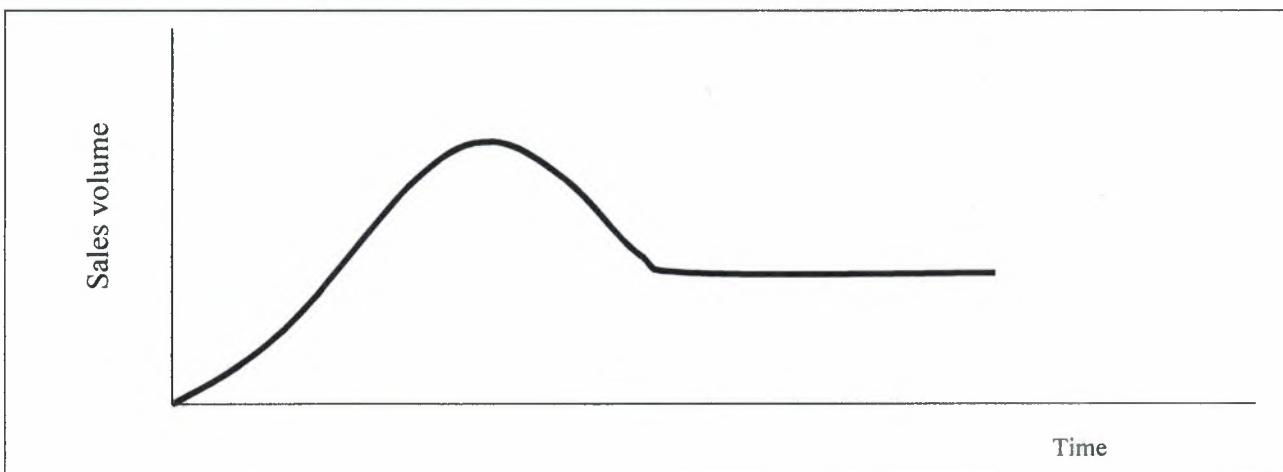
they tend to attract only a limited following. They often have a novel or capricious aspect, such as body piercing and tattooing.

Not all products show the S-shape as illustrated in Figure 3.1 and bell-shape as illustrated in Figure 3.2. Researchers have identified a number of alternate patterns – the growth-slumped maturity pattern, the cycle-recycle pattern and the scalloped pattern are discussed and illustrated in Figure 3.4, Figure 3.5 and Figure 3.6 below:

- **Growth-slumped maturity pattern**

The growth-slumped pattern is illustrated in Figure 3.4 below:

Figure 3.4: Growth-slumped maturity pattern



Adapted from: Kotler (1997: 347)

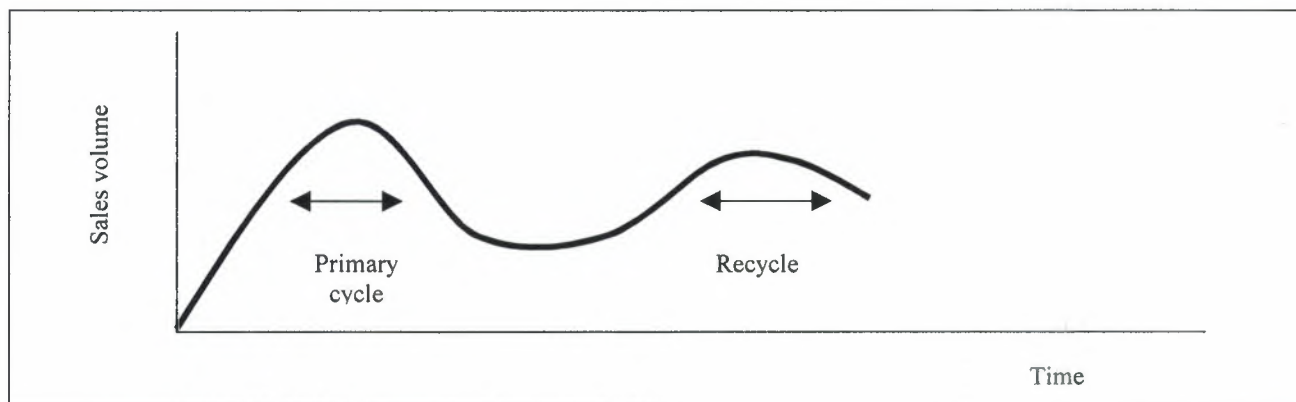
The shape of the product life cycle curve illustrated in Figure 3.4 above is often a characteristic of small kitchen appliances. As depicted in Figure 3.4, late adopters buy

the product for the first time and early adopters replacing the product to sustain the petrified level.

- **Cycle-recycle pattern**

The shape of the product life cycle curve illustrated in Figure 3.5 is often related to the sales of pharmaceutical products.

Figure 3.5: Cycle-recycle pattern



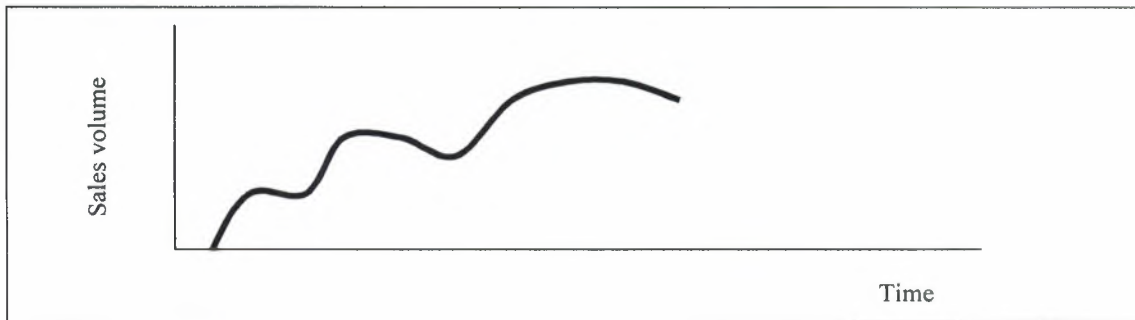
Adapted from: Kotler (1997: 347)

An example of this pattern in Figure 3.5 can be when pharmaceutical companies aggressively promote a new drug and this results in the first cycle (primary cycle). Later, sales start declining and the company gives the drug another promotion push, which produces a second cycle (recycle) that is usually of smaller magnitude and shorter duration.

- **Scalloped pattern**

The scalloped pattern is illustrated in Figure 3.6.

Figure 3.6: Scalloped pattern



Adapted from: Kotler: (1997: 347)

As illustrated in Figure 3.6 sales pass through a succession of life cycles based on the discovery of new-product characteristics, uses or users. Nylon's sales, for example, showed a scalloped pattern because of the many uses discovered over time.

3.2.3 Levels of aggregation for the product life cycle

An important issue that the marketer should consider is to clearly delineate the level of aggregation that is applicable to the life cycle. The level of aggregation that is applicable to the life cycle. The level of aggregation is critical for the understanding of the strategic needs of the organisation. To analyse, for instance, a product category (liquor), a product form (white liquor), a product (vodka) or a brand (Smirnoff), marketers mainly use the product life concept.

Many levels of aggregation exist and it can be similar or different from the traditional curve as depicted in Figure 3.1 and the bell shaped curve as illustrated in Figure 3.2.

The levels of aggregation are ranging from the international level to the brand level:

- International product life cycle – this has been used to describe international trade patterns and to explain international trade fluctuations.
- Corporate life cycle – this applies to the life cycle of the total organisation (the level of aggregation is the whole organisation).
- Brand product life cycle – this will be the sales history of the brand. The brand is unique, for example Camel.
- Brand form or type life cycle – the brands that satisfy a definite set of needs and are made up by the joint sales histories of all the brands that constitute the product form. For example, all the filter cigarette brands.
- Product class life cycle – this contains all the different forms that a class can have and would represent the combined sales of all the different product forms constituting the product class. For example, a filter cigarette is a product form, while all type of cigarettes would reflect the product class.

According to Du Plassis, Jooste and Strydom (2001: 221) the brand life cycle, the product form life cycle and the product class life cycle are the three life cycles most prominent to marketers.

Academics agree that there is no comparable and satisfactory empirical validation of the “classic” product life cycle concept. According to Wood (1990: 148), the product form bears the closest approximation to the product life cycle. A too high aggregation (product class) often results in a stable mature phase of the product life cycle, while a too low aggregation (product brand) often indicates the history of the specific brand and not the product form.

3.2.4 Product life cycle extensions

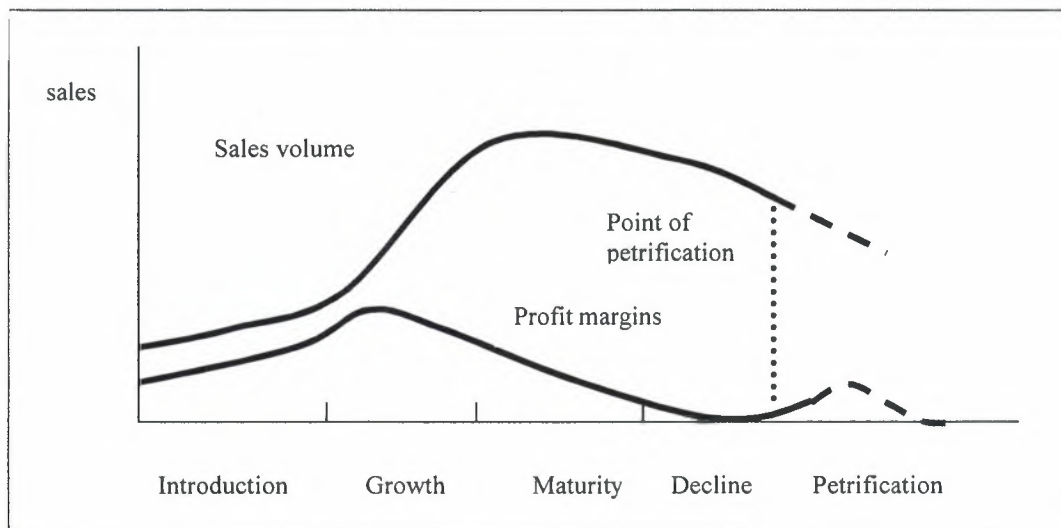
The exact phases of the product life cycle are not easily demarcated as different products may behave and respond differently. Some products skip certain phases while others linger in one phase but move rapidly through another. It is, therefore, essential to provide evidence from the theory in order to present arguments describing phases beyond the traditional four phases of the product life cycle concept as described by Kotler (1997: 363) and illustrated in the introductory chapter:

- **Product petrification**

According to Michael (1971: 88), the lack of preciseness of the decline phase in the traditional viewpoint of the life cycle theory, as witnessed by sales and profit curves stopping curiously in mid-air as illustrated in Figure 3.7, is partly because new products receive more attention than older products. Developing, launching and managing a new

product or product line can be very exciting. It is surmised that the attention span decreases especially when products are becoming weaker. Most products with declining sales are usually in the final phase of their life cycle. According to Michael (1971: 88-91), there is considerable evidence available that the decline may consist of two different phases. The already recognised phase of declining sales is labelled by Michael (1971: 89) as that of product petrification and is illustrated in Figure 3.7 below:

Figure 3.7: Product petrification: A new phase in product life cycle theory



Adapted from Michael (1971: 89)

Figure 3.7 indicates that sales are declining rapidly and the corresponding profit margins are close to zero. By adding the product petrification phase the sales and profit curves do not stop abruptly, it hardens and prolongs the decline phase.

Product petrification is related to individual products and product lines. Often products or product lines are discontinued before the opportunity for petrification is recognised. Petrification is an extension of the decline phase of the product life cycle and it offers profitable opportunities. Products that can be lead profitably through a petrification phase can be found in many product lines such as stainless steel and chromium razor blades (Michael, 1971: 88). Products displaying a decrease in sales exhibit different characteristics, some of which hint at petrification potential.

Such products usually become less available at the consumer level, because either dealers refuse to carry slow movers or else the company finds it more profitable to concentrate distribution on newer products. In both instances, the limited availability (or partial withdrawing) of a declining product with product petrification potential exhibits the following characteristics:

- Consumers continue to seek the product through the regular channel.
- Letters to the producer regarding the product's lack of availability increase.
- Competing or substitute items in the product line enjoy unexplained sales boosts.

Two USA companies manufacturing and marketing steel razor blades and toothpaste have produced improvements in the profitability of declining products by taking advantage of the product petrification phase of the life cycle. Instead of withdrawing the steel razor blade because it is a declining sales product, the industry raised prices 15 to 20 percent while cutting promotion to zero (Michael, 1971: 90).

The successful implementation of product petrification requires a marketing strategy uncommon to those generally recommended for the traditional phases of a product's life cycle. The elimination of marketing promotion is possible because the rate of decline of sales is not escalating. The inelastic price relationship with volume associated with a considerable number of products with petrification potential allows profit margins to inflate.

This study considers the petrification phase as described by Michael (1971: 88-90) as that it should be part of the strategy employed during the decline phase with the objective of avoiding withdrawal of products from the market. It cannot be a separate phase and the traditional four phases of the product life cycle concept as described by Kotler (1997: 363) and illustrated in the introductory chapter is still valid.

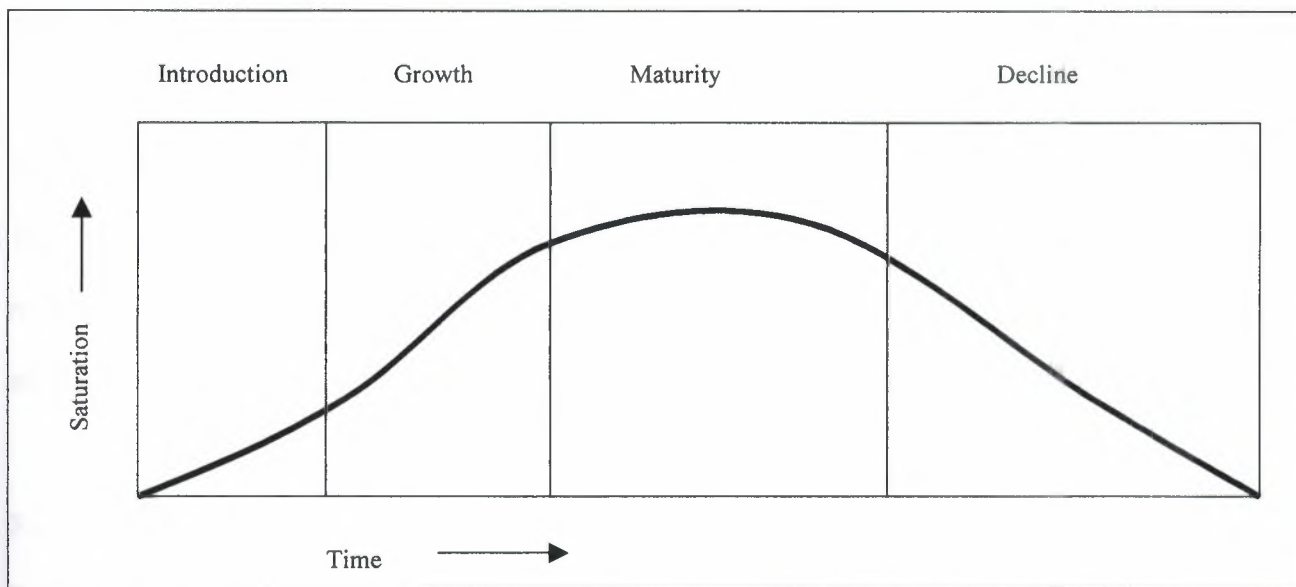
- **The PLC and saturation**

The traditional product life cycle is the result of sales accumulated over certain time period as illustrated in Figure 3.2.

Figure 3.8 is the result of an empirical study undertaken by Smallwood (1973: 29-35) on US household appliances such as dishwashers, colour televisions, freezers, refrigerators and ovens. Smallwood (1973: 29-35) identified the product life cycle as seen in Figure 3.8 as a valuable tool for management in forecasting, pricing, advertising and

distribution. According to Smallwood (1973: 29), the vertical scale is measured in saturation of the product, while the horizontal scale is calibrated to represent the passage of time.

Figure 3.8: Life cycle phases of various products



Adapted from: Smallwood (1973: 29)

The vertical axis represents the percentage of customers using the product, while the horizontal axis is calibrated to represent the passage of time. Smallwood (1973: 30) provides labels for the vertical axis as saturation in contradiction with the traditional product life cycle concept that labels the vertical axis as sales. This labelling of the vertical axis by Smallwood (1973: 30) is similar to the labelling of the number of adopters using a product over time in the non-cumulative diffusion curve as depicted in Figure 3.2.

There is no relation between the termination phase depicted in Figure 3.8 and the petrification phase depicted in Figure 3.7. The termination phase prescribed by Smallwood (1973: 29) posits the termination of the product from the market at a fast rate while the petrification phase prescribed by Michael (1971: 89) posits a slower decline in sales prolonging the life of the product on the market.

Apart from the petrification and saturation phases described above Walker et al (1999: 147), posit a shakeout or competitive turbulence phase after growth and just before the maturity phase. This phase is characterised by a decreasing growth rate that results in strong price competition, forcing many organisations to leave the industry or to sell out.

3.2.5 Application areas of the product life cycle concept

In order for the product life cycle concept to have any practical use, the marketing manager needs to know the answers to the following three questions (Wood, 1990: 150):

- Given a proposed new product or service, how and to what extent can the shape and duration of each phase be predicted?
- Given an existing product, how can one determine in what phase it is?
- Given all this knowledge, how can the product life cycle concept be used effectively?

The product life cycle concept can be applied to many marketing sub-disciplines, ranging from product development, growth management and strategy. Table 3.1 provides a summary of the different application areas of the product life cycle concept as derived from various publications since 1981.

Table 3.1: Application areas of the product life cycle concept

Author(s)	Application area	Large/small organisations
Hamel and Taylor (1981: 68-75)	Electrical houseware products	Large
Qualls, Ohlhavsky and Michaels (1981: 76-80)	Household appliances	Large
Tigert and Farivar (1981: 81-90)	High technology products	Large
Ayal (1981: 91-96)	International trade	Large
Thorelli & Burnett (1981: 97-108)	Industrial products	Large
Sproles (1981: 116-124)	Fashion products	Large
Payburn and Curley (1984: 305-311)	Information technology	Large
De Bresson and Lampet (1985: 170-189)	Technological design	Large
Cravens (1986: 76-80)	Tyre industry	Large
Lambkin and Day (1989: 4-21)	Industrial products	Large
Brown (1992: 41-52)	Industrial products	Large
Paley (1994: 51-52)	Computer software	Small
Ryan and Riggs (1996: 33-41)	Industrial products	Large
Grantham (1998: 8)	Technological products	Small
Agarwal (1997: 571-585)	Manufactured products	Large
Shankar, Carpenter & Krishnamaruthi (1999: 269-277)	Pharmaceutical products	Large
Magnan, Fawcett and Birou (1999: 239-253)	Manufactured products	Large

It is clear from Table 3.1 that the various attempts at applying the product life cycle concept in practice is mainly restricted to fashion retailing, fast moving consumer goods, technological products, manufactured goods and industrial products.

The following conclusions were made from the studies depicted in Table 3.1:

- The product life cycle is a valid tool for predicting the sales volume of a product class (Harrel & Taylor, 1981: 75).
- Managers must begin to pay more attention to the timing of their entry into the market (Qualls et al, 1981: 80).
- The product life cycle concept forces a disciplined approach to estimating market potential (Tigert & Farivar, 1981: 90).
- A systematic knowledge of the correct life cycle position is crucial in order to make the correct decision for the future (Sproles, 1981: 122).
- By making sense of the information the various product life cycle concepts can make managers more liable to consider certain options or to dismiss others (De Bresson & Lampet, 1985: 189).
- A need was identified for modelling the dynamics of competitive behaviour in evolving market structures as organisations do have the choice to act early or to wait and spread their resources to lower their risk (Lambkin & Day 1989: 8-9).
- To be more innovative and to manage the crucial strategic importance of innovation managers need to (Brown, 1992: 50-51):

- (a) Lower the expectations of large sales of innovative new products since such products are likely to appeal initially to only a small number of innovative customers.
 - (b) Target innovative products at the segment that needs it most, and the innovators and early adopters within the segment, rather than the mass market.
 - (c) Build positive attitudes to change underpinning the flexibility to manage discontinuities, which is essential to effective innovations.
 - (d) Provide rewards to product line managers to encourage them and to reduce career implications and failure.
- By increasing skill, marketing and sales managers will begin to execute product life cycle strategies to achieve the following objectives (Paley, 1994: 51):
 - (a) Extend the sales life of their products,
 - (b) Find a viable market position to avoid head-on confrontations with strong competitors.
 - (c) Deploy their sales forces for greater productivity.
 - The product life cycle is a tool that can be deployed to accelerate effective decision-making in markets demanding ever-increasing levels of speed and agility (Ryan & Riggs, 1996: 39).
 - The probability of survival in the marketplace differs across the product life cycle phases. A consistent decline in survival rates is seen when the intensity of competition increases. Early entrants enjoy a higher probability of survival across all product life cycle phases than later entrants (Agarwal, 1997: 580).

After accounting for entering a market, the stage of the product life cycle in which a product enters has a significant effect on growth, market response and sales (Shankar et al, 1999: 269-277).

Table 3.1 further indicates that the majority of the product life cycle studies were conducted in large organisations in the USA and UK. Grantham (1998: 8) provides the only proof from literature on the successful application of the product life cycle concept within a small organisation named Quarterdeck Office Systems. The reason for this success story will be discussed in paragraph 3.8.

Two valuable contributions, not depicted in Table 3.1 because they are not related to marketing directly, were made by Birou, Fawcett and Magnan (1998: 37-48) and Rink, Roden & Fox (1999: 65). They empirically tested the product life cycle concept for functional strategic alignment and financial planning purposes respectively.

- Birou et al (1998: 37-48) concluded that by exploring the potential of the product life cycle to act as a strategic planning framework, it is clear that there is no quick and tested formula for the application on the product life cycle in practice.
- The product life cycle – financial model developed by Rink et al (1999: 65) provides guidelines for financial decisions to be taken during the different products' sales cycle. The model, furthermore, clarifies finance's relationship with other functions in the organisation in the decision-making process. This is an indication that the product

life cycle concept can be applied to assist and help integrating thinking by all functions during the product life cycle phases.

Despite the various efforts highlighted in Table 3.1, there are many criticisms, unsolved problems and difficulties in the practical application of the product life cycle concept as a marketing decision-making tool.

3.2.6 Criticism, gaps and the validity of the product life concept

(a) Criticism of the product life cycle concept

Some serious criticisms as discussed in the introductory chapter, have been made about and against the product life cycle concept. Table 3.2 provides a summary of the major criticisms and problems linked to the product life cycle concept.

Table 3.2: Major criticisms of and problems with the PLC concept

Major criticisms and problems	Author(s)
The PLC concept has no practical use.	Levitt (1963: 93)
It is still difficult to determine at which phase of the PLC a product or service is.	Levitt (1963: 93) Dhalla and Yuspeh (1976: 102-110) Grantham (1997: 9)
The PLC concept has not yet been tested systematically.	Polli and Cook (1969: 385-400)
The PLC led many companies to make costly mistakes and to neglect opportunities. It is often difficult to accurately determine in which phase of the PLC a product actually is. Shortcomings on the practical application of the PLC concept.	Dhalla and Yuspeh (1976: 102-110)
There is still no evidence of the efficacy of the PLC as a tool to predict marketing strategy.	Dhalla and Yuspeh (1976: 102-110) Grantham (1997: 9)
Most empirical studies testing the product life cycle concept have found that it lacks validity or usefulness for explaining sales growth.	Weber (1976: 19-290)
The problem with the PLC concept is that sales are modelled primarily as a function of time and are expected to produce curves that display growth, levelling and decline.	Tellis and Crawford (1981: 125-132)
In many markets, the product or brand life cycle is longer than the actual planning life cycle of organisations.	Mercer (1993: 269-274)
There is still serious doubt about the application of the product life cycle as a marketing tool.	Grantham (1997: 4)

It is clear from the information provided in Table 3.2 that there are some overlapping criticisms:

- Levitt (1963: 93), Dhalla and Yuspeh (1976: 105), and Grantham (1997: 4) are sharing the view that it is often difficult to determine in which phase of the product life cycle a product or a service is. It is clear that one of the earliest and most concerning aspects of the application of the product life cycle concept is still eminent today.
- Weber (1976: 12) and Grantham (1997: 4) are questioning the product life cycle concept's lack of validity in terms of the ability to identify in which phase the product is.

The transition from one phase to another is, therefore, not clear and the transition from birth to growth, maturity and death is far from inevitable. By implanting an expectation of decline in the minds of marketing managers, the product life cycle concept itself may become a self-fulfilling prophecy with intrinsically valuable brand equity prematurely axed from portfolios (Wood, 1990: 151).

In addition to Table 3.2, day (1981: 65) strengthens the existing but common theme of criticism, doubt and the need for further investigation into the PLC concept on strategic and functional levels. He points out that the identification of the boundaries between phases will be effected by the variety of product life cycle patterns. The more variations of the PLC identified, the more difficult the positioning process becomes.

(b) Gaps in the product life concept

The gaps in the product life cycle concept are derived from the various criticisms and problems associated with its practical application. Many gaps have been identified that link very closely with the criticism raised during the previous four decades and those depicted in Table 3.2 of which the major ones are:

- On-going scepticism over the product life cycle theory's applicability (Dhalla and Yuspeh, 1976: 105).
- A lack of validity or usefulness of the product life cycle for explaining sales growth (Weber, 1976: 12).
- 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 curve (Midgely, 1981: 114).
- The clear value of the life cycle analysis 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 and 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: 7).

The gap identified by Grantham (1997: 7) will be tested among marketing decision makers in small organisations in Northern Cyprus who are applying the product life cycle concept in strategy and marketing strategy formulation. It is clear from the literature study that:

- No empirical research on the applicability of the product life cycle for decision-making in small organisations has been undertaken to date.
- The study on the applicability of the product life cycle concept concentrated mainly on large organisations as indicated in Table 3.1.
- The studies done to date on the applicability of the product life cycle concept was executed abroad – not in Northern Cyprus.

These gaps provide substance for this study to conduct empirical research on the applicability of the product life cycle concept among small organisations in Northern Cyprus.

(c) The validity of the product life cycle concept

The development of accurate life cycles cannot be accomplished overnight. On the other hand, accurate life cycle patterns can be generated within a single operation period. Weber (1976: 22) concluded in his study that despite the general acceptance of the product life cycle concept among academics and practitioners, most studies testing the product life cycle concept have found that it

lacks validity as to indicating which “life” is investigated and as to the complications of the empirical research.

Despite the demonstrable lack of general applicability for the product life cycle theory as a whole, the major lesson of the PLC – that change is to be ignored at the marketing manager’s peril – still holds true (Mercer: 1983: 274). More recently Grantham (1997: 9) made the following conclusions sharing this feeling and concluded that:

- There is a serious doubt about the validity of the product life cycle as a marketing tool;
- The value of the product life cycle for forecasting purposes is limited; and
- There is still doubt and no evidence of the efficacy of the product life cycle as a tool to predict marketing strategies.

This thesis will, however, through the various research hypotheses as discussed in chapter six, endeavour to test the applicability of the product life cycle concept among small organisations in Northern Cyprus.

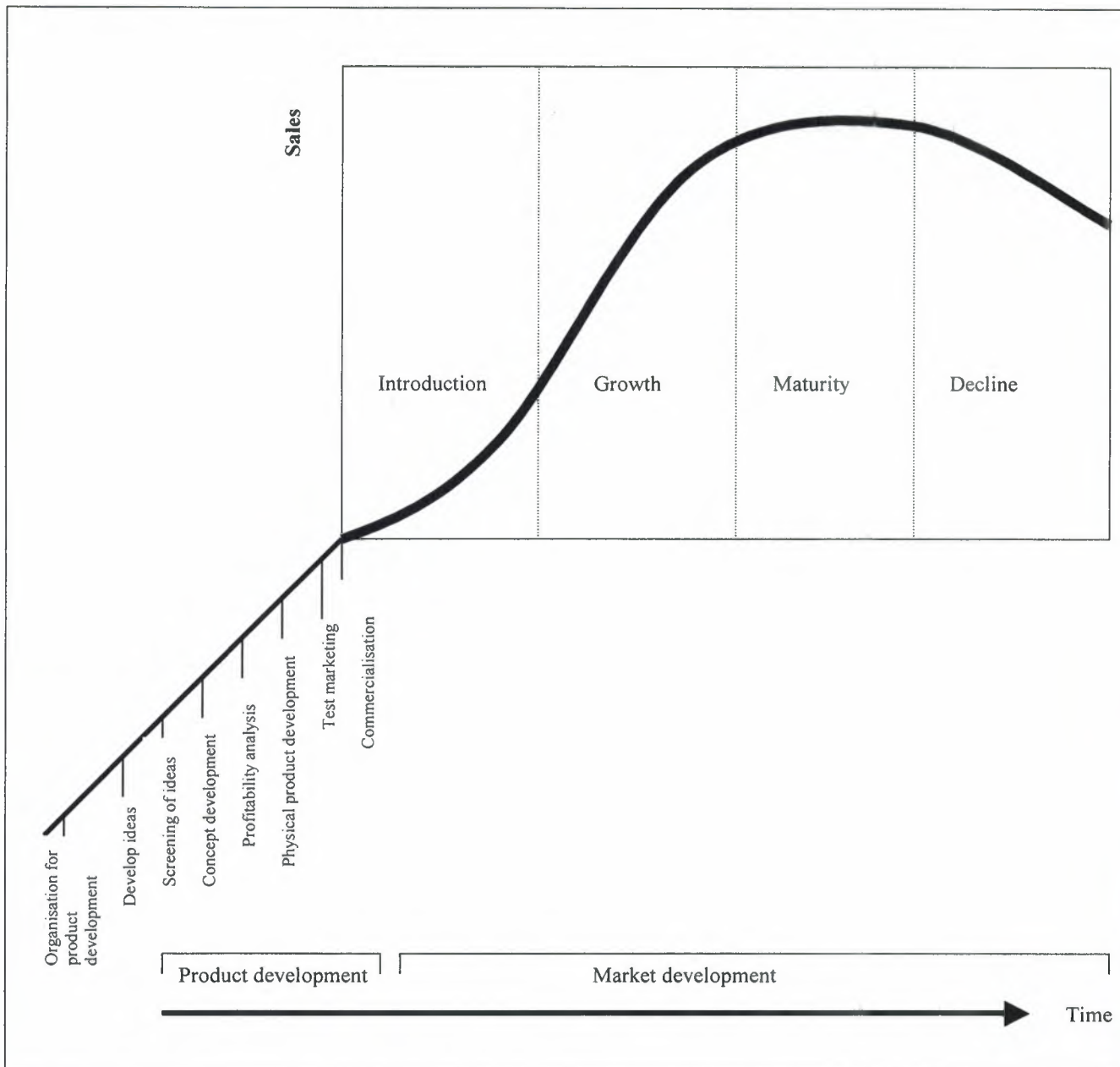
3.3 PRODUCT MANAGEMENT

The marketing mix variables discussed in chapter two is a variable tool available to the marketer of a physical product in order to manage the product through the various phases

of the product life cycle. Marketing related decisions could be made by applying different strategies such as branding, product line extensions, product modifications, positioning and growth strategies. The growth of existing products can be achieved through market penetration and market development as discussed in chapter two.

The management process of a product or service (offering) starts with the new product development and continues along the different product life cycle phases as part of market development as depicted in Figure 3.9.

Figure 3.9: Sequence and steps associated with the development process of a product



Adapted from: Lamb, Hair, McDaniel, Boshoff and Terblanché (2000: 340) and Kotler (1997: 363)

Figure 3.9 will be referred to in the discussion of paragraph 3.3.1 and paragraph 3.3.2.

3.3.1 New Product development

New products or services can be defined as those products or product attributes which are new to the organisation and which the target market regards as being significantly different from existing competitive products or services (Van der Walt et al, 1996: 196).

New product development is a systematic process that has to be followed in order to create new products or services with the lowest possible sacrifices and risks and with the highest possible benefits to the organisation. This process should further create the highest possible need satisfaction for the target market (Van der Walt et al, 1996: 199).

New product development is the main theme in the product development process, but new product development can also be related to each phase of the product life cycle as illustrated in Figure 3.9. Different product strategies can be employed in the different product life cycle phases based on the product sales and market conditions, such as changing consumer preferences, technological advances and changing economic conditions.

(a) Steps in product development

The nature of the decision-making process in product development is depicted in Figure 3.9. At each step in the product development process the developer has to decide which ideas to discard and which ideas to retain for the next step. According to Van der Walt et al (1996: 196), the developer is continuously confronted with a go/no or go/don't know

decision-making situation. If the decision is go, the idea advances through the next step; if the decision is no go, the idea is not pursued.

The product development process as depicted in Figure 3.1 is divided into the following eight chronological steps (Lamb et al, 2000: 240-246):

- **Step 1: Organisation for product development**

According to Lamb et al (2000: 245), several types of groups or structures within an organisation can facilitate the development of new products. These groups or structures include new-product committees and departments, venture teams and intrapreneurs.

The establishment of an effective organisation in which product development can be stimulated, planned, co-ordinated and controlled is one of the most important prerequisites for successful product development. New product development should be a combined effort by the different departments or functions in the organisation and this combined effort will be discussed in paragraph 3.2.1(b). Most leaders of new product teams are aware of the complexity of the problem they are confronted with and the changes that must occur before cross-functional teamwork can accelerate the new product development process (Jassawalla and Sashittal, 2000: 34).

Organisations handle the organisational aspects of new product development in the following ways (Kotler, 2000: 333):

- (i) Product managers – many organisations assign the responsibility for new product development ideas to product managers.
- (ii) New product managers – many organisations assign the responsibility for new product development to new product managers. Johnson & Johnson have new product managers who report to category managers. Product managers similar to new product managers tend to think in terms of modifications and line extensions limited to their product market (Kotler, 2000: 333).
- (iii) New product committees – many organisations have a high-level management committee responsible for reviewing and approving proposals.
- (iv) New product departments – large organisations often establish a department headed by a manager who has substantial authority and access to top management. The new product department's major responsibilities include generating and screening of new ideas, working with the R&D department, and conducting test marketing and commercialisation as depicted in Figure 3.1.
- (v) New product venture teams – a venture team is a group brought together from various operating departments and charged with developing a specific product, service or business.

- **Step 2: Development of ideas**

New product ideas can come from a variety of sources, such as customers, employees, distributors, competitors, research and development, and consultants.

- **Step 3: Screening of ideas**

The screening of product ideas includes a process of eliminating ideas that are inconsistent with the organisation's new-product strategy or are obviously inappropriate for some other reasons. The new-product committee, the new-product department, or some other formally appointed group can perform the screening process. Screening questions such as competitive advantage, resources, legal implications, and profitability can be addressed early in the product development process.

- **Step 4: Concept development**

The viable product ideas from Step 3 can be transformed into a product concept and be subjected to a more thorough evaluation. Evaluation questions can include answers to questions on who will use the product; what is the primary benefit of the product; and when will the product be used. According to Lamb et al (2000: 241), the product concept flows from combining unique product attributes to certain customer needs and actions.

- **Step 5: Profitability analysis / Business analysis**

During this step preliminary but detailed figures for demand, cost, sales and the calculation of probability are calculated. Answers to questions such as demand, impact on profit, market share and return on investment, customer benefits, competitive response and the impact on organisational resources will provide management with a clear understanding of the product's market potential.

- **Step 6: Physical product development**

During this step, prototypes are developed and the organisation starts compiling a preliminary marketing strategy. The physical development process is optimised best when all functional areas such as R&D, engineering, production, marketing and even suppliers work together rather than sequentially.

- **Step 7: Test marketing**

After products and marketing strategies have been developed, they are usually tested in the "real world" – the marketplace. Test marketing is the limited introduction of a product and a marketing strategy to determine the reactions of potential customers in a market situation (Lamb et al, 2000: 243). With the selection of a test market, many criteria need to be considered such as marketing variables (product, price, place, promotion, segmentation and positioning), demographics (income, age, gender,

purchasing habits), psychographics and possible geographical areas where the product will be marketed.

- **Step 8: Commercialisation**

As illustrated in Figure 3.9, commercialisation is the last step in product development and the first step in market development stage. For instance, product modifications can be used as a new product development strategy in the mature phase and the steps in product development can be used in this process.

(b) Product development and interrelationship with other functions in an organisation

The development and marketing of a product have an affect on the organisation in general and each functional area in particular.

Jassawalla and Sashittal (2000: 46) provide the following description on how product decisions can influence the other functions in an organisation:

- The development and manufacturing of new products present technical challenges for production/operations management.
- Product decisions have a substantial influence on the financial management of an organisation.

- Product decisions directly affect the human resources of an organisation.
- Product decisions influence information management in the organisation.
- The purchasing department in an organisation is affected in a special way by product development and other decisions.
- The marketing department in the organisation can effectively use information on the product mix that the organisation manufactures and markets.

Interaction, information sharing and cross-fertilisation of ideas among people from R&D, production, marketing and other groups is essential when product development is handled by a multi-functional team. According to Jassawalla and Sashittal (2000: 46), problems arise when people with dissimilar orientations, experiences and interests are called upon to interact, make decisions and participate in a co-creative endeavour such as new product development. A closer examination of the human interaction process that characterises new product development shows that effective leadership as well as followership, equitable distribution of power and a concern for building collaboration among participants can make the human interaction more productive and facilitate the progress of ideas across organisations.

(c) Important issues to ensure the success of the new product development process

Timing, globalisation, participation of management and customer interaction are some of the most important issues related to the process of new product development. There is no

empirical proof of a time frame linked to the product development process. The time frame linked to the product development process and business life cycles are measured in months and executives must therefore plan their new product replacements almost at the same time they launch them (Anonymous, 1997: 42-46). Chryssochoidis and Wong (2000: 268) are of the opinion that international product managers must assign greater priority to assessing the relative advantages of customising new product technology and not to consider the timing implications for both the new product development effort and subsequent rollout.

As global competitive pressure increases and product life cycles are compressed, organisations are trying to shorten the product development cycles (Griffen, 1997: 1-24). This view is shared by Lee, Lee and Sonder (2000: 497) who stated that to ensure success in the current age of globalisation, it is imperative for organisations to understand the management practices of competitors both within and outside national boundaries.

Apart from understanding competition Gruner and Homburg (2000: 1) are of the opinion that more attention should be given to customer interaction in the new product development process as a means to increase new product success.

Top management support is crucial to new product development success and Swink (2000: 208) indicates that the top management support is positively associated with better time-based performance, quality design and financial performance as a whole. Gil and de la Fe (1999: 391-404) posit that risk and costs associated with new product development

can be shared among the partners and more use that is effective can be made of manufacturing facilities and production capabilities. This strategy was successfully employed by two international joint ventures – Rover with Honda and Seat with Volkswagen.

3.3.2 Market development

Market development is a collective for managing products during the four phases of the product life cycle and must not be confused with Ansoff's growth strategy of market development.

Various growth strategies based on cross classifying product and product-market extension possibilities have been discussed in chapter two. Ansoff (1957: 113 – 124) described the following growth opportunities to be used for market development purposes after a product have been commercialised:

- (i) Product development
- (ii) Market development
- (iii) Market penetration
- (iv) Diversification

(a) Product development

New product development was discussed in paragraph 3.3.1(a) and illustrated in Figure 3.9 but a variety of decisions have to be taken continuously during the market development phase on the existing product/service mix and product/service ranges. Through product development, organisations can grow by developing new product-line extensions or by means of new product offerings.

New products can also be called innovations. An innovation or innovative product is a product perceived as new by a potential consumer (Lamb et al, 2000: 254). Existing products can be changed by means of product modification or current packaging may be changed. Potential consumers will regard such product as new and different from the existing product.

(b) Market penetration

In relation to Ansoff's growth strategies as depicted in Figure 2.4 a marketer can use market penetration to develop the market with current products. Market penetration in existing markets aims at encouraging current customers to use more of the current product, to use it more often, or to use it in new ways. Market penetration can be employed through mass-market penetration or niche penetration.

Mass market penetration and niche penetration is discussed in the next section.

(i) Mass-market penetration

The ultimate objective of mass-market penetration is to capture and maintain a commanding share of the total market of existing products. Marketing programme components for a mass-market penetration involve increasing customers' awareness and willingness to buy, increasing customers' ability to buy and considerations for pioneering global markets – exporting, franchising, contract manufacturing, joint ventures and sole ownership.

The short-term objective of mass-market penetration is to maximise explorers and adopters in the total market and to invest heavily to build future volume and market share. The medium-term objectives are to maintain the pre-emption of competition and to maintain a leading share position even if some sacrifice of margins is necessary in the short term as new competitors enter the market. The long-term objective is to maximise the return on investment (ROI).

According to Walker et al (1999: 232), mass penetration can be achieved through the following two possible strategic objectives:

- To increase the customers' awareness by means of heavy advertising, extensive sales force efforts, extensive introductory sales promotions, quick expanding of offerings and free trial offers.

- To increase the customers' ability to buy by means of penetration pricing, extended credit terms, heavy use of trade promotions and the offering of engineering, installation and training services.

(ii) Niche penetration

Niche penetration calls for the same advertising, sales promotion, personal selling and trade promotion activities as mass-market penetration (Walker et al, 1999: 236). By employing niche penetration organisations should use more selective media and channel design to precisely direct those activities toward the selected market segment (niche).

Because the objectives of niche penetration strategy are similar to, but more narrowly focused than a mass-market strategy, the marketing elements are also likely to be similar in the two strategies. The short-term objective of niche penetration is to maximise explorers and adopters in target segments and build future volume and market share in the chosen niche. The medium-term objective is to maintain the leading share position in the target segment even if some sacrifice of short-term margins is necessary. The long-term objective is to maximise the return on investment (ROI).

(c) Market development

Market development is a growth strategy where a new market is entered by an existing product dealing with the ways in which consumers become aware of, test and eventually

accept or reject a new product item. The primary objective of market development is to secure future volume and profit growth (Walker et al, 1999: 220). This objective has become even more important in recent years due to the rapid advancement in technology and more intense competition globally. A steady flow of new products and services and the development of markets, including those in foreign countries, are essential for the continued growth in most organisations.

The marketing function plays a pivotal role in the development of the market by means of speeding up innovations, and by utilising market strategies during the different product life cycle phases.

Chances for new market entry success by using current products are dependent upon the management of the new product development process (Jenkins, Forbes, Durrani and Banerjee, 1997: 359-378). Different types of market entries are appropriate for achieving the different strategic objectives and the following strategic scenarios as described by Walker et al (1999: 220-221) are possible:

- **Scenario 1**

If the objective is to improve cash flow by adding another cash generator or cash cow as described by the Boston Consulting Group Matrix and depicted in Figure 2.3, simple line extensions or product modifications – particularly those that reduce costs – may be followed.

- **Scenario 2**

If the objective is to establish a foothold in or pre-empt a new market segment, the organisation must introduce a product that is new to that market, although it may not be entirely new to the organisation.

- **Scenario 3**

If an organisation is pursuing a prospector strategy and its objectives are to maintain a position as a product innovator and to establish footholds in a variety of new product-markets, it should attempt to be the pioneer in as many of those markets as possible. The successful implementation of such a diversification strategy requires the organisation to be competent in and devote substantial resources to R&D, product engineering, marketing and market research.

- **Scenario 4**

If the organisation is concerned primarily with defending an already strong market share position in its industry, it may prefer to be the follower. This strategy usually requires fewer investments in R&D and product development, but marketing and sales are critical in implementing it effectively.

(d) Diversification

Organisations can develop markets and seek growth by diversifying their operations. Diversifying is typically more risky or it involves learning new operations and dealing with unfamiliar customer groups.

According to Walker et al (1999: 46-47), diversification can happen through:

- **Vertical integration**

Vertical integration can be employed by means of forward or backward integration:

Forward integration - an organisation moves downstream in terms of the product flow, as when a manufacturer integrates by acquiring a wholesaler or a retailer.

Backward integration - occurs when an organisation moves upstream by acquiring a supplier.

- **Related Diversification**

Related diversification occurs when an organisation internally develops or acquires another business that does not have products or customers in common with its current business but it might contribute to internal synergy sharing product facilities, R&D know-how, or marketing and distributing skills.

- **Unrelated diversification**

In contradiction to related diversification, the motivation for unrelated diversification is primarily financial rather than operational. Unrelated diversification tends to be risky in terms of financial outcome.

- **Diversification through organisational relationships or networks**

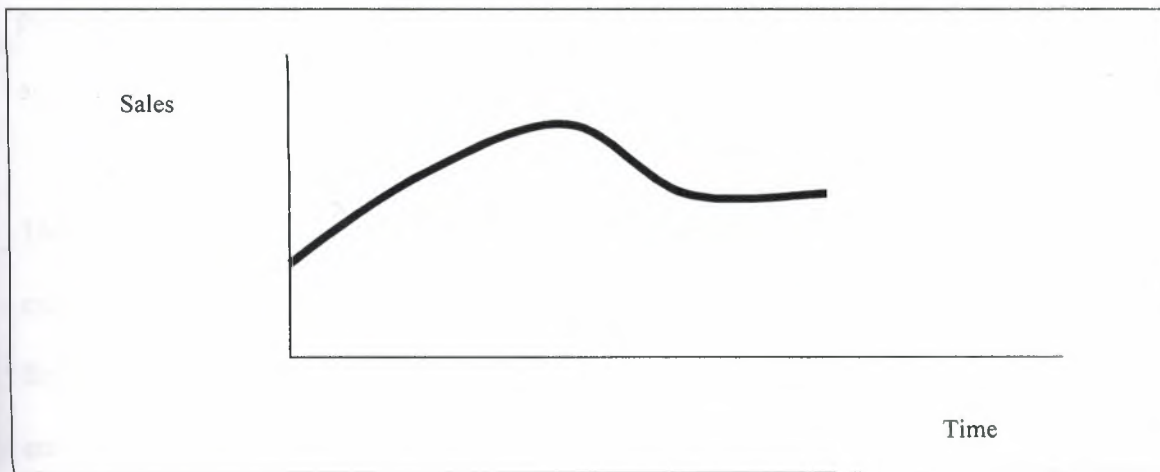
Organisations attempt to gain some of the benefits of market expansion or diversification while simultaneously focusing more internally on a few core competencies. The aim is to form relationships or organisational networks with other organisations instead of acquiring ownership.

3.4 THE PRODUCT LIFE CYCLE AND GROWTH STRATEGIES

The various growth strategies as developed by Ansoff (1957: 114) have been discussed in chapter two and in paragraph 3.3. A significant contribution by linking the product life cycle to growth strategy has been made by Bass (1969: 215-227).

Bass developed a growth model for the timing of initial purchasing of new products and tested this model empirically against data for eleven consumer durables.

The growth model postulated is best reflected by growth patterns similar to the pattern shown in Figure 3.10 below:

Figure 3.10: Growth of a new product

Adapted from: Bass (1996: 216)

This model yields relatively good predictions of sales peaks and the timing of the peak when applied to historical data. The growth model shown in Figure 3.10 is best reflected by growth patterns similar to the shape of the product life cycle curve: sales will reach a peak and then level off to a magnitude lower than the peak. Bass (1969: 215) is of the opinion that long-range forecasting of new product sales is a guessing game and he, therefore, provided a framework for a rationale for long-range forecasting.

The growth model is based on the assumption that the probability of purchase at any time is related linearly to the number of previous buyers. Additional information should be incorporated into the model, or versions of the model, if and when available for analysis internally of the organisation. Key data include price trends, sales force expenditure, advertising expenditure and the cost of data from the appropriate learning curves. Good industrial intelligence including the feedback from the sales force and primary market

research must supplement any growth model. The economic environment is also critical, particularly interest rates and corporate profitability which might affect the timing of adoption.

There is a behavioural rationale in the assumption of the Bass model that implies exponential growth of initial purchases to peak and then exponential decay. Behaviourally, the assumptions are similar in certain respects to the theoretical concepts emerging in the literature on new product adoption and diffusion as depicted in Figure 3.2. From a planning viewpoint, the central interest in the long-term forecasting lies in the prediction of timing and the magnitude of the sales peak. The model definitely contributed to an understanding of the process of new product adoption and might be useful for long-range forecasting.

Tigert and Farivar (1981: 81-90) tested the Bass model for growth by means of a sensitivity analysis for a high technology product with the main aim to develop a forecasting equation to aid in production scheduling and market development.

The contributions by Bass (1969: 215-227) and Tigert and Farivar (1981: 81-90) can be related to the discussion in paragraph 3.2.1(b) that provided valuable insight into the application possibilities of the product life cycle concept for growth and forecasting purposes.

According to Bass (1969: 226), there is behaviour rational that the probability of purchase at any time is related linearly to the number of previous buyers. Tigert and Farivar (1981: 90) by testing the Bass model posit that the Bass model forces a disciplined approach to estimating market potential but they concluded that no forecasting model should be a substitute for other elements of the strategic planning process.

The application of the product life cycle concept for forecasting purposes will be tested empirically among small manufacturing organisations in Northern Cyprus.

3.5 THE PRODUCT LIFE CYCLE CONCEPT AND STRATEGIC PLANNING

The product life cycle concept is an integral part of product management as discussed in paragraph 3.3 and the application of this concept for strategic planning and marketing decision-making will be tested during the empirical part of this study. To date Hofer (1975: 784-810) developed the most extensive theoretical profile of the product life cycle as it affects corporate strategy. Two of Howler's propositions are particularly valuable, namely:

- (i) The most fundamental variable in determining an appropriate marketing strategy is the phase of the product life cycle (Hofer, 1975: 789).
- (ii) Major changes in business strategy are usually required during three phases of the product life cycle: introduction, maturity and decline (Hofer, 1975: 799).

To date, authors have found no comprehensive empirical validation of the propositions by Hofer (1975: 784-810) or of the strategy performance implications of the product life cycle. A study conducted by Anderson and Zethaml (1984: 1) empirically examined differences in strategic variables between phases of the product life cycle, as well as differences among the determinants of high performance across phases of the product life cycle.

Anderson and Zeithaml (1984: 23) contended that growth businesses should consider the implications of their objectives and strategies for later phases of the product life cycle. Growth phase decisions concerning short-term profitability and market share may have a critical impact on the success of the organisation as the market matures. In addition, those businesses should track the evolutionary development of the market; constantly evaluate their position and implement strategies in line with the changing conditions.

Wind (1981) in Anderson and Zeithaml (1984: 7) suggested that the product life cycle concept could be used in two ways:

- (i) To assume that all products follow the life cycle and to develop strategies to sustain sales and profits rather than allowing decline, or
- (ii) Incorporate information on the product position in the life cycle with other information such as market share and profitability.

The study conducted by Anderson and Zeithaml (1984: 22) provides a better understanding of the evolution of business strategy and the trade-offs that may be confronted. The starting point should be the comparison of organisational goals with the short term and long-term profit opportunities of the organisation and the various strategic business units. Findings of Anderson and Zeithaml (1984: 23-24) question the idea that a single set of strategies is preferable at any phase of the product life cycle, particularly in the growth phase.

Anderson and Zeithaml (1984: 7) derived the following major trends from a sample consisting of 1,234 small to large industrial manufacturing organisations:

- (i) Marketing strategies in the introductory phase emphasise a buyer focus, building on advertising and increasing purchase frequency.
- (ii) In the growth phase, there is a movement toward strategic segmentation and building efficiencies in production and marketing.
- (iii) High performance strategies for the maturity phase are more complex than for the previous two phases. Basically, they centre on improving efficiency in process, reducing overall cost in marketing and distribution.
- (iv) Relatively little work has been done regarding strategies leading to high performance in the decline phase. Strategy depends on industry traits, on whether some segments will have enduring demand, on whether barriers impede exit of organisations and on the nature of competition.

In spite of the limited attention in the empirical research relating marketing strategy to performance within phases of the product life cycle, a number of studies have conceptually related these variables directly and indirectly. Studies that investigated strategy and performance and that have product life cycle implications are summarised in Table 3.4.

The trends cited by Anderson and Zeithaml (1984: 7) are very important but in the context of this research, they will not be included in the empirical part of this study. This research will use the product life cycle assumptions provided by Kotler as discussed in paragraph 1.6.1 in the introductory chapter. Kotler's (2000: 316) assumptions are: identified characteristics, described marketing objectives and proposed marketing strategies during each product life cycle phase. Kotler used the publications of Weber (1976: 12-19) and Doyle (1976: 1-6) to generate his product life cycle assumptions for each phase in the product life cycle.

- Weber (1976: 12-29) conducted empirical research directed at the industry life cycle rather than the product line life cycle by using two different products – computers and razor blades.

According to Weber (1976: 13), each phase has its own marketing implications as shown in Table 3.3.

Table 3.3: Marketing implications of each phase of the product life cycle

Effects and responses	Phases of the PLC			
	Introduction	Growth	Maturity	Decline
Competition	None of importance	Some emulators	Many rivals competing for a small piece of the pie	Few numbers with a rapid shakeout weak members
Overall Strategy	Market establishment; persuade early adopters to try the product	Market penetration; persuade mass market to prefer the brand	Defence of brand position; check the inroads of competitions	Preparations for removal; milk the brand dry of all possible benefits
Profits	Negligible because of high production and marketing costs	Reach peak levels as a result of high prices and growing demand	Increasing competition cuts into profit margins and ultimately into total profits	Declining volume pushes costs up to levels that eliminates profits entirely
Retail prices	High, to recover some of the excessive cost of launching	High, to take advantage of heavy consumer demand	What the traffic will bear; need to avoid price wars	Low enough to permit quick liquidation of inventory
Distribution	Selective, as distribution is slowly build up	Intensive; employ small trade discounts since dealers are eager to store	Intensive; heavy trade allowances to retain shelf space	Selective; unprofitable outlets slowly phased out
Advertising strategy	Aim at the needs of early adopters	Make the mass market aware of brand benefits	Use advertising as a vehicle for differentiation among otherwise similar brands	Emphasise low price to reduce stock
Advertising emphasis	High, to generate awareness and interest among early adopters and persuade dealers to stock the brand	Moderate, to let sales to rise on the sheer momentum of word-of-mouth recommendations	Moderate, since most buyers are aware of brand characteristics	Minimum expenditures required to phase out the product
Consumer sales and promotional expenditure	Heavy, to entice target groups with samples, coupons and other inducements to try the brand	Moderate, to create brand preference (advertising is better suited for this job)	Heavy, to encourage brand switching, hoping to convert some buyers into loyal users	Minimal, to let the brand coast by itself

Adapted from: Weber (1976: 13)

Table 3.3 provides a description of the various marketing implications based on the various effects and responses on the marketing mix variables along with characteristics on competition and profit across all four phases of the product life cycle.

- According to Doyle (1976: 5), each phase has its own marketing implications in the form of responses on the strategic focus, marketing expenditure, marketing emphasis, distribution, price and products responses shown in Table 3.4.

Table 3.4: Implications of the product life cycle

Responses	Phases in the product life cycle			
	Introduction	Growth	Maturity	Decline
Strategic focus	Expand the market	Market penetration	Defend market share	Productivity
Marketing expenditure	High	High (declining %)	Falling	Low
Marketing emphasis	Product awareness	Brand preference	Brand loyalty	Selective
Distribution	Patchy	Intensive	Intensive	Selective
Price	High	Lower	Lowest	Rising
Product	Basic	Improved	Differentiated	Rationalised

Adapted from: Doyle (1975: 5)

Table 3.4 provides a description of the various marketing implications based on the various responses on the marketing mix variables along with the strategic focus, marketing emphasis and marketing expenditure across all phases of the product life cycle.

There are differences between the work published by Weber (1976: 13) as depicted in Table 3.3 and the work published by Doyle (1976: 5). The differences are:

- (i) Weber provides effects and responses while Doyle only provides responses.
- (ii) Doyle provides strategic focus and marketing expenditure responses and Weber does not.
- (iii) Both authors provide marketing variable responses. Doyle (1976: 5) labelled the promotional variable as marketing emphasis responses.
- (iv) Weber provides profit effects and responses compared to Doyle who provides marketing expenditure responses.

This study holds the view that based on the above-mentioned discussion of differences, the marketing implications (effects and responses) provided by Weber is more comprehensive than those provided by Doyle.

Based mainly on the work published by Weber (1976: 13) and Doyle (1976: 5), Kotler (2000: 316) provides a description of marketing characteristics, proposed marketing objectives and suggested strategies depicted in Table 3.5 and published in Kotler's general marketing text books since the 1980s.

The proposed marketing objectives and suggested marketing strategies are the direct result of the various effects and responses provided as marketing implications by Weber (1976: 13) and Doyle (1976: 5). Kotler's described characteristics in Table 3.5 are broader and more detailed than the effects and responses provided by Weber (1976: 13) and Doyle (1976: 5).

Table 3.5. Summary of product life-cycle characteristics, objectives and strategies

	Introduction	Growth	Maturity	Decline
Characteristics				
Sales	Low sales	Rapidly rising sales	Peak sales	Declining sales
Costs	High cost per customer	Average cost per customer	Low cost per customer	Low cost per customer
Profits	Negative	Rising profits	High profits	Declining profits
Customers	Innovators	Early adopters	Middle majority	Laggards
Marketing objectives				
	Create product awareness and trial	Maximise market share	Maximise profit while defending market share	Reduce expenditure and milk the brand
Strategies				
Product	Offer a basic product	Offer product extensions, service, warranty	Diversify brand and models	Phase out weak items
Price	Use cost-plus	Price to penetrate market	Price to match or beat competitors	Cut price
Distribution	Build selective distribution	Build intensive distribution	Build more intensive distribution	Go selective: Phase out unprofitable outlets
Advertising	Built product awareness among early adopters and dealers	Build awareness and interest in the mass market	Stress brand differences and benefits	Reduce to level needed to retain hard-core loyals
Sales promotion	Use heavy sales promotion to entice trial	Reduce to take advantage of heavy consumer demand	Increase to encourage brand switching	Reduce to minimal level

Adapted from: Kotler (2000. 316)

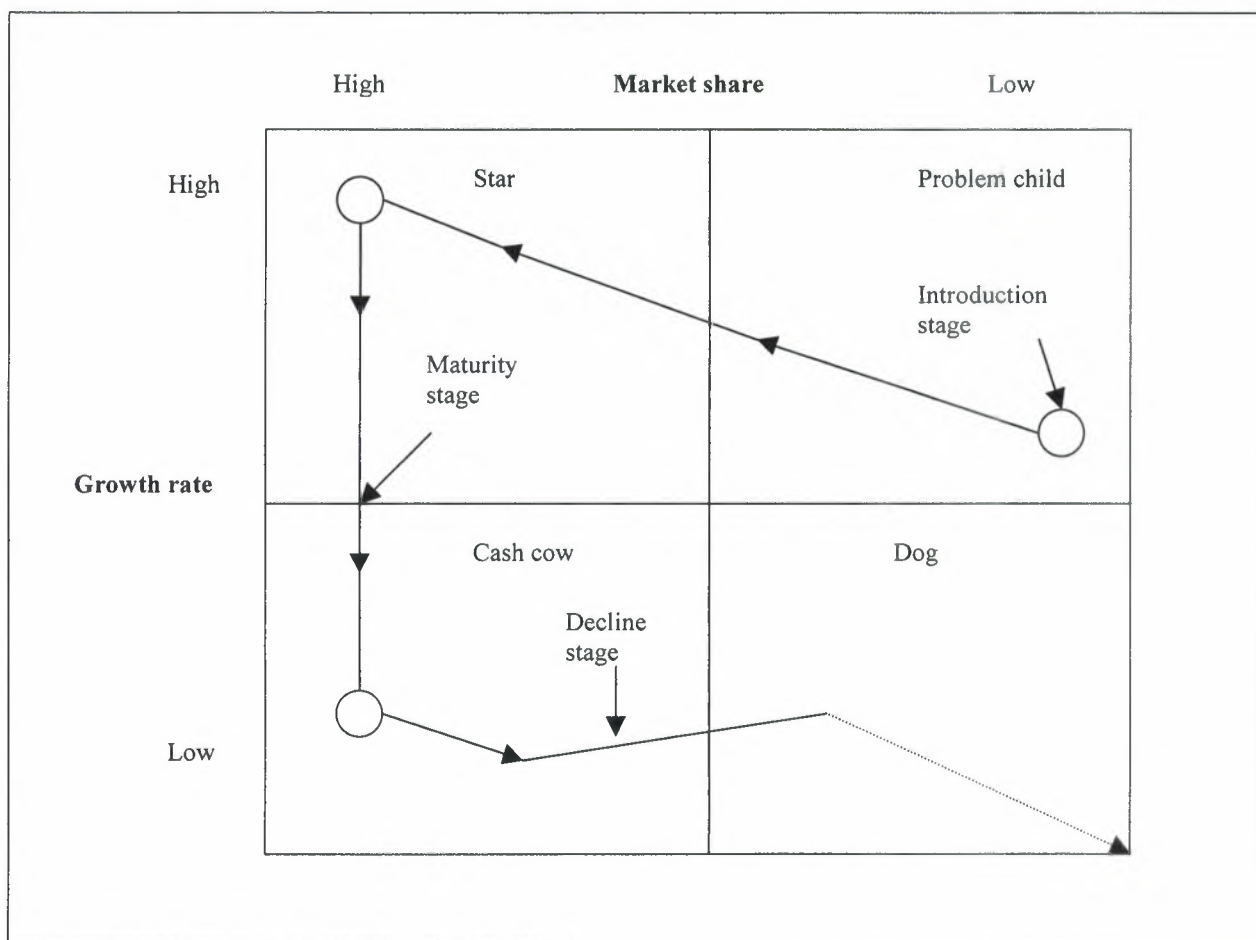
As discussed in paragraph 3.2.6(a), it is still difficult for marketing decision-makers to determine at which phase of the product life cycle a product or service is. Thus the described marketing characteristics, proposed marketing objectives and suggested marketing strategies to be associated with each phase of the product life cycle as depicted in Table 3.5 is still more a theory with serious doubt about its application than a marketing decision-making tool in practice.

Table 3.5 depicted the product life cycle assumptions to be empirically tested during the empirical part of this study.

3.6 THE PRODUCT LIFE CYCLE AND PRODUCT PORTFOLIO

When the product life cycle is compared to the product portfolio concept developed by the Boston Consulting group as discussed in paragraph 2.3.3(a)(ii), the marketing manager can take strategic decisions with greater certainty. Figure 3.11 illustrates the relationship between the product life cycle concept and product portfolio.

Figure 3.11: Relationship between product life cycle and product portfolio



Adapted from: Van der Walt et al (1996: 521)

As seen in Figure 3.11, the introductory phase begins in the problem child's quadrant, the growth phase at the end of this quadrant, extending into the star area. The maturity phase begins in the cash cow quadrant and the decline phase is positioned between the cash cow quadrant and the dog quadrant.

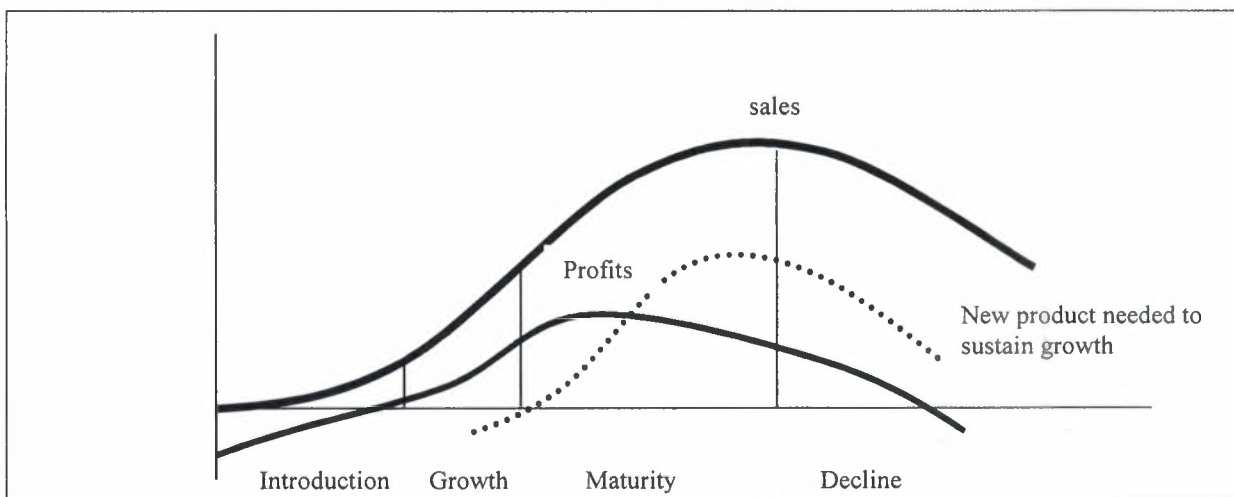
As SBUs migrate from one quadrant to another as illustrated in Figure 3.9, there could be vital strategic implications for the organisation. These strategic implications can be related to the alternative strategies discussed in paragraph 2.3.1(c)(i) whereby decisions need to be taken on whether to invest, to hold, to harvest or to divest the particular SBU.

In relation to Figure 2.1, this migration will have implications on corporate strategy level. Corporate goals and objectives could need adaptation, strategies might need to be reformulated and redeployment of organisational resources would be imperative. This will subsequently have strategic implications down to the functional level in the organisation, as the tactical decisions based on the marketing mix variables would be strongly influenced by the strategies formulated at a higher level of the hierarchy as depicted in Figure 2.1.

3.7 MARKETING IMPLICATIONS IN EACH PHASE OF THE PRODUCT LIFE CYCLE

Doyle (1976: 1) provides an illustration in Figure 3.12 of the various phases of the product life cycle with the underlying relationship between sales, profit and the need for new product development.

Figure 3.12: Phases in the product life cycle



Adapted from: Doyle (1976: 1)

The four phases are characterised by the following:

- **Introduction**
 - Sales of new products usually rise slowly at first.
 - Profits are negative.

- The introductory phase might last from a few months to a year for consumer goods and generally longer for industrial goods.

- **Growth**

- If the product is successful, growth usually accelerates at some point, often surprising the innovator.
- The acceleration results from:
 - (i) A larger pool of imitators.
 - (ii) The broadening of the market-by-market segmentation.
 - (iii) Product improvements.
 - (iv) Increase in the number of distributors.
- Profit margins peak during this phase as the experience curve effects lower unit costs faster than price declines.

- **Maturity**

- This phase begins after sales cease to rise exponentially.
- There are no new distribution channels to fill.
- This is usually the longest phase in the life cycle.
- The period over which sales are generated depends upon the ability of the organisation to stretch the cycle by means of market segmentation and new uses for the product.
- Profits decline.

- **Decline**

- Most products and brands enter a period of declining sales caused by:
 - (i) Technical advances that lead to product substitution.

- (ii) Fashion and taste change.
- (iii) Cost factors
- Profit margins are eroded.

Doyle (1976: 2) strongly indicated that if the product life cycle is to be of value for decision-making, researchers must prove that the cycle is sufficiently regular to establish the following three events:

- (i) The current position of the product in the cycle.
- (ii) When turning points occur.
- (iii) At what sales level(s) these will occur.

Variable (i) will be included in the measurement instruments of this research in order to determine whether small organisations use this variable in marketing decision-making.

Doyle (1976: 3) reached the following main conclusions:

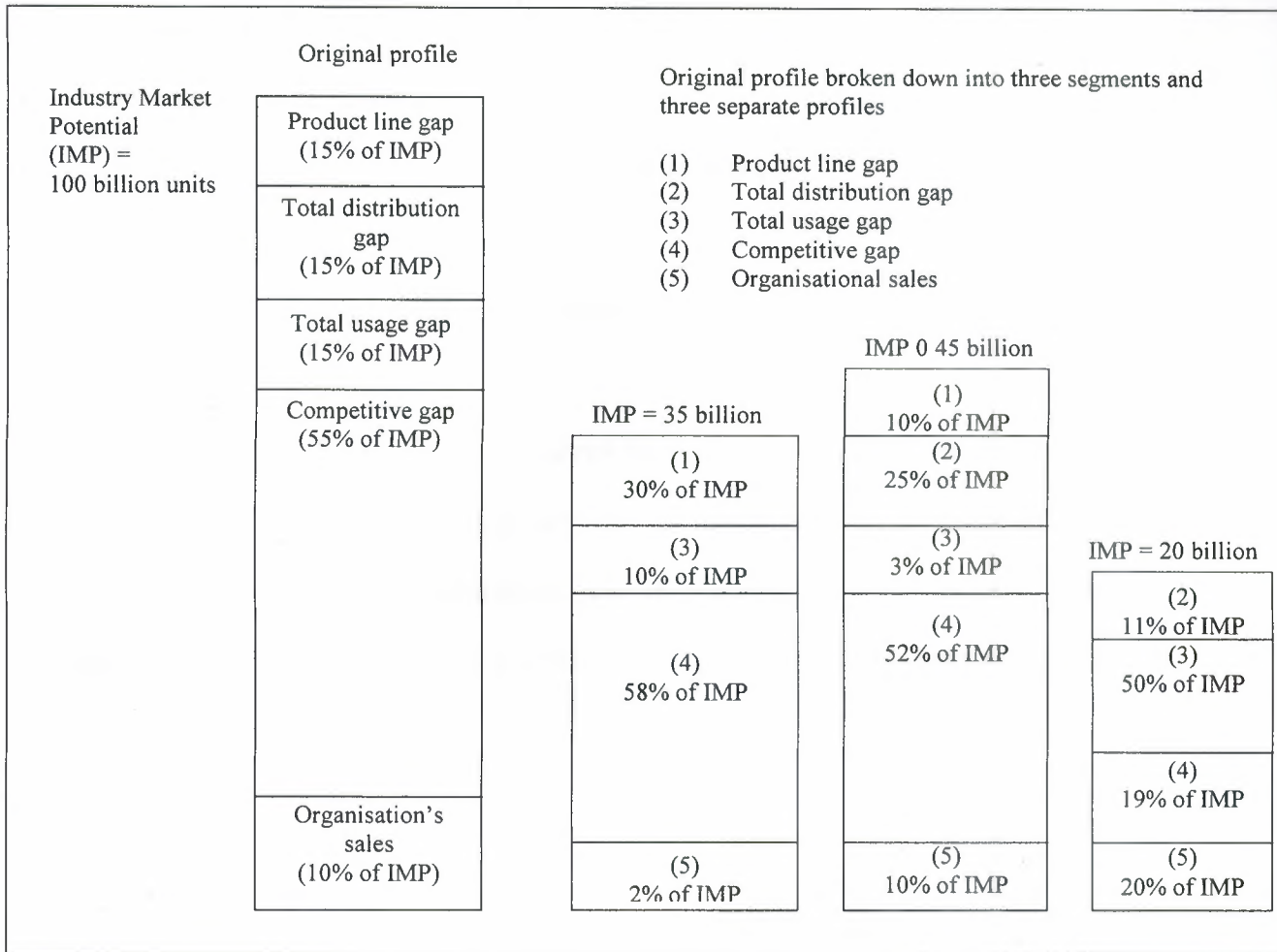
- (i) Sales of most, though not all, products broadly follow the product life cycle pattern.
- (ii) The characteristics of competition and unit profit tend to follow that postulated above, e.g. profits peak during the rapid growth phase and problems of competition and excess capacity become more acute as the cycle advances.
- (iii) The average length of the product life cycle tends to shorten as a result of economic, technological and social change. Products generate profit for shorter periods.

- (iv) There is no regularity across products in the length of the phases in the product life cycle.
- (v) Often the product life cycle can be temporarily bent by heavy promotional expenditures in the decline phase.

As a result, Weber (1976: 12-29) provided a new framework and new perspectives for viewing and considering all possible growth opportunities according to Ansoff's intensive growth strategies illustrated in Figure 2.6.

The framework is called the inverted product life cycle and it provides a configuration to fit competitive information available internally and externally of the organisation whereby future growth opportunities can be identified.

According to Weber (1976: 12), the inverted product life cycle process will help organisations to estimate the sales likely to result from taking advantage of available growth opportunities. The inverted product life cycle uses the traditional product life cycle concept to expand it into an analytical yet intuitive and useful tool for planning future growth as depicted in Figure 3.13.

Figure 3.13: The inverted product life cycle

Adapted from: Weber (1976: 22)

The life cycle used in the inverted process as illustrated in Figure 3.13 is the industry life cycle rather than the product life cycle where the industry market potential serves as the starting point. The inverted product life cycle framework of Weber (1976: 17-21) can be used to:

- Assist growth-planning decisions.

- Develop quantifiable growth objectives for different product lines.
- Evaluate alternative growth opportunities.
- Assist product managers.
- Build and use inverted product life cycles for competitors.
- Assess international markets
- Act as a new point of reference for separating market segments.

The development of accurate life cycles cannot be accomplished overnight but can be generated within a single period. Accuracy and utilisation of possible future growth possibilities will improve each subsequent year as planning personnel become more familiar with this kind of analysis as a better data base for the organisation's own life cycle is accumulated.

3.8 THE PRODUCT LIFE CYCLE CONCEPT CONTRIBUTING TO MARKETING STRATEGY AND DECISION MAKING IN SMALL ORGANISATIONS

The literature thus so far clearly indicates that the product life cycle concept was empirically tested mainly in large organisations as depicted in Table 3.1 and that only these organisations can reap the fruits of the correct application in marketing decision-making.

The only proof of the successful application of the product life cycle concept derived from the literature is the success story of Quarterdeck Office System. Quarterdeck Office System is a small computer software organisation in Santa Monica California, USA. *They profess the validity of the product life cycle, the use of which they claim, saved them from bankruptcy.* Quarterdeck would have been ruined were it not for management's knowledge and use of the product life cycle concept (Grantham: 1997: 8).

The company exists through serving the niche created by Microsoft. They identified the various life cycle phases of their products and continually assessed strategies that Microsoft was following. They concluded that their products worked more efficiently with older computers and for a large segment of users, who struggled to learn new programmes, as they were not willing to upgrade the new hardware. On the other hand, Microsoft's Windows worked better with newer computer models and with software requiring some memory. On this basis, and considering the fact that Microsoft was aiming their product at the introduction and growth phases, Quarterdeck positioned its own products at the mature and declining phases of the life cycle.

3.9 THE PRODUCT LIFE CYCLE AND SMALL ORGANISATIONS

It is eminent from the discussion in this chapter that the product life cycle concept theory and its application, as derived from literature, focused mainly on large organisations in the USA and UK. Very little evidence of empirical research conducted on the application

of the product life cycle concept among small organisations was found. As indicated in the introductory chapter, the primary objective of this research is to establish what the use and practical value of the product life cycle is in marketing decision-making among small manufacturing organisations. This study aims, therefore, to test the applicability of the traditional marketing mix instruments among small manufacturers with the aim of expanding the marketing strategies to be applied to the marketing of services along the different product life cycle phases.

3.10 CONCLUSION

This chapter dealt with a literature search on product management, strategies to achieve growth along with the product life cycle concept and all its various facets. It is clear that most of the articles stem from the period 1950 to 1993, with little empirical research after 1993. This, however, provides an opportunity for this study to re-open the product life cycle concept debate and test it among small organisations in Northern Cyprus. The major theoretical aspects discussed in this chapter will be the basis for the research hypothesis that will be discussed in chapter five and it will have an impact on the measurement designing process that will be comprehensively explained in chapter six.

CHAPTER 4

SMALL BUSINESS ENVIRONMENT IN NORTHERN CYPRUS

4.1 INTRODUCTION

Small organisations are vitally important to economies and they are not necessarily mini versions of large organisations. They do have features common with other organisations but they also have unique characteristics and attributes that are reflected in the manner in which they are organised and managed. The small scale of their operations and subsequent lack of management depth could imply that small organisations do not apply the product life cycle concept for management, strategy and marketing purposes.

It is evident from the literature survey conducted on the product life cycle concept in the previous chapter that very little research has been done on the application of this concept in small organisations. The literature survey revealed that this concept is applied mainly by large organisations and its application was empirically tested among the large organisations internationally. Yet, its application by small organisations has not been sufficiently tested empirically among small organisations globally, and specifically not in the context of Northern Cyprus. There are no agreed definitions and classifications of small organisations in Northern Cyprus. The Government sources make a classification of all businesses based on the industries they are in and the number of people they employ (SPO, 1998: 7). However, there is an increasingly accepted trend for small

business in Northern Cyprus to be classified and incorporated in the collective category of small, micro and medium enterprises (SMEs) similar to the classifications used in the European Union (Önet, 2003: 2).

This chapter will be discussing the importance of small organisations to economies globally and will then emphasise the structure of small organisations in Northern Cyprus. The chapter will conclude with valuable information on the demarcation of the small organisational environment among which the empirical study will be conducted.

4.2 THE STRUCTURE OF SMALL ORGANISATIONS GLOBALLY

Small organisations do not normally have the organisational structure that is found in large organisations. While small organisations usually employ staff to perform multiple tasks, large organisations tend to use specialists who perform the same activity. It can be deducted therefore, that many of the structural features of small organisations arise because of their size (Robbins: 1992 in Ehlers, 2000: 44).

According to Ehlers (2000: 43-44), small organisations often break down their tasks into functional subsections and assign employees to the selected task. However, specialisation is only economically feasible if the organisation is large enough. If expertise is sought, it can be externally sourced but experts are very expensive whether on a contract basis or employed on a full-time basis. If the volume of the work does not

warrant full-time employment of an expert, this work will have to be done by someone else – a non-specialist, a consultant or the owner her/himself. Since, it is very likely that the non-specialist will not be as effective and sufficient as the specialist will, some of the cost advantages of specialisation will be lost to the small organisation.

4.3 MANAGERIAL INFLUENCE AND CONTROL OF SMALL ORGANISATIONS GLOBALLY

The owners of small organisations frequently experience tension between exercising the right to dictate organisational policy and goals and at the same time to react and respond to the knowledge and wishes of the employees.

Owners occupy a dominant position and the potential for tension exists between the desire of the owner to exert a strong influence on events and the need to empower employees (Ehlers, 2000: 44).

Owners co-ordinate the day-to-day activities within their organisations by direct, face-to-face supervision; they use one-way communication and the decision-making process is central in the person of the owner/manager of the organisation (Ehlers, 2000: 44).

Although the owners of small organisations would like to retain a substantial element of decision-making power, they are also seeking to promote flexibility, innovation and problem solving among employees.

In managing a small organisation, creativity, adaptation, change, ambiguity, flexibility, problem-solving and collaboration occur regularly. These occurrences are the result of the changing environment in which small organisations operate – an environment where obtaining business orders is difficult, making-predicting, planning and formalising more difficult.

4.4 THE GLOBAL IMPORTANCE OF SMALL ORGANISATIONS

Small organisations constitute at least 95% of organisations in the European Union. Despite their huge importance, and the relevance given to the small firm sector in terms of economic development, the message seemed to be ignored by the financial and economic commentators (Ehlers, 2000: 47).

Sengenberger, Loveman and Piore (1990) in Ehlers (2000: 47) did a comprehensive review on an international comparison between small organisations in France, Germany, Italy, Japan, the United States and the United Kingdom. The most important empirical result to emerge from the country reports is that there has been an increase in the share of total employment in small organisations that are defined as those who employ fewer than 100 employees. In general, the increase has been at the expense of large organisations. For the purposes of this study, small organisations will be classified as those organisations employing 50 employees or less.

Kroon and Moolman (1992: 129), mention the following reasons for the importance of small organisations in any country:

- Small organisations are multitudinous, suppliers of employment and creators of work opportunities, innovators and initiators, subcontractors for large organisations, responsible for the manifestation of the free market system, in many instances the entry point into the business world, playing an important socio-economic role.
- Small organisations can have a multiplying effect on the economy.
- Small organisations provide economic stability and a better distribution of economic activities.

While small organisations have remained an enigma for years, a series of empirical studies (Hall, 1987; Evens and Javanovic, 1989; Loveman and Sengenberger, 1991; Acherer, 1991; Ivernizzi and Revelli, 1991 and Hughes, 1991) have enabled researchers to reach a far better understanding of the economic role of small organisations.

As a result of the above-mentioned studies, Sexton and Kasarda (1996) in Ehlers (2000: 49) present stylised facts on the economic role of small organisations in different global market economies:

- There has been a shift in the size distribution of organisations away from large organisations towards smaller ones.
- The growth rate decreased with organisational size and organisational age.
- Small organisations are at least as innovative as large organisations on an employee basis and generally have the innovative advantage found in high-technology industries.
- The small organisation's share of employment is growing faster in the goods-producing sectors than for the economy as a whole.
- Organisational survival is positively related to organisational size and organisational age.
- Small organisations produce at least a proportionate share of new jobs.

Apart from the global importance of small organisations, there are certain advantages and disadvantages linked to small organisations.

The advantages and disadvantages will be discussed in the next section.

4.5 THE ADVANTAGES AND DISADVANTAGES OF SMALL ORGANISATIONS OPERATING GLOBALLY

It is important to reiterate that small organisations are not simply smaller versions of large organisations. They differ from large organisations according to their legal form, market position, staff capabilities, managerial styles, organisational structure and financial resources.

4.5.1 The advantages of small organisations

According to Boone and Kurtz (1996: 125-127), the differences between large and small organisations provide small organisations with the following unique advantages:

- **Innovation** – Small organisations are often the first to be offering new products to the market.
- **Better customer service** – A small organisation can be more flexible than a large organisation, allowing it to tailor its products and services to the exact needs of current and potential customers.
- **Lower cost** – Small organisations can often provide products and services at a cheaper price than large organisations. Small organisations have lower costs and can earn profits on lower prices than large organisations.

- **Filling of isolated niches** – The size of large organisations can exclude them from some markets. This situation provides substantial opportunities for small organisations with lower overhead costs.

4.5.2 The disadvantages of small organisations

Despite the unique advantages, small organisations have a variety of disadvantages. These disadvantages include the potential for poor management, a risk of inadequate financing and government regulations.

The most important global disadvantages for small organisations according to Boone and Kurtz (1996, 128-130) are:

- **Poor management** – Poor management is a common reason for the failure of small organisations. A lack of business training and knowledge often leads to bankruptcy. Only a few small organisation owners possess the specialised knowledge of a lawyer, a professional marketer or an accountant and outside professionals should be sourced externally when needed.
- **Inadequate financing** – Many small organisations start with inadequate capital and soon run out of funds. They often lack the resources to survive through tough economic times or to expand if they are successful.

- **Government regulations** – Small organisations all over the world complain extensively about regulations and red tape. Small organisations, cannot cope with the excessive paper work and they often have to utilise external experts to complete the necessary forms and to compile the necessary reports. This places a burden on the financial position of the small organisation.

The advantages and disadvantages discussed in paragraphs 4.5.1 and 4.5.2 are linked to certain secondary research objectives formulated in chapter one and research hypotheses to be discussed in the next chapter.

The discussion so far provided a global view of small business. The rest of the discussion to follow will be directed at the Northern Cyprus economy and in particular, the role of small, medium and micro organisations in Northern Cyprus.

4.6 THE ECONOMY OF NORTHERN CYPRUS

Cyprus is a small island situated in the eastern-most part of the Mediterranean Sea with a total land area of 9,282 km². Northern Cyprus (The Turkish Republic of Northern Cyprus) is a small state lying along the north coast of the island with a total area of 3,355 km². The southern part of the island is governed by the Greek Cypriot Administration.

The major problem for the 183,000 inhabitants (SPO, 1998) of Northern Cyprus is that their small state is only recognised by Turkey and that they are isolated from the world by both economic and political embargoes. The isolation imposes all communications and trade to be carried out via Turkey. This affects the cost-effectiveness of Northern Cyprus industries and restricts their global competitiveness. As a result, the Northern Cyprus governments, for the last 30 years, have practised state-protectionist policies attempting to avoid unemployment and emigration. The funding of such policies has been through financial aids regularly received from Turkey. The unemployment was mainly compensated through employment within the public sector. Table 4.1 illustrates the spread of the working population among the current economic sectors.

**Table 4.1 Spread of the working population among economic sectors in
Northern Cyprus**

Economic sector	1993	1994	1995	1996	1997
Agriculture	18,100	17,738	17,383	16,862	16,168
Manufacturing	8,198	8,207	8,348	8,356	8,428
Construction	9,584	9,584	9,584	9,792	11,547
Wholesale, retail and tourism	7,889	8,004	8,367	8,367	8,677
Transport and communications	6,144	6,228	6,510	6,734	7,192
Financial intermediaries	2,162	2,194	2,397	2,456	2,693
Community services	6,936	7,266	7,276	10,848	11,434
Public (Government)	16,365	16,589	16,589	16,899	16,972
Total	75,378	75,810	76,454	80,314	83,131

Adapted from SPO, Economic and Social Indicators, 1998: 61

Table 4.1 reveals the people employed within the public sector as 20% on average for the 5 years between 1993 and 1997 which clearly indicates the employment policies of the Northern Cyprus governments in response to the political and economic sanctions the country faces.

Another major problem of Northern Cyprus stems from the fact that it is an underdeveloped small island state. Consequently, its resources in land, labour, and capital are strictly limited. According to Poirine (1994: 1), many small island economies depend heavily on rents coming from the outside. The development policy in Northern Cyprus aims at the realisation of structural adjustment required for the achievement of the highest possible rate of growth compatible with the maintenance of economic stability, the more equitable distribution of income and the improvement of the standards of living. For the recognition of these objectives long-term plans and annual programs have been prepared and put into action since 1977, which marked the beginning of the planning period (SPO, Economic Developments in the TRNC, 2002).

Northern Cyprus is mainly dominated by the service sector industries, tourism and education. Despite being a small island state, Northern Cyprus boasts about having five universities receiving both home and overseas students from all of the world, predominantly from Turkey. The tourism sector suffers from high costs and lack of sufficient investment due to the countries political and economic isolation as previously mentioned. The Gross National Product was revealed as 984 million USA Dollars with a

4,610 US Dollars per head and with an inflation rate of 78.8% in the year 2001 (SPO, 2002).

4.7 THE SME SECTOR IN NORTHERN CYPRUS

The State Planning Office of Northern Cyprus has categorised private businesses according to the number of people they employ and the economic sectors they operate in (SPO, 1997, Genel Sanayi ve İşyeri Sayımı, 1998) as depicted in Table 4.2.

Table 4.2: Definition by Size of Business Organisations in Northern Cyprus

Definition of size	Number of employees
Small	1-9
Big	10+

Adapted from SPO, Genel Sanayi ve İşyeri Sayımı, 1998

However, the business size in Northern Cyprus appears to have further categories when business organisations are further categorised by the economic sectors that they operate in as depicted in Table 4.3.

**Table 4.3: National Distribution of business organisations in Northern Cyprus
based on employment size**

Sector	Number of employees									Total
	1	2	3-4	5-6	7-9	10-24	25-49	50-99	100+	
Manufacturing	408	432	776	376	364	1193	803	1134	1161	6647
Construction	25	36	86	70	70	144	160	110	425	1126
Wholesale and Retail	2131	2020	1481	722	381	1073	762	530	1368	10468
Hotels and Restaurants	693	672	657	514	293	366	374	556	351	4476
Transport-Communication	90	132	133	93	80	115	229	145	-	1117
Financial Intermediaries	20	32	38	25	-	69	25	-	-	209
Estate Management	116	216	198	69	59	121	56	-	-	839
Education	18	26	47	26	16	30	38	66	-	267
Health	162	134	99	20	8	-	-	-	-	423
Public Services	221	148	157	66	31	162	145	70	-	1000
TOTAL	3884	3848	3672	1981	1302	3377	2592	2611	3306	26572

Adapted from SPO, Genel Sanayi ve İşyeri Sayımı, 1998

The confusion in defining the size of businesses is increasingly compensated by researchers who use the definitions provided by the European Union (EU), Önet, 2003:

2). Currently, there are political negotiations between the Turkish Republic of Northern Cyprus and the Greek Cypriot Administration for joining the EU as a unified federal state. The definition of businesses by employment size in the European Union is depicted in Table 4.4.

Table 4.4: Definitions of Businesses under EU Classifications

Definition by size	Number of employees
Very small (Micro)	0-9
Small	10-49
Medium	50-249
Large	250+

Adapted from Önet, Kıbrıs Türk Ticaret Odası, 2003

It is deducted from table 4.3 that 88% (23266/26572) of the people employed in business organisations in Northern Cyprus work for Small to Medium Enterprises (SMMEs) by EU definitions. The importance of small organisations to the Northern Cyprus economy is further emphasised by Tümer, (2001: 1) giving the contribution to national employment of small organisations as 60% and their contribution to exports as 92.7%.

The next section will look at the manufacturing sector industries in Northern Cyprus as the main environmental frame of this study.

4.8 THE MANUFACTURING SECTOR IN NORTHERN CYPRUS

The manufacturing sector in Northern Cyprus is comprised of small-scale, light industries ranging from processed agricultural produce, furniture, clothing, tobacco, and to plastic products (SPO, 1998: XXVIII). For the year 1990, 9.6% of the economically active

population were employed within the industry and the contribution of the manufacturing organisations to the GDP was 11.6% (Olgun, 1991).

The overwhelming majority of the manufacturing output is absorbed by the domestic market as the exports are prevented to a certain degree by a number of constraints including difficulties in export markets, inability to attract new investments and to develop new industries, political constraints and cheap imports from Turkey (Olgun, 1991).

Northern Cyprus has no comparative advantage in industrial goods in respect to neighbouring Turkey and other European countries. The constraints on the manufacturing industry are heavily compensated by the protectionist policies of the government, at a rate of up to 50-60% in some sectors (Önet, 2003: 5). Such a high level of protectionism coupled with little legislation on free competition has resulted in lack of competitiveness at global standards.

4.9 SCOPE OF THIS STUDY

As mentioned in the demarcation section of this study in the introductory chapter, this is an exploratory study aimed at investigating the use and the application of the product life cycle concept among small manufacturing organisations in Northern Cyprus. The literature study revealed that the product life cycle concept as marketing decision-making instrument was tested mainly among large organisations around the world. This

phenomenon provides more substance and relevance to the execution of this study in order to make a contribution to address the need of research among small organisations in Northern Cyprus.

To execute the empirical part of this study among small manufacturing organisations, it is necessary to use respected publications such as the Standard Industrial Classification (SIC) and the SPO (State Planning Office, The Turkish Republic of Northern Cyprus) research reports published in Northern Cyprus.

SPO and SIC classifications will be discussed in the next section.

4.10 THE STANDARD INDUSTRIAL CLASSIFICATION (SIC) AND THE STATE PLANNING OFFICE RESEARCH PUBLICATIONS

As mentioned in the introductory chapter the empirical part of this research will be executed among small manufacturing organisations in Northern Cyprus based on the quantitative selection criteria that will be motivated in chapter six. It is, however, necessary to provide a discussion on the SIC as this source will be used to select the small manufacturing organisations from the economic active population in Northern Cyprus. The discussion will highlight the International Industrial Classification and the customised State Planning Office Research Registers and Publications developed to suit local economic activities.

4.10.1 The Standard Industrial Classification and the SPO Registers

Most countries base the classification of their economic activities on the International Standard Industrial Classification (ISIC) to publish statistical information. The ISIC proposed by the United Nations (UN) must, however, be adapted to suit particular economic and statistical conditions prevailing in individual countries. The ISIC covers the entire field of economic activities, dividing them into major divisions, major groups, and sub-groups.

Based on the proposed ISIC classification of economic activities by the United Nations, Table 4.5 provides a description of the SIC major divisions for economic activities in Northern Cyprus.

Table 4.5 The codes and Major divisions of the SIC

Code	Major division
D	Manufacturing
F	Construction
G	Wholesale and retail
H	Hotels and restaurants
I	Transport and communications
J	Financial intermediation
K	Estate management
M	Education
N	Health and social services
O	Other community and personal services

Adapted from SPO, Genel Sanayi ve İşyerleri Sayımı, 1998

The State Planning Office (SPO) of Northern Cyprus has developed a SPO register covering the different SIC major divisions or parts of a major division for the economic activities in Northern Cyprus. The SPO registers and research reports provide an overview of the establishments active in the most important sectors of the Northern Cyprus economy.

The empirical part of this study will be conducted among small organisations in the manufacturing register (major division D).

4.10.2 A description of the major division used in this study

According to the SPO Reports (SPO, 1998: XXVIII) the major division D (manufacturing) is divided into 21 divisions with two digit codes as depicted in Table 4.6.

Table 4.6 SIC Classification of manufacturing industries in Northern Cyprus

SIC Code	
D	Manufacturing
15	Processed food and drinks
16	Tobacco products
17	Textile products
18	Clothing
19	Leather products
20	Wood and kindling products (excluding furniture)
21	Paper and paper products
22	Printing and Publishing
25	Plastic and rubber products
26	Non-metallic mineral products
27	Metal works
28	Metal products excluding machine and machine parts
29	Machines and accessories
30	Office, accounting and computing appliances
31	Electrical machines and appliances
32	Radio, television, and communications systems and appliances
33	Medical equipment; sensitive and optical equipment and watch making
34	Motorised land vehicles; trailer and semi-trailers
35	Other transport vehicles
36	Furniture manufacturing
37	Recycling

Adapted from SPO, Genel Sanayi ve İşyerleri Sayımı, 1998

The national distribution of large, medium and small organisations will be provided in chapter six.

4.11 CONCLUSION

This chapter provided an explanation on overview of the environment in which this study will be conducted. Substance was given for the selection of small organisations to be included as the sample frame for the empirical part of this study. It furthermore provided a universal perspective on the importance of small organisations to economies worldwide together with the advantages and disadvantages.

To localise this study and to link the current chapter to the literature survey in chapters two and three, the Northern Cyprus economy, the manufacturing sector and the SIC registers were briefly explained. A motivation for the choice of small organisations will be provided in chapter six.

CHAPTER 5

PROBLEM STATEMENT AND RESEARCH HYPOTHESES

5.1 INTRODUCTION

The problem statement and the various research propositions will be discussed and special reference will be given to the different research hypotheses 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 evident 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 Northern Cyprus 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 criticism 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 Northern Cyprus economy, the manufacturing and small organisations environment discussed in chapter four further strengthens the need of research by indicating that the volume of research with practical application on small organisations in Northern Cyprus 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 Northern Cyprus to apply the product life cycle concept.

5.3 HYPOTHESES

The following hypotheses were formulated in chapter one and will be motivated in the next section:

5.3.1 Hypothesis 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 organisations (Agarwal: 1997, 571-585 and Magnan et al, 1999: 239-253). For this reason the following hypothesis was formulated:

- Hypothesis 1

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

5.3.2 Hypotheses 2, and 3,

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) are 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, this research aims 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 hypotheses were formulated in the context of Kotler's view as described above:

- **Hypothesis 2:**

Marketing managers of small organisations in Northern Cyprus use the product life cycle concept to strategically plan and manage their products through the various phases of the product life cycle.

- **Hypothesis 3:**

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

5.3.3 Hypothesis 4

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 hypothesis was set in the context of the above-mentioned:

- **Hypothesis 4:**

Small manufacturing in Northern Cyprus do not have a marketing function responsible for applying the product life cycle concept when marketing strategy is developed and marketing decisions are taken.

Research hypothesis 4 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 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 hypotheses 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.

CHAPTER 6

RESEARCH DESIGN AND PROCEDURE

6.1 INTRODUCTION

Chapter five was devoted to a description of the problem statement and the various research hypotheses. This chapter presents the research process and approach planned for the empirical study. The research methodology will be discussed with special reference to data collection, questionnaire design and statistical procedures to be used.

6.2 THE DATA SOURCES

There are two types of data resources, primary and secondary data (Cooper and Schindler, 1998: 256). Primary data is original data collected and specifically for the purpose of the research in question. Researchers gather secondary data for their purposes, which can be used for the purposes of the research in question. Secondary data may be obtained from internal organisation sources or from external sources. This study will rely on both primary research and secondary data sources.

6.3 DATA COLLECTION METHODS

The nature of research can be either qualitative or quantitative. Qualitative research is an unstructured, exploratory research method based on small samples intended to provide insight and understanding of the problem setting (Malhotra, 1996: 164). Quantitative research involves the collection of primary data from a large number of individuals, frequently with the intention of projecting the results to the larger population (Martins, Looser & Van Week, 1996: 125).

The primary research data required for this research is firstly of a qualitative nature in order to derive issues to be included in the questionnaire. Qualitative research will be followed by quantitative research.

The qualitative research will be executed by means of personal interviews with selected manufacturers and retailers with the main aim to identify important aspects to be included in the questionnaire (measurement instrument).

Various methods of collecting primary research data exist; namely: mail based self-administered questionnaires, telephone interviews, personal interviews (face-to-face) and focus groups.

Dillon et al (1993: 158-164) provide the factors that the researcher can consider during the selection of the best survey method. These factors are depicted in Table 6.1.

Table 6.1: A summary of the data collection methods

Criteria	Mail	Telephone	Face-to-face
Versatility	Not much	Substantial but complex or lengthy scales are difficult to use	Highly flexible
Quantity of data	Substantial	Short, lasting typically between 15 and 30 minutes.	Greatest quantity
Sample control	Little	Good, but non-listed households can be a problem	In theory, provides greatest control
Quality of data	Better for sensitive or embarrassing questions; no interviewer present to clarify what is being asked	Positive side: interviewer can clear up any ambiguities. Negative side. May lead to socially accepted answers	There is the possibility of cheating
Response rate	In general, low; as low as 10%	60-80%	Greater than 80%
Speed	Several weeks	Large studies can be completed in 3 to 4 weeks	Faster than mail but typically slower than telephone surveys
Cost	Inexpensive	Not as low as mail; depends on incidence rate and length of questionnaire	Can be relatively expensive, but considerable variability
Uses	Executive, industrial, medical and readership studies	Particularly effective in studies that require national samples	Still prevalent in product testing and other studies that require visual cues or product prototypes

Adapted from: Dillon, Madden, and Fertile (1993: 173)

The criteria will be discussed in the next section.

Versatility

Versatility refers to the extent to which the survey method can handle different question formats and scenarios.

- **Quantity of data**

Quantity refers to the amount of information that can be collected.

- **Sample control**

Sample control refers to the ease or difficulty of ensuring that desired respondents are contacted.

- **Quality of data**

Quality of data refers to the accuracy of the data collected using a particular data collection method.

- **Response rate**

The response rate is calculated by the number of responses divided by the sample size.

- **Speed**

Speed refers to the total time it takes to complete the study by using a particular data-collection method.

- **Cost**

Cost refers to the cost per completed interview.

- **Uses**

Uses refer to how the collected data will be used.

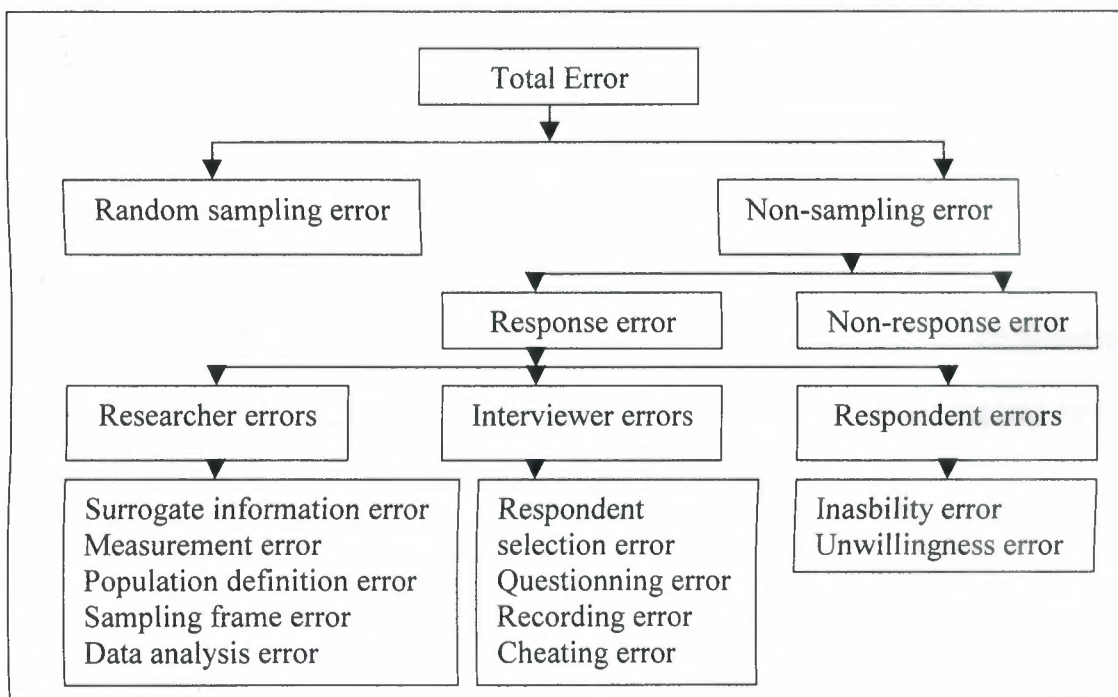
This research study has chosen the face-to-face or personal interviewing method after carefully considering the above-mentioned criteria. The most important criteria that led

to the choice of personal face-to-face interviewing are the quality of the data required. A comprehensive discussion on personal face-to-face interviewing will be done in paragraph 6.6.

6.4 POTENTIAL SOURCES OF ERRORS IN RESEARCH DESIGN

The usefulness of the collected data and the data analysis for this study will depend on the overall quality of the research design. Errors may occur in the research design and will have an influence on the various stages in the research process. Figure 6.1 identifies the types of errors that can affect research design. A total error, a random sampling error and a non-sampling error will be discussed in paragraph 6.4.1.

Figure 6.1: Errors in research design



Adapted from: Malhotra (1996: 100)

The different errors will be discussed in the next section:

6.4.1 Total error

Malhotra (1996: 100) defines a total error as the total variation between the true mean value in the population of the variable of interest and the observed mean value obtained in a marketing research project. A total error can be divided into a random sampling error and a non-sampling error.

(a) Random sampling error

A random sampling error occurs when a particular selected sample is an imperfect representation of the population of interest. A random sampling error may be defined as the variation between the true mean value for the sample and the true mean value of the population (Malhotra, 1996: 102).

(b) Non-sampling errors

Malhotra (1996: 102) described a non-sampling error as one that can be attributed to sources other than sampling and it can be random or non-random. Non-sampling errors consist of response errors and non-response errors.

(i) Response errors

Malhotra (1996. 102) defines a response error as the variation between the true value mean of the variable in the net sample and the observed mean value obtained in a marketing research project. A response error is a non-sampling error arising from respondents who do not respond but give inaccurate answers or whose answers are misrecorded or misanalysed. Researchers, interviewers or respondents can make response errors.

(ii) Non-response errors

Malhotra (1996. 102) defines a non-response error as the variation between the true value mean of the variable in the original sample and the true mean value in the net sample. A non-response error occurs when some respondents included in the sample do not respond. Non-responses will cause the obtained sample to be different in size or composition from the original sample.

6.4.2 Dealing with non-responses

According to Sudman and Blair (1999. 275) there has been disturbing trend of a steady decline in sample co-operation in the past quarter of the century. There is a broad range of reasons most of which are not under the control of the researcher. The question arises whether careful probability design methods are valid and useful if co-operation rates continue to drop. Sudman et al (1999. 27) believe that reasonably high-quality samples will continue to be possible but they will only be achieved with greater effort and cost.

New methods are needed but will probably be more expensive than existing methods.

The new methods will be justified if they significantly improve the quality of information obtained.

On the basis of the above trend Sudman et al (1999) suggest the following possibilities:

- More contact attempts to locate respondents.
- Greater use of mix models to obtain co-operation.
- Higher compensation to interviewers and respondents.
- As co-operation declines, it will become increasingly important that intensive efforts be made to get a sample of previous non-respondents so that better post-survey adjustments of data are possible.
- Current statistical efforts to adjust for non-co-operation as well as for imputation of missing data will be intensified and improved as problems grow worse, as seen in Groves (1989) and Rubin (1986).

To reduce any possible non-response errors in this research it will be necessary that all the selected individual elements be contacted.

6.5 SAMPLING

The basic principle of sampling is that by selecting some of the elements in a population, a researcher may draw conclusions about the entire population (Malhotra, 1996: 359).

The population in question is all small organisations in Northern Cyprus and the sample is a subset of this particular population as mentioned in chapter one.

Sampling, whether consumer or business, is thus appropriate when the population size is large and if the cost and time associated with obtaining information from the population is high. Sudman and Blair (1999: 273) identified several issues that distinguish business samples from consumer samples:

- The most significant distinguishable issue is the enormous variability in the size of business organisations. The most commonly used method to sample businesses according to size is to use annual sales.
- The second sampling issue is deciding what is the appropriate unit within the organisation to study.
- The third issue is determining who within the organisation are the appropriate respondents or informants.

The three aspects above are considered by this study and small organisations based on the number of employees (10-49) are chosen. Manufacturers were chosen based on their contribution to the percentage of people employed in Northern Cyprus and the contribution to exports to be discussed later in this chapter. Finally, it is also decided by this study that the person in the organisation responsible for marketing decision-making would complete the questionnaire.

There has been a substantial increase in research volume, especially in the areas of consumer satisfaction and new product evaluation during the past 20 years. The procedural developments include disk-by-mail and e-mail surveys. There was, however, no change in sampling issues and sampling procedures.

Before the steps in the sampling process are discussed, it is essential to describe the population and to define terminology that will be used:

- **Population (universe)**

A population or universe is the aggregate of all elements. According to Martins et al (1996: 251) the population must be defined in terms of the element, sample units, time and size. The population selected in this study is all large, medium and small organisations in Northern Cyprus across all the Standard Industrial Classification (SIC) of all economic activities. See Table 6.2 in the next section for a detailed description of the population used in this study.

- **Survey population**

The survey population is described by Martins et al (1996: 252) as the aggregate of elements from which the sample is drawn. In practice, one seldom finds complete lists or records of all the elements. The sample has to be drawn from lists that do not always contain all of the elements.

There will be a difference between the survey population and the population or the universe. The survey population selected for this study is all small organisations in Northern Cyprus. Small organisations were selected based on their contribution of nearly 60% of the people employed in the private sector in Northern Cyprus and a 92.7% contribution to exports (Tümer, 2001: 1).

- **Sample frame**

A sample frame is a record of all the sample units available for selection at a given stage in the sampling process. A frame may be a register of industries or merchants, a telephone directory or even a map (Martins et al, 1996: 252). Each phase in the sampling process requires own frame.

According to Martins et al (1996: 252) a reliable sample frame meets several requirements:

- It represents all the elements of the population.
- There is no duplication of elements.
- It is free from foreign elements.

The sample frame selected for this study is the SPO register listing the small manufacturers in Northern Cyprus. See paragraph 6.5.2 for a description of the sample frame.

- **Element**

An element is the unit about which information is needed (Martins et al, 1996: 251). The sample element selected is all manufacturers on a national basis, employing 10 – 49 people.

- **Sample unit**

Martins et al (1996: 251) describe a sample unit as the unit for selection at some stage of the sampling process. The sample unit selected is all small manufacturers in Northern Cyprus, with 10 – 49 employees.

There are six distinctive steps in sampling (Martins et al, 1996: 252):

- Step 1:** Defining the population
- Step 2:** Identifying the sample frame
- Step 3:** Selecting the sample method
- Step 4:** Determining the sample size
- Step 5:** Selecting the ample elements

The six steps will now be discussed in the context of the research scope:

6.5.1 Defining the population

The population comprises of all large, small and medium organisations in Northern Cyprus. The Statistics and Research Office of the State Planning Organisation, The Turkish Republic of Northern Cyprus (TRNC) Prime Ministry, was contacted to obtain relevant information on the population.

The Statistics and Research Office of the State Planning Organisation uses the international Standard Industrial Classification (SIC) and all research carried out are registered and published in the form of booklets and web pages. Registers were chosen by this study on how recent was the information available. See Table 6.2 for the national breakdown according to the Statistics and Research Office of the State Planning Organisation classified registers (1998) which is a modification of Table 4.3 in chapter four indicating the classification of the small organisations under the European Union (EU) specifications depicted in Table 4.4 also in chapter four.

Table 6.2 SIC Classification of manufacturing industries in Northern Cyprus according to business size

SIC Code		European Union (EU) Classification				
		Micro	Small	Medium	Medium-Large	
D	Manufacturing					
	Average number of employees	0-9	10-49	50-99	100+	Total
15	Processed food and drinks	186	33	2	1	222
17	Textile products	19	4	-	-	23
18	Clothing	89	17	8	3	117
19	Leather products	17	-	-	-	17
20	Wood and kindling products (excluding furniture)	153	3	-	-	156
21	Paper and paper products	9	1	-	-	10
22	Printing and Publishing	34	5	-	-	39
25	Plastic and rubber products	15	6	-	-	21
26	Non-metallic mineral products	34	10	3	1	48
27	Metal works					
28	Metal products excluding machine and machine parts	177	9	-	-	186
29	Machines and accessories	27	1	-	-	28
30	Office, accounting and computing appliances	2	1	-	-	3
31	Electrical machines and appliances	11	-	1	-	12
33	Medical equipment; sensitive and optical equipment and watch making	2	-	-	-	2
34	Motorised land vehicles; trailer and semi-trailers	3	-	-	-	3
35	Other transport vehicles	2	1	-	-	3
36	Furniture manufacturing	156	10	3	-	169
	TOTAL	936	101	17	5	1059

Adapted from SPO, Genel Sanayi ve İşyerleri Sayımı, 1998

Very small (micro) and small organisations represent 98% (1037/1059) of the national distribution as depicted in Table 6.2.

The state Planning Office (SPO) provides a list of the names and addresses of institutions and establishments in the major sectors of the economy of Northern Cyprus. Each listing includes size indicators such as number of employees and Standard Industrial Classification (SIC) codes.

6.5.2 Identification of the sample frame

The quantitative criteria as described in Table 6.2 seek to distinguish between the following size classes: micro, small, medium, and large organisations.

The sample units are the small manufacturers in Northern Cyprus with between 10-49 employees. This criterion of the number of employees is based on the classification of the State Planning Office in Northern Cyprus (SPO, 1998).

For this research employment size has been selected because it is the most stringent criterion and it is used most often to distinguish between small and large organisations (Önet, 2003; SPO, 1998; Tümer, 2001).

It is important to note from literature discussed in chapters two and three that mainly large organisations were used to study the application of the life cycle theory abroad. This study has chosen small organisations in Northern Cyprus based on statistics that the Small to Medium Enterprises (SMME) sector absorbed nearly 60% of the people

employed in the private sector and contributed 92.7% to exports according to Tümer (2001). Small manufacturing organisations with 10-49 employees were selected based on their 16% (4352/26572) contribution to total employment in the manufacturing sector and 65% (4352/6647) contribution to the total employment to private enterprises in Northern Cyprus as depicted in Table 4.3 in chapter four.

6.5.3 Sample size determination and the selection of the sampling method

A sampling method can be based on a probability or non-probability method. The preferred approach, however, is to use probability sampling in which case all the members of the population have a known probability of being selected for the sample. Non-probability sampling relies on the judgement of the researcher and is only as representative as the researcher's luck and skills permit (Kinnear & Taylor, 1996: 439).

(a) Sample size determination

A sample size can be determined through the use of statistical procedures or through ad hoc methods. Ad hoc methods are used when a researcher knows from experience what sample size to select or when there are known constraints. The constraints may be issues such as time and available funding.

For factors can influence the determination of a sample size:

- The value of information in the study in general and the degree of reliability that is to be placed in the results.
- The number of groups or subgroups to be analysed within the sample.
- The cost of the sample.
- The variability of the population – as variability increases, so does the required sample size.

According to Dillon et al (1993: 251), a sample size can be determined for means and proportions. If the statistic of interest is a proportion rather than a mean, the approach of determination is similar for means and proportions. The sample size can furthermore be determined for an ending and a non-ending population.

The sample size determined by this study is based on a sample proportion for an ending population of 101 small organisations in Northern Cyprus as shown in Table 6.2.

The following formula was applied to determine the sample size (Dillon et al. 1993: 253) for small manufacturing organisations in Northern Cyprus.

$$n = \frac{P^{\wedge} Q^{\wedge}}{\frac{H^2}{Z_{cl}^2} + \frac{P^{\wedge} Q^{\wedge}}{N}}$$

Where

n = sample size

P^{\wedge} = Initial approximation of the population of interest

Q^{\wedge} = $1 - P^{\wedge}$

Z_{cl}^2 = Required confidence level

N = Frequency

H^2 = Required precision

As the P^{\wedge} value in the sample size formula represents the initial approximation of the population of interest, a preliminary telephonic study was conducted by this study to determine what percentage of the selected population knows about the product life cycle concept and applies the concept during marketing strategy formulation and marketing decision-making. Eighty randomly selected small manufacturing organisations in Northern Cyprus from the State Planning Organisation (SPO) list were contacted telephonically. The telephonic interviewer asked to speak to the person in the organisation responsible for making marketing decisions. In 40% of the cases the person responsible for making marketing decisions indicated that he/she knows about the existence of the product life cycle concept and that his/her organisation applies the concept during strategic marketing planning and marketing decision-making.

The calculation of the sample size used was adjusted according to the above finding as follows:

$$n = \frac{P^{\wedge} Q^{\wedge}}{\frac{H^2}{Z_{cl}^2} + \frac{P^{\wedge} Q^{\wedge}}{N}}$$

$$n = \frac{(0.4)(0.6)}{\frac{(0.05)^2}{(1.96)^2} + \frac{(0.4)(0.6)}{101}}$$

$$= \underline{79}$$

6.5.4 Selection of the sample process

To enable the fieldwork of this study to systematically select the sample elements from the SPO list, the sample elements were calculated as:

Every 11th element will be drawn systematically from the SPO list until a number of 79 small manufacturers is reached.

6.6 PERSONAL INTERVIEWING

As mentioned in paragraph 6.3, the following section will be devoted to a discussion on face-to-face or personal interviewing to be used as the data collection method during the empirical part of this study.

Table 6.1 summarised the various data collection methods at the disposal of this study. This study has chosen personal interviews based on the high unfamiliarity rate of the sample with the product life cycle concept as discussed in paragraph 6.5.3(a). Flash cards were used for the illustration of the product life cycle curve and the explanation of the key concepts used.

Based on the above mentioned, the telephone and mail methods of data collection were not as possible data collection methods as with the face-to-face interviewing method.

6.6.1 Definition of a personal interview

A personal interview is a two-way conversation initiated by an interviewer to obtain information from a respondent (Cooper and Schindler, 1988: 291).

6.2.2 Evaluation of a personal interview

There are clear advantages and limitations associated with the use of a personal interview when compared to the other survey methods available to a researcher (Cooper and Schindler, 1988. 291) and summarised in Table 6.1. The following value description will highlight the choice of this study to use a personal interview method:

(a) Advantages of a personal interview

- Depth of information and detail that can be secured when compared with a telephone, mail, self-administered and mall intercept surveys.
- The interviewer has more flexibility to improve the quality of the information received than with any of the other survey methods.
- Interviewers have more control over the interview and any disturbances that may occur.
- Interviewers can probe for additional questions and gather supplemental information through observation.
- Interviewers can pre-screen to ensure that the correct respondent is participating in the interview.

(b) Limitations linked to the use of a personal interview

Cost and time are limitations linked to a personal interview (Cooper and Schindler, 1988: 291).

An interview may cost from a small to a large amount and the cost is particularly high if the study covers a wide geographical area or if the sample has stringent criteria. It can take time to fill a sample if some of the respondents to be included in a sample are hard-to-reach people.

6.6.3 Requirements for a successful personal interview

According to Cooper and Schindler (1988: 292), there are three broad conditions to be met to have a successful personal interview. These conditions are:

- Availability of the needed information from the respondent.
- An understanding of the respondent of his or her role.
- Adequate motivation by the respondent to co-operate.

It is the task of the interviewer to ensure that the personal interview is successful. The interviewer can influence the correspondent in many ways and it is the responsibility of the interviewer to motivate the respondent to take part in the interview. Namely, there are few techniques.

6.6.4 Personal interviewing techniques

The following techniques are available to interviewers for personal face-to face interviews (Cooper and Schindler, 1988: 293-296):

(a) Introduction

Interviewer appearance and conduct of behaviour are critical in making a good impression on the potential respondent in order to convince the respondent to participate. The interviewer's introduction and explanations should be no more detailed than necessary.

(b) If the respondent is busy

If it is obvious that the respondent is busy, it may be a good idea to give a general introduction and try to stimulate enough interest to arrange an interview at another time.

(c) Establishing a good relationship

The successful interview is based on rapport – meaning a relationship of confidence and understanding between the interviewer and the respondent as interviews are often new to respondents and they need help in defining their roles.

(d) Gathering the data

After the completion of the introduction and the establishment of initial rapport, the interviewer turns to the technical task of gathering information. A difficult task in interviewing is to make certain the answers adequately satisfy the question's objectives. The interviewer should follow the exact wording of the questions, ask them in the order presented, and ask every question that is specified.

(e) Probing

The technique of stimulating respondents to answer more fully and relevantly is called probing. A probe should be neutral not to cause bias and should appear as a neutral part of the conversation. According to Cooper and Schindler (1988, 295), there are several probing styles:

- A brief assertion of understanding and interest.
- An expectant pause.
- Repeating the question.
- Repeating the respondent's reply.
- A neutral question and comment.
- Question clarification.

(f) Recording the interview

While the methods used in recording varies, the interviewer usually writes down the answer of the respondent. Some guidelines can make this task easier.

- Record the responses as they occur.
- If there is a time constraint the interviewer should use a shorthand system.
- Abbreviating words and using of key words are good ways of recording.

6.6.5 Interview problems

Cooper and Schindler (1988: 297) indicate that during personal interviewing, the researcher deals with the two interrelated aspects of bias and cost. Bias results from three types of error – sampling error, non-response error, and response error as discussed in paragraph 6.4 and illustrated in Figure 6.1.

The most reliable solution to non-response problems is to make call-backs. If enough attempts are made, it is usually possible to contact most target respondents, although unlimited call-backs are expensive. One way to improve the productivity of call-backs is to vary them by time of day and day of week.

When data reported differ from the actual data, response errors occur. Errors can be made in the process of tabulating the data or when the respondent fails to report fully and

accurately. Consistent control or elimination of response errors is a problem that has yet to be solved. (Cooper and Schindler, 1988: 298).

As professional interviewer's salaries are typically high, Cooper and Schindler (1988: 299) reiterates that interviewing is costly and these costs continue to rise. Much of the results from the substantial interviewer time due to administrative tasks and travelling. To counter the problem of research costs, organisations can:

- Pay the interviewers an hourly rate.
- Use the telephone to schedule personal interviews.
- Use self-administered questionnaires.

The interviewing procedure employed during the fielding of this study will be discussed in paragraph 6.8.

6.7 MEASUREMENT AND MEASUREMENT SCALES

Before the process of questionnaire design can be explained, it is necessary to provide information on the possible measurement scales to the disposal of the researcher.

6.7.1 Measurement

Measurement is a process of assigning numbers to objects to represent quantities of attributes (Dillon et al, 1993. 302). Measurement relates to the procedure used to assign numbers that reflect the amount of an attribute possessed. Many characteristics that are investigated in marketing research studies can be measured in a variety of ways. Particular attention must be given to the objectives of the study and the precise definition of the characteristics to be measured.

6.7.2 Level of measurement

Measurement can be undertaken at different levels. The levels reflect the correspondence of numbers assigned to the characteristics in question and the meaningfulness of performing mathematical operations on the numbers assigned.

The different levels of measurement will be discussed in the next section.

(a) Nominal measurement

Nominal measurement is measurement where the numbers assigned allow the researcher to place an object in one and only one of a set of mutually exclusive exhaustive classes with no implied ordering (Dillon et al, 1993. 273)

(b) Ordinal measurement

Ordinal measurement is a measurement in which the response alternatives define an ordered sequence so that the choice listed first is the less (greater) than the second, the second less (greater) than the third, and so forth (Dillon et al, 1993: 274). The number assigned does not reflect the magnitude of an attribute possessed by an object.

(c) Interval measurement

Interval measurement allows the researcher to indicate how far apart two or more objects are with respect to the attribute and consequently to compare the differences between the numbers assigned (Dillon et al, 1993: 275). Because the interval lacks natural or absolute origin, the absolute magnitude of the numbers cannot be compared.

(d) Ratio measurement

Ratio measurement has the same properties as interval scales, but also has a natural and absolute origin (Dillon et al, 1993: 277).

The different appropriate statistical options available to the researcher are illustrated in Table 6.3.

Table 6.3: Appropriate statistics for nominal, ordinal, interval and ratio data

Scale	Range	Central tendency	Dispersion
Nominal	Number of categories	Mode	Frequency in each category
Ordinal	Number of scalar positions	Median	Percentage or interquartile range
Interval and ratio	Top scores minus bottom score plus 1	Mean	Standard deviation

Adapted from: Dillon, Madden, and Fertile (1993: 275)

The different scale types depicted in Table 6.2 will be discussed in the next section.

6.7.3 Scale types

Measurement scales fall into two broad categories of comparative and non-comparative scales (Dillon et al, 1993. 277)

(a) Non-comparative scaling

According to Dillon et al, (1993: 277), non-comparative scaling is a method whereby the respondent is asked to evaluate each object on a scale independently of the other objects being investigated.

According to Dillon et al (1993, 277 – 281), there are various types of non-comparative scaling:

(i) Line marking/Continuous rating scales

This is a procedure that instructs the respondent to assign a rating by placing a marker at the appropriate position on a line that best describes the object under study. There is no explicit standard for comparison.

(ii) Itemised rating scales

The respondent is provided with a scale having numbers and/or brief descriptions associated with each category and asked to select one of the limited number of categories, ordered in terms of scale position, that best describes the object under study.

When using itemised rating scales the researcher must make the following decisions:

- **The number of categories:**

When making a decision on the number of categories the researcher can decide to include any number of response categories provided that the respondents have to discriminate among alternatives. The researcher can include 5-9 categories.

- **The number of favourable and unfavourable categories**

When using a balanced scale, the scale has an equal number of favourable and unfavourable categories. When using an unbalanced scale, the scale has unequal numbers of favourable and unfavourable scale categories.

- **The nature and degree of verbal description**

Verbal category descriptors help to ensure that each respondent is operating from the same base. Pictures and other types of graphic illustrations can also be used, especially if the respondents are children or do not have a high literacy rate.

- **The presence of a neutral position**

Odd number versus even number of scale items. In odd numbers of scale the middle scale becomes the neutral point.

- **Forced and unforced itemised rating scales**

With forced itemised rating scales, the respondent must indicate the answers even though he/she has no opinion or knowledge about the subject. It is better to use subjects about which the respondents have knowledge and opinion.

(b) Comparative scaling

Comparative scaling is a scaling process in which the subject is asked to compare a set of stimulus objects directly against one another (Dillon et al, 1993. 281).

According to Dillon et al (1993: 281-288), the following types of comparative scaling are available:

(i) Paired comparison scales

This is a scale whereby the respondents are provided with two objects at a time and the respondents are asked to select one of the two according to some criterion.

(ii) Geared paired comparisons

This scale type is an extension of the paired comparison method, by asking respondents to indicate for instance which brand is preferred and how much they are willing to pay to acquire the preferred brand.

(iii) Rank-order scales

These scales where respondents are presented with several objects simultaneously and requested to “order” or “rank” them. Conditional rank-order scale is a procedure whereby respondents consider each object in turn as a standard for comparisons. Respondents assign ranks to other objects according to this standard.

(iv) Constant sum scales

This is a procedure whereby respondents are instructed to allocate a number of points among alternatives according to the same criterion, for example, preference and importance.

(v) Line marking/Continuous rating comparative scale

A procedure whereby respondents are presented with object pairs and the respondents are asked to judge their similarity by placing a mark on a continuous line.

6.7.4 Single-item versus multiple-item scales

After a research has decided on a scaling type or a combination thereof, he/she should decide whether to use a single-item or a multiple item scale or a combination thereof.

A multiple-scale usually consists of a number of statements that the respondent must react to. For example, the respondent can be asked to indicate how favourable or unfavourable each statement is. According to Dillon et al (1993. 288) multiple item scales are usually used in attitude measurement. There are three different multiple item scales available to the researcher:

(a) Semantic differential scale

A semantic differential scale is a scaling technique where a measure of the person's attitude is obtained by rating the object or behaviour in question on a set of bipolar adjective scales, Dillon et al (1993. 289). According to Cooper and Schindler (1988:

189), the semantic differential scale measures the psychological meanings of an attitude object.

(b) Stapel scale

According to Dillon et al (1993: 290), a stapel scale is a procedure using a single criterion or key words and instructing the respondent to rate the object on a scale. A stapel scale is used as an alternative to the semantic differential scale, especially when it is difficult to find bipolar adjectives that match the investigation question (Cooper and Schindler, 1988: 190).

(c) Likert scale

The Likert scale is a measurement scale consisting of a number of evaluative statements (Dillon et al, 1993: 292). The Likert scale is the most frequently used variation of the summated rating scale (Cooper and Schindler, 1988: 189). Summated scales consist of statements that express either a favourable or unfavourable attitude toward the object of interest. The respondent is asked to agree or disagree with each statement. Each response is given a numerical score to reflect its degree of attitude favourableness, and the scores may be totalled to measure the respondent's attitude. Likert scales help researchers to compare one person's score with the distributions of scores from a well-defined group.

6.8 Questionnaire design and testing

The research problem together with the research objectives and hypotheses have been formulated in chapter one and further discussed in chapter five. The process of designing the measurement instrument should be in accordance with the research problem, hypotheses, primary and secondary research objectives and the different measurement aspects.

All the measurement aspects as discussed in paragraph 6.7 (the levels of measurement and the different measurement scale types) will be considered during the process of designing the questionnaire to be used during the empirical execution of this study. Questionnaire design will be explained in terms of four interrelated activities – preliminary considerations, asking of questions, construction of the questionnaire and the pre-testing of the questionnaire (Dillon et al, 1993. 302).

6.8.1 Preliminary considerations

According to Dillon et al (1993: 302), a researcher should translate the research problem into a set of research questions before he/she starts with the formulation of the questions.

The research question should identify:

- What information is required?
- Who the appropriate target respondents are?

- What data collection method to use?

This study has addressed the three aspects above in chapter one, explained the appropriate target respondents in chapter four, and provided substance for the use of the personal interviewing to be used as the data collection method in paragraph 6.6.

6.8.2 Asking questions

Dillon et al (1993: 303) provide three general guidelines to help in devising an effective questionnaire:

- A researcher should write specific questions only after he/she has thoroughly thought through the research objectives and research hypotheses.
- When a researcher is designing a questionnaire, he/she should constantly refer to the research objectives and research hypotheses.
- For each question a researcher writes down, he/she should consider how the information obtained from the responses would help in answering the research hypotheses.

There are a number of specific considerations to keep in mind in developing questions.

Dillon et al (1993: 304) provide the following basic principles:

- Principle 1: Be clear and concise

- Principle 2: Response choices should not overlap
- Principle 3: Use natural and familiar language
- Principle 4: Do not use words or phrases that show a bias
- Principle 5: Avoid double-barrelled questions
- Principle 6: State explicit alternatives
- Principle 7: Questions should meet the criteria of validity and reliability

The issue is whether or not a researcher is truly measuring what he/she was attempting to measure and whether or not the researcher can replicate these responses at a later point in time. The researcher cannot assume that the same questioning approach will work equally well for all product/service categories and all interviewing methods.

When the questionnaire to be used as the measurement instrument was constructed by this study, the above-mentioned principles were strictly adhered.

6.8.3 Open-ended and close-ended questions

A researcher can make use open-ended and close-ended question formats.

(a) Open-ended question format

With open-ended questions the respondent is allowed to choose any response deemed appropriate, within the limits implied by the question.

According to Dillon et al (1993: 310), there are several good reasons for asking open-ended questions.

- Open-ended questions are useful to check and/or corroborate the results of quantitative or closed-ended questions.
- Open-ended questions may be used to obtain direct comparisons and to specify particular causes for preference or rejection when two or more stimuli are involved in a test.
- Open-ended questions are useful in determining whether a particular communication vehicle (e.g. commercial or concept) conveys its intended objectives.
- Open-ended questions elicit of a respondent's general reactions to or feelings on exposure to specific ads or packages involved in a test.

Open-ended questions are not well suited for self-administered questionnaires and answers, though open-ended questions may be more of an indication of the respondent's knowledge about or interest in the issue being investigated. Interview bias can be a serious problem with the use of open-ended questions and open-ended questions must be coded or categorised for analysis, which can be a tedious task laden with ambiguities.

(b) Close-ended question format

With close-ended questions, the respondent is provided with numbers and/or predetermined descriptions and is asked to select the one that best describes his or her feelings.

There are several issues related to itemised question formats (Dillon et al, 1993: 310):

- The number of response alternatives.
- The nature and degree of verbal description.
- The number of favourable and unfavourable categories.
- The statement of a neutral position.
- The forced or unforced nature of scale.

According to Dillon et al (1993. 310), the obvious advantages of the closed-ended question format relate to:

- Their ease of use in the field.
- Their ability to reduce interview bias.
- Their ability to reduce bias based on differences in how articulate respondents are.

6.8.4 Constructing the questionnaire

The questionnaire was divided into five distinct sections as can be observed in the questionnaire on pages 1-13, in Appendix 1.

- **Introduction, qualification and screening questions**
- **Section A:** Classification questions.
- **Section B:** Specific product life cycle questions.
- **Section C:** PLC related to strategic marketing mix variables. PLC characteristics and strategies linked to the different phases of the product life cycle.

The questionnaire was compiled based on the level of expected marketing expertise derived from the sample size in paragraph 6.5.3(a) and on the theoretical discussion in paragraphs 6.7 and 6.8 concerning:

- The different measurement scales.
- Preliminary considerations associated with questionnaire design.
- General guidelines for asking questions in a questionnaire

6.8.5 Pre-testing the questionnaire

According to Cooper and Schindler (1988: 349), pre-testing is the final step toward ultimately improving survey results. Pre-testing is the final step toward ultimately improving survey results. Pre-testing is not only an established practice for discovering errors but is also useful for training the research team. Pre-testing was done by the

researcher and not by the interviewers because all were marketing undergraduates familiar with the concepts used and well trained.

The value and the necessity for pre-testing proved necessary because important changes were made to the questionnaire before it was finally accepted as the final questionnaire (see pages 1-13 in Appendix 1 for the final questionnaire). The pre-testing was done in an unconventional manner. It was executed among respondents similar to those eligible to be incorporated in the study. During each pre-testing interview, all questions were tested. Apart from the pre-testing of each question, the following components were also evaluated:

- Interviewer instructions
- Question formats – refer to paragraphs 6.8.3(a) and 6.8.3(b), where open-ended and close-ended question formats were discussed.
- Questionnaire layout – refer to 6.8.1 and 6.8.2 where preliminary considerations, specific considerations and the principles for questionnaire design is explained.
- Terminology – refer to the principles for questionnaire design as illustrated in 6.8.2

Only minor changes were made to the layout, but the following one important change was made:

- Clear interviewer instructions were developed to serve as a guide for the interviewer in conducting the personal face-to-face interviews.

It was very clear from the pre-testing that flash cards should be developed to clarify and explain the meaning of concepts used in this study. See pages 1 and 2 in Appendix 2 for the flash cards used to illustrate the product life cycle concepts used in the questionnaire. Since all respondents were expected to be Turkish, the questionnaire in Appendix 1 and the flash cards in Appendix 2 were translated into Turkish as seen in Appendix 3 and Appendix 4.

6.8.6 Questions in the questionnaire

Each question will be discussed with reference to the theoretical discussion of questionnaire design in paragraph 6.8.

Page 1 of the questionnaire, as shown in Appendix 1, indicates procedure for the interviewer on:

- How to approach and select the respondent that qualifies to participate in this study.
- How to make an appointment with an eligible respondent.

The first part of page two provided two paragraphs that the interviewers used when they met the respondent for the interview.

Before the questions will be explained on a question-by-question basis Table 6.4 will indicate the linkage between questions, research objectives and research hypotheses.

Table 6.4 The linkage between the questions in the questionnaire, secondary research objectives and research hypotheses

Questions linked to secondary objectives	
Objectives	Questions
a) To determine whether marketing decision-makers in small organisations in Northern Cyprus can identify in what phase of the product life cycle an individual product or a product range is.	8,9 & 10
b) To identify the application of marketing-decision making variables in the various phases of the product life cycle concept by small organisations.	15 & 19
c) To identify the importance of elements of the marketing mix variables by small manufacturing organisation in the different product life cycle phases.	2,15 & 19
d) To investigate the ability of small organisations to describe the marketing objectives within the various product life cycle phases as indicated in the theory.	16
e) To establish the ability of small organisations to identify product life cycle characteristics as depicted in marketing literature.	18
f) To investigate the ability of small organisations to link marketing strategies with phases of the product life cycle theory according to the theory classification.	20
g) To identify the different marketing objectives that small organisations formulate for their products in each phase of the product life cycle.	10.3
h) To identify the factors influencing a product through the various phases of the product life cycle among small organisations in Northern Cyprus.	10.2
i) To determine the potential of the product life cycle concept for decision-making among small manufacturing organisations in Northern Cyprus.	2&13
j) To determine who is responsible for marketing decision-making in small manufacturing organisations.	2&14
Questions linked to the hypotheses	
Hypotheses	Questions
Hypothesis 1: There is a difference in the application of the product life concept theory assumptions of small organisations in Northern Cyprus compared to Kotler's theory.	16,18&20
Hypothesis 2: Marketing managers of small organisations in Northern Cyprus use the product life cycle concept to strategically plan and manage their products through the various phases of the product life cycle.	2,11,13&17
Hypothesis 3: Small manufacturing organisations in Northern Cyprus apply and use the product life cycle concept for marketing decision-making purposes.	2&17
Hypothesis 4: Small manufacturing organisations in Northern Cyprus do not have a marketing function responsible for applying the product life cycle concept when marketing strategy is developed and marketing decisions are taken.	4

The primary objective as set in the introductory chapter one is not depicted in Table 6.4, but it can be related to questions 1 to 5 plus 6, 7,8,9,11,12,13 & 14.

Table 6.5 illustrates the linkage between the different sections, different questions, question formats and the different scale types used in the questionnaire.

Table 6.5: The linkage between the different sections, questions, question formats, and the different scale types

Section	Question	Question format	Scale type
Section A	1	Closed-ended	-
	2	Closed-ended	-
	3	Open-ended	-
	4	Closed-ended	-
	5	Closed-ended	-
Section B	6	Closed-ended	5-point Likert scale plus a "don't know"
	7	Open-ended	-
	8	Closed-ended	-
	9	Closed-ended	Dichotomous
	10	Open-ended and Closed-ended	-
Section C	11	Closed-ended	Dichotomous
	12	Closed-ended	-
	13	Closed-ended	5-point Likert scale
	14	Closed-ended	5-point Likert scale
	15	Closed-ended	5-point Likert scale
	16	Open-ended	-
	17	Closed ended	5-point Likert scale
Section D	18	Closed-ended	-
	19	Closed-ended	5-point Likert scale
	20	Closed-ended	-

It is eminent from Table 6.5 that an unbalanced 5-point Likert scale was used based on the expectation that the distribution of responses might be skewed and that most of the

respondents could have been favourable or unfavourable towards the various issues at hand. Respondents, who did not have a favourable or unfavourable inclination, were provided with a neutral position and the top box scores could, therefore, be determined. The top box refers to the percentage of respondents rating a brand, product, or concept in the most favourable category on the rating scale and is continuously used as a criterion of performance in marketing research (Dillon et al 1993: 278). Please refer to paragraph 6.7.3, where comparative and non-comparative scaling was discussed.

(a) Questions in Section A

Questions 1 to 5 are classification questions formulated to gather profile information on the different manufacturers as seen on pages 1-3 in Appendix 1. **Questions 1-5** will be cross-tabulated and used to partly answer hypotheses 1, 3, and 4. Questions 1,2, and 5 were closed-ended question formats and question 3 was an open-ended question format to classify manufacturers at a micro level for possible linkage to the SIC classification discussed in chapter 4.

(b) Questions in Section B

Questions 6 to 10 were formulated to determine the importance of the product life cycle concept in the execution of certain functions and aspects within small manufacturers as seen on pages 4 to 6 in Appendix 1.

A closed-ended question format was used for **question 6** because all the possible application areas were derived from the literature study discussed in chapter three. A 5-point Likert scale was used and the scale values were labelled from not important at all, indicated by a scale value of 1, to extremely important, indicated by a scale value of 5. A “don’t know” option was included to make provision for the probability that respondents might not be familiar with the application of the product life cycle concept on all the aspects in his/her organisation.

The reason for the inclusion of **Question 7** was to determine the aspects that provide a competitive advantage to small manufacturers. In particular, this question can provide direction to the importance of the service component. This question can provide further justification to the view of Rafiq and Ahmed (1995: 4-15) that a generic marketing mix should be applicable irrespective of the type of marketing – whether consumer, industrial or services marketing. An open-ended question format was used, as all possible aspects, which may provide a competitive advantage to small manufacturers could not be anticipated.

Questions 8 and 9 were included as they indicated the nature of the product assortment.

A closed-ended question format was used by this study derived the different types of product assortments from the literature study. A dichotomous format was used for question 9, as the answer to this question could either have been yes or no.

Questions 10, 10.1, 10.2 and 10.3 were formulated to determine in what PLC phase the primary product or product range is and for the respondents to provide a short description, reasons and a marketing objective for the primary product in that product life cycle phase. Answer to these questions can be compared to the marketing objectives provided by Kotler (2000: 316) as discussed in chapter three. Question 10 was an open-ended question directly related to the different phases of the product life concept derived from the literature study. Questions 10.1 – 10.3 were all open-ended questions based on the possible diverse descriptions, reasons and marketing objectives that could not be anticipated beforehand.

(c) Questions in section C

Questions 11 to 17, where respondents were asked to determine the role of the product life cycle concept in strategic marketing and strategic marketing planning, can be seen on pages 7 to 11 in Appendix 1. Questions 11 and 12 and 13 will provide answers to the way in which small organisations value the product life cycle concept as an instrument for decision-making as stated in the title of this thesis. Questions 14 to 17 furthermore tested the control that small manufacturers have over the different marketing mix variables, especially the importance of the people, processes and physical evidence and marketing objectives within each phase of the product life cycle.

Question 11 was formulated to determine whether small manufacturers use the product life cycle concept for strategic marketing planning and development purposes. A dichotomous format was used, because the answers to this question could be yes or no.

Question 12 assessed the time frame manufacturers used to do strategic marketing planning and development. This question is closely related to question 11 to provide a time frame.

Question 13 was formulated to determine the extent to which the product life cycle concept influences the process of marketing strategy planning and development. A 5-point Likert scale was used and the scale values were labelled from a very low influence indicated by a scale value of 1 to an extremely high influence indicated by a scale value of 5.

Question 14 tests the degree of control that manufacturers have over its marketing mix variables. A 5-point Likert scale was used and the scale values were labelled from no control at all indicated by a scale value of 1 to full control indicated by a scale value of 5.

Question 15 tests the importance that manufacturers attach to marketing mix variable aspects associated with people, processes, and physical evidence. The marketing mix variables were developed from the literature to be generic for the marketing of physical products and services. The reminder of the marketing mix elements will be covered in question 19. A 5-point Likert scale was used and the scale values were labelled from not

important at all, indicated by a scale value of 1, to extremely important, indicated by a value of 5. This is an effort by this study to compare it to the strategies provided by Kotler (2000: 316), illustrated in Table 3.5 in chapter three and formulated as a secondary objective (c) in the introductory chapter.

Question 16 differs from question 10.3 as this question intends to determine the **marketing objectives** that marketing decision makers in small manufacturing organisations link to each phase of the product life cycle. This can be regarded as a generic type of question as the results on this question will be compared to the marketing objectives provided by Kotler (2000: 316), illustrated in Table 3.5. It will be used to achieve secondary objective (d) set in the introductory chapter.

Question 17 was formulated to establish the likelihood that current manufacturers using the product life cycle concept will continue to do so in future. The likelihood was tested for both general decision-making and marketing decision-making.

(d) Questions in Section D

Question 18 was formulated to evaluate the ability of marketing decision-makers in small manufacturers to link the **characteristics** provided by Kotler (2000: 316) and illustrated in table 3.5 to each phase of the product life cycle. The results on this question will be compared to the marketing characteristics provided by Kotler (2000. 316) as depicted in table 3.5.

Question 19 was formulated to determine the importance that manufacturers attach to marketing mix variables aspects associated with product, price, place and promotion. This question is closely related to question 15 that addresses people, processes and physical evidence. A 5-point Likert scale was used and the scale values were labelled from not important, indicated by a scale value of 1, to extremely important, indicated by a scale value of 5. This is an effort made by this study to compare it to the **strategies** provided by Kotler (2000: 316) and illustrated in Table 3.5.

Question 20 was formulated to evaluate the ability of marketing decision makers in small manufacturers to link the **strategies** provided by Kotler (2000: 316) to each phase of the product life cycle concept. The results on this question will be compared to the marketing strategies provided by Kotler (2000. 316) as depicted in Table 3.5.

6.9 INTERVIEWING PROCEDURE

The interviewers were trained during a training session to ensure that they:

- Were familiar with the selection procedure of a sample element from the State Planning Office (SPO) list provided.
- Understood the procedure of making appointments with respondents adhering to the two qualifying or screening questions as seen on page 1 in Appendix 1.

- Were familiar with all the interviewer instructions as indicated in the dark highlighted areas in the questionnaire as seen on pages 1, 3, 6, 7, 8, 10, 11 and 13 (Appendix 1).
- Undersood the concepts used in the questionnaire.
- Were familiar with the use of the different flash cards as can be seen on pages 1 to 4 in Appendix 2.

The interviewers should follow the interviewing procedure indicated by the interviewer instructions and this was reiterated during the training session. After an interview was finalised the interviewers followed the interviewer instructions as indicated in the dark highlighted areas in the questionnaire.

6.10 CODING AND EDITING

All questionnaires were numbered for the ease of possible future reference.

6.10.1 Coding

Coding is the assignment of a numerical value (code) or alphanumerical symbol to represent a specific response to a specific question along with the column position that the designated code or symbol will occupy on the data record (Dillon et al, 1993: 37). Numerical values were assigned to the closed-ended questions during the questionnaire design, while responses to open-ended questions were written down and grouped together

according to categories. Both the closed-ended and open-ended questions will be pre-coded, checked, edited and subjected to a content analysis process.

6.10.2 Editing

Editing involves the review of the questionnaires for accuracy and precision (Dillon et al, 1993: 37). During the editing process of this study all the usable questionnaires had been checked for maximum accuracy and precision. For accuracy purposes, attention was given to signs of interviewing bias or cheating.

6.10.3 Transferring of data

Data was captured on a database program folder (Microsoft Access) and subjected to a verification process in order to eliminate non-response and data capturing mistakes. A data cleaning process was executed and the missing responses were identified. The various approaches dealing with missing responses will be discussed in the paragraph 6.11.1.

6.11 STATISTICAL PROCEDURES AND STATISTICAL TREATMENT USED IN THE ANALYSIS

The SPSS computer statistical software package was used for data processing and the results and research findings will be discussed in chapter seven. The following statistical procedures can be applied:

6.11.1 Missing responses

There are various approaches dealing with missing responses by either preserving missing or blank spaces or by assigning values to missing data through mean response or imputed response.

Preserving missing or blank responses is an acceptable practice for different types of analysis. Missing or blank responses can be entertained by applying casewise deletion or by means of pairwise deletion.

- **Casewise deletion** is a strategy for missing responses by any respondent (case). The respondent (case) is removed if any of his or her answers are identified as missing (Dillon et al, 1993: 348).
- **Pairwise deletion** is a strategy for missing responses that involves using all of the available non-missing data for each calculation (Dillon et al, 1993: 348).

If 75% or more of a questionnaire is not completed this study will employ casewise deletion where all the answers provided by the respondent will be discarded.

The assignment of values to the missing data is also an acceptable way of handling missing responses. This study has a choice between a mean response strategy and an imputed response strategy.

- A **mean response** is an approach to missing responses that involves replacing the missing response with a constant mean, median or mode response to the question depending on the measurement scale used (Dillon et al, 1993: 348). The missing response items in this data transferring process were treated in a way that used a mean substitution approach. If applicable, each missing response item will be replaced by the mean score of the answers by all the other respondents to those specific questions.
- An **imputed response** is an approach to missing responses where the respondent's answer to other questions used to impute or deduce an appropriate response to the missing question. This study did not employ this method.

6.11.2 Descriptive statistics

Descriptive statistics is a single number used by the researcher to summarise data. The researcher can use measures of central tendency and variability to routinely report when tabulating a study (Dillon et al, 1993: 372).

(a) Measures of central tendency, dispersion and distribution

A measure of central tendency is used to provide data on elevation – how high or how low the scores on a question tend to be. A researcher can use the mean, mode and median to indicate central tendency, dispersion, and distribution of data.

(i) The mean

The mean is the arithmetic average of a variable (Sudman and Blair, 1988: 456) and a measure of central tendency for interval and ratio scaled data (Dillon et al, 1993: 374).

(ii) The mode

The mode is the most frequently occurring value used as a measure of central tendency for data assuming a limited number of values (Dillon et al, 1993: 374).

(iii) The median

The median is the value that is halfway between the highest and the lowest value in a data set (Dillon et al, 1993: 375).

This study envisaged to make use of the mean values on scaled questions in order to determine the means score for the total sample.

(b) Measures of validity

A researcher can use the range and the variance to indicate variability of data. Measures of variability indicate the degree of dispersion to the researcher – how spread out are the responses to a question (Dillon et al, 1993: 372).

(i) The range

The range is the difference between the largest and the smallest observation in a data set (Dillon et al, 1993: 375).

(ii) The variance

The variance is the average squared distance between the values of individual observations on some variable and the mean of that variable (Sudman and Blair, 1988: 459).

(iii) The standard deviation

The standard deviation is the positive square root of the variance (Dillon et al, 1993: 375).

6.11.3 Statistical techniques and procedures to be adopted in this research

The following are the main statistical procedures for possible inclusion in this research:

(a) Cross tabulation

Cross tabulation is a statistical technique that describes two or more variables simultaneously and results in tables that reflect the joint distribution of two or more variables that have a limited number of categories or distinct values. (Kinnear and Taylor, 1996: 318)

(b) Validity

Validity according to Kinnear and Taylor (1996: 231-236) 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. Kinnear and Taylor (1996: 231-236) distinguish between internal validity and external validity. Internal validity is the measure of accuracy of an experiment and external validity is a determination of whether the cause-and-effect relationships found in the experiment can be generalised.

For validity purposes of this study a decision was taken to have strict control over item non-responses.

According to Salkind (2000. 113-116), there are three validity assessment approaches:

- (i) **Content validity** – the extent to which a measure appears to measure the characteristic it is supposed to measure. Content validity can be determined by means of face validity and sampling validity. Face validity is the extent to which one measure seems to capture the characteristic of interest. Sampling validity is the extent to which a “content population” of situations/behaviours relating to the characteristic of interest is adequately represented by the measure concerned.
- (ii) **Criterion validity** – the extent to which a measure can be used to predict an individual’s score on some other characteristics (the criterion). Content validity can be determined by means of concurrent and predictive validity. Concurrent validity is the extent to which a measure is related to another measure when both are measured at the same point in time. Predictive validity is the extent to which current scores on a given measure can predict future scores of another measure.
- (iii) **Construct validity** – the extent to which a measure behaves in a theoretically sound manner. Construct validity can be determined by means of convergent validity, discriminant validity and nomological validity. Convergent validity is

the extent to which a measure is positively related to other measures of the same concept obtained by independent methods. Discriminant validity is the extent to which a measure is not related to measures of different concepts with which no theoretical relationships are expected. Nomological validity is the extent to which a measure is related to measures of other concepts in a manner consistent with theoretical explanations.

To report the validity results of this study content validity will be used. The use of content validity is based on the uniqueness of the questionnaire (use of open-ended questions) and the exploratory nature of the study.

6.11.4 Statistical treatment

This study will treat the statistical analysis as follows:

- (a) As far as the analysis permits, this study will use mean substitution on scaled question where the scale values will be replaced by the mean score of all the other respondents on the same question especially to treat the "don't know" options in question 6.

- (b) This study will employ the mean response strategy to report tendencies, dispersions, and distribution in the data for the total realised sample and per organisational type.
- (c) This study will use standard deviations to report variability in the data for the total realised sample and per organisational type.
- (d) This study will make use of cross tabulations on variables and organisational type to compare results achieved on the total realised sample and per organisational type.
- (e) This study will employ t-tests to determine whether differences identified between groups and or variables can be regarded as significant differences or not.
- (f) This study intends to utilise content validity to indicate that the measurements used, captured the characteristics of interest.

6.12 CONCLUSION

This chapter provided a description of the various data collection methods and the personal face-to-face interviewing technique to be used as data collection method. Special reference was made to the determination of the sample size, the compilation of

the final questionnaire and the pre-testing procedure followed during the empirical execution of the research.

The next chapter (chapter seven) will provide a discussion on the results and interpretation thereof along with the outcomes of the different research hypotheses as formulated in the introductory chapter and substantiated in chapter five.

CHAPTER 7

RESEARCH RESULTS AND INTERPRETATION

7.1 INTRODUCTION

This chapter will be an exposition of the results on a question-by-question basis. The result of each individual question will start with a repetition of the questions as formulated in the questionnaire (Appendix 1). Results will be presented in a table format and the variable numbers (V) as used in the questionnaire will be shown in all relevant tables.

The reporting will start with an illustration of the results achieved by the total sample realised, based on a descriptive statistical analysis of frequencies, mean scores, top-box scores and standard deviations.

The research results will be supplemented by a discussion of other relevant and important cross tabulations, the representativeness of the sample and the validity of the questionnaire. The reporting will be concluded with a summary of the major findings and possible support for the various research hypotheses.

7.2 REALISATION RATE

A sample frame as described in chapter six was obtained from the State Planning Organisation of the Turkish Republic of Northern Cyprus. The sample frame used in this study is shown in Table 7.1 depicting the small manufacturer organisations employing 10-49 employees.

Table 7.1: A description of the sample frame

SIC Code		
D	Manufacturing	Small
	Average number of employees	10-49
15	Processed food and drinks	33
17	Textile products	4
18	Clothing	17
19	Leather products	-
20	Wood and kindling products (excluding furniture)	3
21	Paper and paper products	1
22	Printing and Publishing	5
25	Plastic and rubber products	6
26	Non-metallic mineral products	10
27	Metal works	
28	Metal products excluding machine and machine parts	9
29	Machines and accessories	1
30	Office, accounting and computing appliances	1
31	Electrical machines and appliances	-
33	Medical equipment; sensitive and optical equipment and watch making	-
34	Motorised land vehicles; trailer and semi-trailers	-
35	Other transport vehicles	1
36	Furniture manufacturing	10
	TOTAL	101

The fieldwork was conducted by ten fieldworkers in October 2003 and the realisation rate from the sample is depicted in Table 7.2.

Table 7.2 The realisation rate

Description	Small Manufacturing Organisations
Number of organisations on the SPO list	101
Wrong telephone numbers on the SPO list	9
Number of organisations after the deduction of all the wrong telephone numbers	92
Three calls made but no answer	5
Number of organisations after the deduction of all the wrong telephone numbers and three calls made but no answer	87
Don't Know and don't apply the PLC	53
Number of organisations after the deduction of all the wrong telephone numbers, three calls made but no answer and don't know or don't apply the PLC = Total number of small manufacturing organisations knowing and applying the PLC	34
Actual calls made	34
Interviews granted	23
Realisation rate of the total organisations knowing of and applying the PLC concept	(23/34) 67.6%

The reasons for the overall realisation rate of 67.6% depicted in Table 7.2 are:

- A large number (8.91%) wrong numbers appeared on the SPO list.
- Three calls made to 4.95 % of the numbers listed where no answer was received.

- A large number (60.9%) of organisations reached on the SPO list don't know of and don't apply the PLC concept. The percentage is a confirmation of the exercise completed during the determination of the sample size in chapter six, whereby 40% of the 80 organisations selected randomly from the SPO list indicated that they know of and apply the PLC concept.

It is evident from Table 7.2 that only 67.6% (21/34) of the organisations called, granted an interview. Reasons for this phenomenon are:

- The **confidentiality** of PLC information to the organisation
- Marketing decision-makers **not interested** in an interview.
- Marketing decision-makers **not having the time available** for an interview.

It is important to note that of the 23 responses received only one questionnaire was eliminated for statistical analysis due to its incompleteness. Data on the remaining 22 questionnaires were captured and all were fully completed.

The main finding from the realisation rate is that 39.08% (34/87) of marketing decision-makers within small manufacturing organisations of the sample in Northern Cyprus with between 10-49 employees indicated that their organisations know of and apply the product life cycle concept as a decision-making instrument.

7.3 THE REPRESENTATIVENESS, VALIDITY AND RELIABILITY OF RESULTS

Before a question-by-question exposition of the results will be reported it is important to describe the representativeness, validity and the reliability of the results. This is necessary to provide the correct context in which the results can be interpreted and conclusions can be drawn.

7.3.1 Representativeness of the results

Although the sampling elements were randomly selected, the results achieved during this study are **only** representative of the industries and area in which it was conducted as the intended sampling procedure was strictly followed.

7.3.2 Validity of the results

Validity and reliability tests were applied to determine whether or not this study truly measured what was intended to be measured and whether or not a similar study can replicate these responses at a later stage.

As the research design for this study is of an exploratory nature the questionnaire was designed from the literature and tested in a specific industry with a low sample realisation rate as depicted in Table 7.2. Based on this, the validity can be evaluated based on the face validity of the questionnaire.

As presented in chapter six, validity 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 (Malhotra, 1996: 240).

The content validity approach was used to measure the validity of the results obtained during this study by determining whether questions in the measurement instruments used measured the characteristic it was supposed to measure. The questions in the questionnaire were validated by experts in small manufacturing organisations during the pre-testing procedure.

The content of the measures in the questionnaire originated from previous studies reported in the literature review and was regarded to be sufficient to address the objectives of this study formulated in chapter one.

7.4 RESULTS ON A QUESTION-BY-QUESTION BASIS

This study will report the results on scaled questions by using the mean value, top-box score, low-box score, and standard deviation.

7.4.1 Section A

The purpose of Section A was to obtain classification information on small manufacturers in Northern Cyprus included in the empirical part of this study.

(a) Questions 1 and 2

Q1. Location of the organisation		
Q2. Classification	Manufacturer	SIC

The result of location and classification is illustrated in Table 7.3.

Table 7.3: Classification of organisations realised per region

Location	SIC Number	Number of Small manufacturers interviewed
Lefkoşa	D15	3
	D18	2
	D22	2
	D27	2
	D31	1
	D33	1
	D36	2
	Others not in SIC classification	1
Mağusa	D15, others	4
Güzelyurt	Others not in SIC classification	2
Girne	D15	2
İskele		-

The majority (63.64%) of responses as illustrated in Table 7.3 was realised in Lefkoşa. Because of the relatively low response rate in regions other than Lefkoşa, the regions can and will not be compared.

(b) Question 3

What is the nature of your core business?

The classification of organisations based on their core business activities is illustrated in Table 7.4.

Table 7.4: Classification of organisations by core business activities

Description of the core business	Frequency	
	Manufacturers	
	Number	Percentage
Bread making (bakeries)	2	9.09%
Cakes and pastries	2	9.09%
Clothing and footwear	1	4.55%
Coffee	2	9.09%
Dairy products	1	4.55%
Electrical materials	1	4.55%
Furniture	2	9.09%
Meat	1	4.55%
Metal water containers	1	4.55%
Paint	1	4.55%
Pharmaceuticals	1	4.55%
Printing (newspapers)	2	9.09%
Shampoo and soap	1	4.55%
Stationery	3	13.64%
TOTAL	22	100%

The result of this question clearly indicates that the majority of organisations realised by the random selection procedure is stationery manufacturers with a total of 13.64% followed by bakeries and cake and pastries, printers and coffee manufacturers (9.09% each), and the rest by 4.55% each including clothing and footwear, dairy products, electrical materials, meat, metal water containers, paint, pharmaceuticals, and shampoo and soap manufacturers.

(c) Question 4

Name all the **departments or functions** in your organisation.

The total frequency distribution of the departments or functions is depicted in Table 7.5 and indicates that the majority of small manufacturers in Northern Cyprus have a production department or function (V15) 100%, accounts department or function (V6) 90.90%, sales department or function (V17) 86.36%, marketing department or function (V14) 81.82%, buying department or function (V7) 68.18%, and a finance department or function (V10) 50%.

Table 7.5 Departments or functions within manufacturer organisations

Departments or functions	Manufactures Total of Sample (N = 22)	
	Number	Percentage
V6. Accounts	20	90.90%
V7. Buying	15	68.18%
V8. Communication	1	4.55%
V9. Customer service	10	45.45%
V10. Finance	11	50%
V11. Human resources	6	27.27%
V12. Information Technology	8	36.36%
V13. Legal	6	27.27%
V14. Marketing	18	81.82%
V15. Production	22	100%
V16. Public Relations	1	4.55%
V17. Sales	19	86.36%
V18. Technical support	6	27.27%
V19. Research and development	6	27.27%
V20 Other	2	9.09%

The frequency distribution for the marketing department or function 81.82% (V14) as depicted in Table 7.5 is an important trend to be used for cross tabulation purposes in order to provide answers to certain aspects (for example: the identification of marketing

characteristics) evaluated during this study. It is, furthermore, an indication of the level of marketing expertise and should be taken into account when the application of marketing related activities are analysed.

The main finding is that 81.82% of the manufacturer organisations have a marketing department or function although 86.36% indicated that they have a sales function.

(d) Question 5

How many employees are working in your organisation?

The majority of organisations in Northern Cyprus employ between 11 and 20 employees indicated by the cumulative percentage of 59.09% depicted in Table 7.6. This cumulative percentage is an indication that more than half of the organisations in the sample are very small with reference to organisational size, as quantified in terms of the number of employees.

Table 7.6: Organisational size according to the number of employees

Number of employees	Frequency	Percentage	Cumulative percentage
11 – 15	6	27.27%	27.27%
16 – 20	7	31.82%	59.09%
21 – 30	4	18.18%	77.27%
31 – 40	3	13.63%	90.9%
41 – 50	2	9.09%	100%
TOTAL	N = 22	100%	-

Table 7.6 also indicates that 31.82% of all manufacturing organisations in Northern Cyprus employ between 16 and 20 employees. Furthermore, 22.72% (13.63%+9.09%) of these organisations can be regarded as “large” small organisations as they employ between 31 and 50 people.

The main finding is that the majority of manufacturer organisations in the sample can be regarded as small, based on the fact that they have between 11 and 20 employees.

7.4.2 Section B

The purpose of section B was to determine the product life cycle's importance and to test the ability of marketing decision-makers of manufacturers in Northern Cyprus on PLC phase identification and application. The following results provide the necessary information on PLC importance and application ability.

(a) Question 6

How **important** is the application of the product life cycle concept in the execution of the following aspects in your organisation? (“1” would indicate that the aspect is not important at all and “5” would indicate that the aspect is extremely important).

The aspects, which are regarded as important as associated with the application of the product life cycle concept, are illustrated in Table 7.8.

Table 7.8: Aspects of importance in the application of the PLC concept

Aspect	*N	Mean	Top-box score	Low-box score	Standard deviation
V22. Buying	22	4.70	75.56%	0.00%	0.56
V23. Costing	22	4.32	54.44%	0.00%	0.87
V24. Forecasting	22	3.61	26.97%	1.12%	1.05
V25. Manufacturing	22	2.68	26.97%	25.84%	1.54
V26. Product development	22	3.03	27.59%	14.94%	1.38
V27. Pricing	22	4.56	70.00%	1.11%	0.80
V28. Distribution	22	4.23	48.89%	0.00%	0.87
V29. Advertising	22	4.17	47.78%	1.11%	0.94
V30. Sales promotion	22	4.16	48.89%	3.33%	1.04
V31. Monitoring market share	22	3.26	15.56%	5.56%	1.07
V32. Competitive evaluation	22	3.91	33.33%	1.11%	0.95
V33. Managing brands	22	3.60	32.22%	8.89%	1.27
V34. Allocating resources	22	3.83	31.11%	1.11%	1.03

* N = the number of respondents who answered the question

Buying (V22) is indicated by the total realised sample to be the most important aspect when applying the product life cycle concept as shown by a mean score of 4.70, a top-box score of 75.56% (respondents who selected "extremely important") and a standard deviation of 0.56 depicted in Table 7.8. Buying (V22), as the most important application area of the product life cycle concept, is followed by pricing (V27) and costing (V23) with mean scores of 4.56 and 4.32 and top-box scores of 70.00% and 54.44% respectively. The low-box scores depicted in Table 7.8 indicate that results vary between 0.00% and 25.84%.

The standard deviation of buying (V22) is the lowest of all the aspects. One can conclude that the sample was the most homogeneous on the importance of buying as an aspect in the application of the PLC.

Manufacturing (V25) had the highest standard deviation (1.54) as depicted in Table 7.8 and the sample responses are, therefore, the most heterogeneous on the importance of manufacturing in the application of the PLC concept. This deduction should be treated with caution as the respondents being manufacturers might have considered this as a usual routine and the other aspects as more of a concern.

Product development (V26) with a mean score of 3.03 (top-box score 27.59%) and monitoring marketing share (V31) with a mean score of 3.26 (top-box score 15.56%) seemed to be the least important aspects when applying the product life cycle concept.

The main finding is that small manufacturer organisations in Northern Cyprus see buying, pricing and costing as the most important aspects while they see product development and monitoring market share as the least important aspects when applying the product life cycle concept.

(b) Question 7

Name three aspects that provide a competitive advantage for your organisation?

Competitive advantage is an organisation's ability to perform in one or more ways that competitors will not or cannot match (Kotler, 2000: 316). It was revealed in the literature

study in chapter two that the product life cycle concept is an important aspect to create a competitive advantage and is realised through the organisation's marketing strategy, the implementation thereof and the context in which competition unfolds.

This question resulted in 28 reasons for achieving a competitive advantage and these reasons are shown in Table 7.9. The reasons include marketing strategy elements for competitive advantage as discussed in chapter two. Marketing mix instruments are dominant aspects together with core competencies, resources, management and relationships with major stakeholders. Table 7.9 depicts the various marketing mix instruments that are used to create a competitive advantage for the small manufacturing organisations.

Table 7.9: Factors providing a competitive advantage

Aspect	Frequency	
	Manufacturers	
	Number	Percentage
1. Price	8	12.90%
2. Delivery	1	1.61%
3. Supply (reliability/relationship)	2	3.23%
4. Manufacturing process	2	3.23%
5. Distribution	6	9.68%
6. Brand	1	1.61%
7. Buyer relationships	2	3.23%
8. Quality	7	11.30%
9. Service quality	4	6.45%
10. Advertising	1	1.61%
11. Government support	3	4.84%
12. Few competitors	3	4.84%
13. Management	2	3.23%
14. Large target market	2	3.23%
15. Good industry relationships	2	3.23%
16. Customer relationships	2	3.23%
17. Specialists	2	3.23%
18. Reputation	1	1.61%
19. Customer base	1	1.61%
20. Well-trained staff	2	3.23%
21. Resource allocation	1	1.61%
22. Competitive evaluation	1	1.61%
23. Sales promotion	1	1.61%
24. Quality control	1	1.61%
25. Good value for money	1	1.61%
26. Strong marketing ability	1	1.61%
27. After sales support	1	1.61%
28. Costing	1	1.61%
TOTAL*	62	100%

* The total reflects more than the total sample because of multiple mentions

The following list of marketing mix related aspects as depicted in 7.10 together with the appropriate frequencies are derived from Table 7.9:

Table 7.10 Marketing mix instruments and marketing related aspects responsible for providing a competitive advantage

Marketing mix instrument	Marketing related aspects	Frequency
Product	Quality (no.8) (11.30%), Brand (no. 6) (1.61%)	12.91%
Price	Price (no. 1) (12.90%), Good value for money (no. 24) (1.61%)	14.51%
Place	Distribution (no. 5) (9.68%)	9.68%
Promotion	Advertising (no. 10) (1.61%), (Sales promotion (no. 22) (1.61%)	3.22%
People	Well-trained staff (no. 19) (3.23%)	3.23%
Processes	Manufacturing process (no. 4) (3.23%), Quality control (no. 23) (1.61%), after sales support (no. 26) (1.61%)	6.45%
Physical evidence	Reputation (no. 18) (1.61%)	1.61%

It is evident from table 7.10 that marketing decision-makers of small manufacturers in Northern Cyprus can identify aspects providing a competitive advantage to their respective organisations. These marketing related aspects can be related to all seven marketing mix instruments as illustrated in Table 7.10. Price (14.51%) is the most popular marketing related aspect responsible for providing a competitive advantage as depicted in Table 7.10.

The main finding is that price (14.51%) is the major aspect responsible for creating a competitive advantage as reported by the total sample.

Collectively, product (12.91%), after price, is the marketing mix instrument with the most associated marketing related aspects and physical evidence (1.61%) is the marketing mix instrument with the least associated marketing related aspects.

The main finding is that price (14.51%) and product (12.91%) are the most important marketing mix instruments for creating a competitive advantage based on the collective summation of marketing related aspects as reported by the total sample.

Other reasons (excluding the Marketing mix instruments) for providing a competitive advantage are listed in Table 7.11:

Table 7.11 Other marketing related aspects responsible for providing a competitive advantage

Marketing related aspects	Description of the marketing related aspects	Frequency
Relationships	Supply reliability/relationship (no.3) (3.23%), Buyer relationships (No. 7) (3.23%), Good industry relationships (no. 15) (3.23%), Customer relationships (no. 16) (3.23%)	12.92%
Competition	Competitive evaluation (no. 21) (1.61%)	1.61%
Costing	Costing (no.27) (1.61%)	1.61%

The main finding is that relationships (12.92%) are the most important other marketing mix related aspect creating a competitive advantage (more important than place, promotion, people, processes and physical evidence) as reported by the total sample.

The marketing related aspects depicted in Table 7.10 and Table 7.11 were revealed in the literature study in chapter three, but it is, however, surprising that the product life cycle concept as such is not mentioned as one of the aspects responsible for creating a competitive advantage. It is assumed that respondents (marketing decision-makers) know of and apply the product life cycle concept but focused on the result of using the PLC and not the PLC as a means in decision-making to create an advantage.

(c) Question 8

Indicate the nature of your product assortment.

Apart from the size of the organisation this study sought to reveal the range of the product assortment among organisations in Northern Cyprus as illustrated by the percentage distribution in Table 7.12.

Table 7.12 The nature of product assortment

Nature of product assortment	Total frequency	
	Number	Percentage
Single product	3	13.63%
One product range	6	27.27%
Multiple product ranges	13	59.09%
TOTAL	N = 22	100%

The Table 7.12 shows that a majority (59.09%) of all small organisations in Northern Cyprus have multiple product ranges, followed by 27.27% with one product range and 13.63% with a single product.

The main finding is that small manufacturing organisations in Northern Cyprus have mostly multiple product ranges, less one product ranges and the least single products.

(d) Question 9

If you have **multiple product ranges**, will you apply the PLC concept on each individual product within each product range?

It was assumed that organisations, which indicated that they have either a single product or a one-product range, do apply the PLC concept for each product. They were, therefore, not required to answer question 9.

This question was compulsory for the 13 manufacturers who indicated in question 8 (Table 7.12) that they have multiple product ranges. Table 7.13 provide responses of organisations who answered yes or no.

Table 7.13: Application of the PLC on each individual product within each product range

Application of the PLC	Frequency	Percentage
Yes	6	46.15%
No	7	53.85%
TOTAL	13	100%

Table 7.13 indicates that there is almost an equal distribution in the use and non-use of the product life cycle concept on each individual product within each product range.

The main finding is that less than half of the marketing decision-makers in manufacturing organisations that have indicated they have multiple product ranges apply the product life cycle concept on each individual product within each product range.

(e) Question 10

In what phase of the product life cycle concept is your primary product positioned? **The primary product can be regarded as the best selling product or product range in your organisation.**

It was important for this study to measure the marketing decision-makers' ability to identify the phase in which their primary products or product range (best seller) are positioned.

Table 7.14 indicates the positioning of the primary products (best sellers) in each phase of the product life cycle.

Table 7.14 Positioning of primary product in each PLC phase for the total sample

PLC phase	Frequency	Percentage
Introductory phase	2	9.09%
Growth phase	10	45.45%
Maturity phase	9	40.91%
Decline phase	1	4.55%
TOTAL	N = 22	100%

Table 7.14 indicates that 45.45% of the primary products or product ranges (best sellers) are positioned by the marketing decision-makers of manufacturers to be in the growth phase of the product life cycle.

Apart from this high positioning in the growth phase of the product life cycle, 40.91% of marketing decision-makers positioned their best sellers in the maturity phase of the product life cycle. A low percentage of best sellers are positioned in the introductory (9.09%) and decline (4.55%) phases of the product life cycle.

The main finding is that 45.45% of the marketing decision-makers in small manufacturing organisations indicated that their primary products or best sellers are positioned in the growth phase of their product life cycles.

Three interrelated questions following on question 10 were asked:

- **Question 10.1** was formulated to reveal a **description** of the primary product or product range (best seller).
- **Question 10.2** was formulated to reveal **reasons** why the primary product or product range was identified as the best seller.
- **Question 10.3** was formulated to reveal the ability of marketing decision-makers to identify the subsequent **marketing objective** of their best sellers in the identified product life cycle phases.

(i) **Question 10.1**

Provide a short description of your primary product/product range.

Question 10.1 is closely related to question 10 as marketing decision-makers of manufactures in Northern Cyprus were asked to describe their primary products or product ranges. Table 7.15 provides the verbatim response from manufacturers of a description of their primary products or product range.

Table 7.15 Verbatim representation of primary products of small manufacturers

Small manufacturers
Cheap casual wear, T-shirts, sports-wear, Turkish coffee, daily newspaper, office stationery, sanitary papers, shampoo, washing detergents, office furniture, isolation for roofing, cables and accessories, bread, ice-cream, cakes and pastries, flour.

The information in Table 7.15 was deemed necessary to illustrate the nature and broad type of products of the manufacturers included in the study. It is evident from Table 7.15 that most of the organisations' best sellers can be related to their core business.

(ii) Question 10.2

Provide a **reason(s)** why this product or product range is your best seller.

Table 7.16 illustrates the reasons why small manufacturers regarded their products or product ranges as best sellers.

Table 7.16 Reasons why primary products or product ranges are best sellers

Reasons	Frequency	
	Manufacturers	
	Number	Percentage
1. Easy to use product	1	4.17%
2. Quality	3	12.5%
3. Cheap local alternative	1	4.17%
4. Price	4	16.67%
5. Few competitors	2	8.33%
6. Demand	2	8.33%
7. A price quality relationship	1	4.17%
8. Few manufacturers	1	4.17%
9. A necessity product	6	25.00%
10. Low cost	2	8.33%
11. Sales incentives	1	4.17%
TOTAL*	24	100%

* The total exceeds 22 responses because more than one reason was mentioned in some instances

Product necessity (no. 9) with a total frequency of 25.00% is the most popular reason for the best seller, followed by price (no. 4) 16.67%, and quality (no. 2) 12.5% as shown in Table 7.16.

The reasons for best sellers exposed in Table 7.16 indicate that marketing decision-makers of manufacturing organisations in Northern Cyprus mentioned marketing related reasons as primary reasons for creating best sellers. The necessity for a product (no. 9), price (no. 4), quality (no. 2) is prominent marketing related reasons.

The total frequency of demand (no. 6) 8.33% is surprising, as the best seller is the result of demand and demand is not the reason for a best seller. A possible misunderstanding by some respondents is suggested.

The main finding is that the majority of the marketing decision-makers in manufacturing organisations indicated that necessity of the product is the primary reason for individual products or product ranges to be best sellers, followed by price.

(iii) Question 10.3

Describe the marketing objective for the primary product or product range in the product life cycle phase indicated in Q10.

Marketing decision-makers of manufacturers in Northern Cyprus described the PLC position of their primary product and/or product ranges (best sellers) within the PLC phase indicated in question 10 (Table 7.14). It is important to reiterate that 45.45% of the best sellers are positioned in the growth phase of the product life cycle, followed by 40.91% in the maturity phase, 9.09% in the introductory phase and 4.55% in the decline phase.

Table 7.17 presents marketing objectives for the primary products in the different PLC phases as mentioned by the marketing decision-makers in small manufacturing organisations.

Table 7.17 Marketing objectives for primary products or product ranges in the PLC phases

Marketing objectives	Product life cycle phase				Total
	Introductory phase	Growth phase	Maturity phase	Decline phase	
1. High/maximum sales	3.13%	20.31%	10.93%	0.78%	35.15%
2. Low price	0.00%	5.47%	6.26%	0.00%	11.73%
3. Build on solid introduction	0.00%	0.78%	0.00%	0.00%	0.78%
4. Use brand image	0.00%	0.00%	2.34%	0.00%	2.34%
5. Sufficient stock levels	0.00%	0.00%	0.78%	0.00%	0.78%
6. Product range and variety	0.00%	0.78%	1.56%	0.00%	2.34%
7. Meet the demand	0.00%	2.34%	0.78%	0.00%	3.13%
8. Intensive marketing	0.78%	0.00%	0.00%	0.00%	0.78%
9. Better buyer relationships	0.00%	0.78%	0.00%	0.00%	0.78%
10. Quality	0.00%	3.13%	0.00%	0.00%	3.13%
11. Maximum profit	0.00%	0.78%	2.34%	0.00%	3.13%
12. Keep current customers happy	0.00%	0.00%	0.78%	0.00%	0.78%
13. Exploit niche markets	0.00%	0.78%	0.00%	0.00%	0.78%
14. High or increased market share	0.00%	0.78%	0.00%	0.00%	0.78%
15. Low mark-up	0.78%	1.56%	0.00%	0.00%	2.34%
16. Customer retention	0.00%	3.91%	4.69%	0.00%	8.60%
17. Repeat purchases	0.00%	0.00%	0.78%	0.00%	0.78%
18. Increased advertising and promotion	1.56%	3.13%	2.34%	0.78%	7.81%
19. Customer acquisition	0.00%	0.78%	0.78%	0.00%	1.56%
20. Customer support	0.78%	1.56%	0.00%	0.00%	2.34%
21. Evaluating the product	0.00%	0.00%	0.00%	0.78%	0.78%
22. Service	0.00%	0.78%	0.00%	0.00%	0.78%
23. High return on investment (ROI)	0.00%	0.78%	0.00%	0.00%	0.78%
24. High profits	0.00%	0.78%	0.78%	0.00%	1.56%
25. Product awareness	0.78%	0.00%	0.00%	0.00%	0.78%
26. Intense competition	0.00%	1.56%	0.00%	0.00%	1.56%
27. Word-of-mouth/referrals	0.00%	0.00%	1.56%	0.00%	1.56%
28. Distribution	0.00%	0.78%	0.00%	0.00%	0.78%
29. Warranties	0.00%	1.56%	0.00%	0.00%	1.56%
TOTAL	7.81%	53.13%	36.72%	2.34%	100%

Table 7.17 indicates 29 marketing objectives provided by marketing decision makers on an open-ended response format and it yielded an allocation of 7.18% of the marketing objectives to the introductory phase, 53.13% to the growth phase, 36.72% to the maturity phase and 2.34% to the decline phase. High/maximum sales is the marketing objective with the highest

frequency in each of the four PLC phases – 3.13% in the introductory phase, 20.32% in the growth phase, 10.93 in the maturity phase and 0.78% in the decline phase. It is important to note that increased advertising and promotion (no. 18) and evaluating the product (no 21) also achieved a frequency of 0.78% in the decline phase.

The most important marketing objectives (highest frequencies) revealed by the respondents in each PLC phase are:

- Introductory phase – high/maximum sales (no. 1) 3.13%, increased advertising and sales promotion (no. 18) 1.56%.
- Growth phase – High/maximum sales (no. 1) 20.31%, low price (no. 2) 5.47% and customer retention (no. 16) 3.91%.
- Maturity phase – high/maximum sales (no. 1) 10.93%, low price (no. 2) 6.26% and customer retention (no. 16) 4.68%.
- Decline phase – High/maximum sales (no. 1) and increased advertising and sales promotion (no. 18) and evaluating the product (no. 21) 0.78% respectively. The frequency is very low and must be viewed as not too an important finding.

The main finding is that marketing decision-makers in small manufacturing organisations provided primary objectives in each PLC phase: high/maximum sales, increased advertising and sales promotion in the introductory phase, high/maximum sales and low price in the growth and maturity phases respectively and high/maximum sales, increased advertising and sales promotion and evaluation the product in the decline phase.

It is important to mention that by observing the above-mentioned marketing objectives, one can assume that the respondents confused marketing objectives with strategies because some of the “objectives” can be regarded as strategies (e.g. increase advertising). The main finding should, therefore, be treated with some caution.

7.4.3 Section C

The purpose of Section C was to mainly focus on how, and how often small manufacturers in Northern Cyprus engage in strategic planning and development. This section, furthermore, wanted to reveal the extent to which small manufacturers use the PLC concept in strategic planning and development and the subsequent control they have over the marketing mix instruments. The following results provide the necessary information on marketing strategy planning and development and control over marketing mix elements.

(a) Question 11

Does your organisation engage in **strategic marketing planning and development** using the product life cycle phases?

Table 7.18 provides the answer to what extent the PLC phases are used for strategic marketing planning and development purposes:

Table 7.18. Strategic marketing planning and development by using the product life cycle phases

Strategic planning and development by using the PLC	Frequency	Percentage
Yes	70	76.09%
No	22	23.91%
TOTAL	N = 22	100

Seventy-six percent of the respondents indicated that they use the PLC phases when they engage in strategic planning and development.

The main finding is that more than three-quarters of manufacturing organisations in Northern Cyprus engage in strategic marketing planning and development by using the product life cycle phases.

(b) Question 12

If yes on Question 11, how often does your organisation do strategic marketing planning and development?

Manufactures in Northern Cyprus engage in strategic marketing and planning on an annual basis in 54.55% of all cases as depicted in Table 7.19. The result in Table 7.19 shows that small manufacturers in Northern Cyprus engage in strategic marketing and planning on a six monthly basis or less in 31.82% of all cases as indicated by the cumulative percentage.

Table 7.19: Involvement in strategic marketing planning and development for the total sample

Engagement occurrence	Frequency	Percentage	Cumulative percentage
Monthly	3	13.64%	13.64%
Six monthly	4	18.18%	31.82%
Annually	12	54.55%	86.37%
Other (more than 12 months)	3	13.64%	100%
TOTAL	22	100%	-

One can deduce that small manufacturers in Northern Cyprus realise the importance of adapting to the fast pace of developments and changes in the external environment as described in the theory on the strategic audit and SWOT analysis in chapter two.

The main finding is that small manufacturing organisations in Northern Cyprus do strategic planning and development on an annual basis or less frequently.

(c) Question 13

To what extent does the product life cycle concept influence **marketing strategy planning and development** in your organisation? ("1" would indicate a very low influence and "5" an extremely high influence).

The extent of influence by the PLC on marketing strategy and planning is illustrated in Table 7.20.

Table 7.20 Influence of the PLC concept on marketing strategy planning and development for the total sample

Extent of influence	Frequency	Percentage	Cumulative percentage
1	0	0.00%	0.00%
2	2	9.09%	9.09%
3	9	40.91%	50%
4	8	36.36%	86.36%
5	3	13.64%	100%
TOTAL	N = 22	100%	-

Mean from the sample = 3.55

From table 7.20 it can be seen that 9.09% (2) of the respondents indicated a relatively low influence of the PLC concept on marketing strategy planning and development.

The marketing strategy planning process and development is to a very high extent influenced by the product life cycle concept as indicated by the mean score of 3.55 for the total sample as reported in Table 7.20. A high percentage (90.91%) of decision makers in manufacturing organisations indicated an average to above average extent of influence by the PLC concept on strategic marketing planning and development.

The main finding is that 91% of manufacturing organisations in Northern Cyprus indicated that the product life cycle influences marketing strategy and development from an average to an above average extent.

(d) Question 14

What degree of control does your organisation have over the marketing mix instruments? ("1" would indicate no degree of control and "5" would indicate a full degree of control).

This question was extended to reveal the degree of control that marketing decision-makers in organisations have over the marketing mix instruments. Table 7.21 indicates that the respondents have the best control over product (V53) as a marketing mix instrument depicted by a mean score of 4.30, followed by people (V57) 4.29, place (V55) 4.13, price (V54) 3.09, promotion (V56) 4.08, processes (V58) 4.05 and physical evidence (V59) 3.91.

Table 7.21: Degree of control over the marketing mix instruments for the total sample

Marketing mix instruments	Frequency	Mean	Top-box score	Low-box score	Standard deviation
V53. Product	22	4.30	54.35%	2.17%	0.94
V54. Price	22	4.09	41.30%	0.00%	0.91
V55. Place	22	4.13	35.87%	0.00%	0.84
V56. Promotion	22	4.08	38.04%	1.09%	0.90
V57. People	22	4.29	48.91%	0.00%	0.83
V58. Processes	22	4.05	39.13%	0.00%	0.98
V59. Physical evidence	22	3.91	36.96%	0.00%	1.05

A majority of 54.35% (top-box score) of the total sample indicated that they have full control over product (V53) as a marketing mix instrument, followed by control over people (V57) (48.91), price (V54) (41.30%), processes (V58) (39.13%), promotion (V56) (38.04%), physical evidence (V59) (36.96%) and place (V55) (35.87%).

If the standard deviations in Table 7.21 are analysed, then the respondents in the sample were the most heterogeneous on physical evidence (V59) when compared to the standard deviations on the other marketing mix instruments.

The result depicted in Table 21 is further strengthened by low-box scores of 0.00% for price (V54), place (V55), people (V57), processes (V58), and physical evidence (V59) as well as the relatively low scores for product (2.17%) and promotion (1.09%) indicating that few manufacturers in the sample have no degree of control over their marketing mix instruments.

The main finding is that small manufacturing organisations have a good degree of control over the marketing mix instruments and highest degree of control over the product element.

(e) Question 15

How important is each of the following aspects* when you associate them with the four phases of the product life cycle. ("1" would indicate that the aspect is not important at all and a "5" would indicate that the aspect is extremely important).

* Aspects are listed in the questionnaire in Appendix 1 as people, processes, and physical evidence.

Marketing decision-makers in manufacturing organisations rated the importance of marketing mix related aspects of people, processes and physical evidence within each product life cycle phase. (In question 19, marketing decision-makers had the opportunity to rate the importance of marketing mix related aspects on product, price, place and promotion within each product

life cycle phase). With the result of these two questions this study endeavours to develop marketing mix related aspects that can be associated with each PLC phase.

The importance of the marketing mix instrument related aspects regarding the expanded marketing mix instruments of people, processes and physical evidence in the various product life cycle phases are illustrated in Table 7.22 (introductory phase), Table 7.23 (growth phase), Table 7.24 (maturity phase) and Table 7.25 (decline phase). The importance of the aspects in the introductory phase of the PLC shown in Table 7.22 will now be discussed.

Table 7.22: The importance of marketing mix related aspects (people, processes and physical evidence) in the introductory phase of the PLC.

Marketing mix instrument	Introductory phase					
	Aspects	Responses	Mean	Top-box score	Low-box score	Standard deviation
People	77. Training of personnel	22	4.49	62.64%	0.00%	0.76
	81. Incentives to personnel	22	4.61	68.13%	0.00%	0.61
	85. Knowledge of personnel	22	4.26	47.25%	0.00%	0.81
	89. Commitment of personnel	22	3.93	40.66%	3.30%	1.13
Processes	93. Information systems	22	3.76	31.11%	7.78%	1.20
	97. Complaints handling	22	3.95	31.82%	1.14%	0.92
	101. Toll free number	22	4.04	32.58%	1.12%	0.83
	105. Policies and procedures	22	4.05	36.36%	1.14%	0.92
Physical evidence	109. Organisation's reputation	22	4.76	82.22%	0.00%	0.56
	113. Organisation's name	22	4.82	84.44%	0.00%	0.43
	117. Organisation's logo	22	4.81	82.22%	1.11%	0.42
	121. Corporate dress (appearance of employees)	22	4.68	74.44%	0.00%	0.57

The results in Table 7.22 indicate that the respondents regard incentives to personnel (no. 81) as the most important people aspect in the introductory phase of the product life cycle with a

mean score of 4.61 and a top-box score of 68.31% and a low-box score of 0.00%. When the standard deviations in Table 7.22 on all aspects tested are compared, then the standard deviations of 1.13 on commitment of personnel (no. 89) and 1.20 on information systems (no. 93) are indicative of higher heterogeneity.

The main finding is that marketing decision-makers in small manufacturing organisations in Northern Cyprus regard incentives to personnel as the most important people aspects in the introductory phase of the PLC.

Policies and procedures (V105) (4.05) and the organisation name (no. 113) 4.82 are regarded as the most important with regard to process and physical evidence elements respectively

The main finding is that policies and procedures are regarded by marketing decision-makers in small manufacturing organisations in Northern Cyprus as the most important process aspect in the introductory phase of the PLC.

The highest top-box score of 84.44% was achieved by the organisation's name (no. 113) as a physical evidence aspect. A very positive result is indicated by the low-box scores of 0.00% on various aspects as depicted in Table 7.22.

Another main finding is that the organisation's name is regarded by marketing decision-makers in small manufacturing organisations in Northern Cyprus as the most important physical evidence aspect in the introductory phase of the PLC.

Table 7.23 provides a similar analysis on the importance of marketing mix related aspects for the sample in the growth phase of the product life cycle.

Table 7.23: The importance of marketing mix related aspects (people, processes and physical evidence) in the growth phase of the PLC

Marketing mix instrument	Growth phase					
	Aspects	Responses	Mean	Top-box score	Low-box score	Standard deviation
People	78. Training of personnel	22	3.79	41.76%	2.20%	1.23
	82. Incentives to personnel	22	4.08	43.96%	1.10%	0.96
	86. Knowledge of personnel	22	3.94	33.33%	1.11%	0.94
	90. Commitment of personnel	22	3.74	30.77%	1.10%	1.04
Processes	94. Information systems	22	4.24	55.56%	1.11%	1.03
	98. Complaints handling	22	4.44	61.11%	3.33%	0.80
	102. Toll free number	22	4.34	52.22%	3.33%	0.80
	106. Policies and procedures	22	4.28	53.33%	0.00%	0.90
Physical evidence	110. Organisation's reputation	22	4.08	43.33%	1.11%	0.99
	114. Organisation's name	22	4.10	43.33%	1.11%	0.94
	118. Organisation's logo	22	4.20	47.78%	1.11%	0.90
	122. Corporate dress (appearance of employees)	22	4.08	43.33%	2.22%	0.97

Table 7.23 indicates that the respondents regard incentives to personnel (no. 82) as the most important people aspect with a mean score of 4.08, a top-box score of 43.96% and a low-box score of 1.10% in the growth phase of the product life cycle. Complaints handling (no. 98) with a mean score of 4.44 and a toll free number (no. 102) with a mean score of 4.34 were the most important process aspects. The organisation's logo (no. 118) with a mean score of 4.20 and organisation's name (no. 114) 4.10 are regarded as the most important physical evidence aspects. The highest top-box score of 55.56% was achieved by the information systems as a process aspect.

The low-box scores of between 0.00% and 3.33% on various aspects as depicted in Table 7.23 are very positive results because the majority of the respondents regarded the aspects as relatively important (lowest mean score was 3.74).

The main finding is that marketing decision-makers in small manufacturing organisations in Northern Cyprus regard incentives to personnel as the most important people aspect in the growth phase of the PLC.

Another main finding is that marketing decision-makers in small manufacturing organisations in Northern Cyprus regard complaints handling (followed by a toll free number) as the most important process aspects in the growth phase of the PLC.

The last main finding from Table 7.23 is that marketing decision-makers in small manufacturing organisations in Northern Cyprus the organisation's logo as the most important physical evidence aspect in the growth phase of the PLC, followed by the organisation's name.

If the standard deviations in Table 7.23 on all aspects tested are compared, then the standard deviations on training of personnel (no. 78) of 1.23, commitment of personnel (no. 90) of 1.04 and on information systems (no. 94) of 1.03 are indicative of a higher heterogeneity.

Table 7.23 provides an analysis on the importance of marketing mix related aspects for the sample in the maturity phase of the product life cycle.

Table 7.23 indicates that the respondents regard incentives to personnel (no. 83) as the most important people aspect with a mean score of 4.24, a top-box score of 50.55% and a low-box score of 1.10% in the maturity phase of the product life cycle. This is followed by the training of personnel (no. 79) with a mean score of 4.14.

Complaints handling (no. 99) (2.66), the organisation's logo (no. 119) (3.86) and the organisation's name (no. 115) (3.83) are regarded as the most important process and physical evidence aspects relatively.

Table 7.24 illustrates an analysis on the importance of marketing mix related aspects for the sample in the maturity phase of the product life cycle.

Table 7.24: The importance of marketing mix related aspects (people, processes and physical evidence) in the maturity phase of the PLC

Marketing mix instrument	Maturity phase					
	Aspects	Responses	Mean	Top-box score	Low-box score	Standard deviation
People	79. Training of personnel	22	4.14	51.65%	1.10%	1.06
	83. Incentives to personnel	22	4.24	50.55%	1.10%	0.89
	87. Knowledge of personnel	22	4.12	41.76%	1.10%	0.89
	91. Commitment of personnel	22	4.03	42.86%	1.10%	1.00
Processes	95. Information systems	22	2.56	17.78%	35.56%	1.49
	99. Complaints handling	22	2.66	15.56%	26.67%	1.40
	103. Toll free number	22	2.63	13.33%	28.89%	1.37
	107. Policies and procedures	22	2.63	13.33%	30.00%	1.40
Physical evidence	111. Organisation's reputation	22	3.76	33.33%	7.78%	1.19
	115. Organisation's name	22	3.83	33.33%	4.44%	1.07
	119. Organisation's logo	22	3.86	35.56%	4.44%	1.08
	123. Corporate dress (appearance of employees)	22	3.78	33.33%	5.56%	1.11

The highest mean score of 2.66 on complaints handling (no. 99) in the maturity phase is relatively low when compared to the highest mean scores for people (4.24) and physical evidence (3.86). The highest top-box score of 50.55% was achieved by the incentives to personnel (no. 83) as a people aspect. The low-box scores in Table 7.24 on all the information system aspects (no. 95) are somewhat surprising because one would have expected information systems to be considered important, but it can be assumed that information systems are already established and working well.

The main finding is that marketing decision-makers in small manufacturing organisations in Northern Cyprus regard incentives to personnel as the most important people aspect in the maturity phase of the PLC, followed by training of personnel.

Another main finding is that marketing decision-makers in small manufacturing organisations in Northern Cyprus regard complaints handling as the most important process aspect in the maturity phase of the PLC (although the mean score was relatively low).

The high standard deviations on processes and physical evidence depicted in Table 7.24 are an indication that the sample is less homogeneous on the aspects pertaining to these marketing mix instruments than on the aspects related to people.

The last main finding from Table 7.24 is that marketing decision-makers in small manufacturing organisations in Northern Cyprus regard the organisation's logo as the most important physical evidence aspect in the maturity phase of the PLC, followed by the organisation's name.

Table 7.25 illustrates a similar analysis on the importance of marketing mix related aspects for the sample in the decline phase of the product life cycle.

Table 7.25: The importance of marketing mix related aspects (people, processes and physical evidence) in the decline phase of the PLC

Marketing mix instrument	Decline phase					
	Aspects	Responses	Mean	Top-box score	Low-box score	Standard deviation
People	80. Training of personnel	22	4.56	64.84%	1.10%	0.67
	84. Incentives to personnel	22	4.59	59.34%	0.00%	0.49
	88. Knowledge of personnel	22	4.45	51.11%	0.00%	0.60
	92. Commitment of personnel	22	4.28	49.45%	1.10%	0.63
Processes	96. Information systems	22	4.12	38.89%	1.11%	0.87
	100. Complaints handling	22	4.25	47.19%	1.12%	0.85
	104. Toll free number	22	4.30	47.78%	1.11%	0.81
	108. Policies and procedures	22	4.19	42.70%	1.12%	0.86
Physical evidence	112. Organisation's reputation	22	3.97	45.05%	4.40%	1.16
	116. Organisation's name	22	4.07	47.25%	2.20%	1.08
	120. Organisation's logo	22	4.08	47.25%	2.20%	1.07
	124. Corporate dress (appearance of employees)	22	4.04	43.96%	2.20%	1.08

Table 7.25 indicates that the respondents regard incentives to personnel (no. 84) (4.59) as the most important people aspects and training of personnel (no. 80) (4.56) as the second most important people aspects in the decline phase of the product life cycle. This is closely followed by the knowledge of personnel (no. 88) with a mean score of 4.45. A toll free number (no. 104) (4.30) and complaints handling (no. 100) (4.25) are viewed as very important process aspects. The organisation's logo (no. 120) (4.08) and organisation's name (no. 116) (4.07) are

regarded as the most important physical evidence aspects. The highest top-box score of 64.84% was achieved by the training of personnel (no. 80) as a people aspect.

The low-box scores of between 0.00% and 4.40% on all the aspects as depicted in Table 7.25 are very positive because the majority regarded all aspects as relatively important (lowest mean score 3.97).

The high standard deviations on physical evidence shown in Table 7.25 are an indication that the sample is less homogeneous on the aspects pertaining to this marketing mix instrument's aspects than on the aspects pertaining to people and processes.

The main finding is that marketing decision-makers in small manufacturing organisations in Northern Cyprus regard incentives to personnel as the most important people aspect in the decline phase of the PLC, followed by the training of personnel.

Another main finding is that marketing decision-makers in small manufacturing organisations in Northern Cyprus regard a toll free number as the most important process aspect in the decline phase of the PLC, followed by the organisation's name.

The last main finding from Table 7.25 is that marketing decision-makers in small manufacturing organisations in Northern Cyprus regard the organisation's logo as the most important physical evidence aspect in the decline phase of the PLC although the organisation's name had virtually the same importance.

Tables 7.22 to 7.25 illustrated the importance of the three expanded marketing mix instruments in the product life cycle phases and their related aspects. A summarised representation across all four of the product life cycle phases on each of the expanded marketing mix instruments is provided in Table 7.26.

Table 7.26: The importance of marketing mix related aspects in the various PLC phases

Marketing mix instrument	Aspect	Mean values per PLC phase			
		Introductory	Growth	Maturity	Decline
People	(77-80) Training of personnel	4.49	3.79	4.14	4.56
	(81-84) Incentives to personnel	4.61	4.08	4.24	4.59
	(85-88) Knowledge of personnel	4.26	3.94	4.12	4.45
	(89-92) Commitment of personnel	3.93	3.74	4.03	4.28
Processes	(93-96) Information systems	3.76	4.24	2.56	4.12
	(93-96) Complaints handling	3.95	4.44	2.66	4.25
	(97-100) Toll free number	4.04	4.34	2.63	4.30
	(101-104) Policies and procedures	4.05	4.28	2.63	4.19
Physical evidence	(105-108) Organisation's reputation	4.76	4.08	3.76	3.97
	(109-112) Organisation's name	4.82	4.10	3.83	4.07
	(113-116) Organisation's logo	4.81	4.10	3.86	4.08
	(121-124) Corporate dress (appearance of employees)	4.68	4.08	3.78	4.04

Table 7.26 reiterates the interpretation and deductions made from Tables 7.22 to 7.25 and illustrates the high mean scores on the importance of all the marketing aspects except the low mean scores on all marketing mix aspects for processes in the maturity phase as highlighted.

The main finding is that all the marketing mix related aspects pertaining to people, processes and the physical evidence mix are important except for the marketing mix aspects linked to processes in the maturity phase.

Table 7.27 provides a summary of the mean values per marketing mix instrument.

Table 7.27: Importance of the three expanded marketing mix instruments

Marketing mix instrument	Mean
People (no 77-92)	4.36
Processes (no 93-108)	3.74
Physical evidence (no 109-124)	4.07

It is evident that the mean values on the importance of the marketing mix instruments based on certain aspects are all above average as depicted in Table 7.27. Processes have the lowest mean value of 3.74 and people have the highest mean value of 4.36. A similar analysis will be conducted on the marketing mix aspects for the other 4Ps, namely product, price, place and promotion in question 19.

The main finding is that marketing decision-makers in the sample attached high importance to the people, processes and physical evidence (expanded marketing mix) across all four phases of the product life cycle concept.

It is important to determine how the mean values for each marketing mix instrument compare in all four PLC phases. Table 7.28 illustrates the importance of each marketing mix instrument in the different PLC phases based on mean values.

The mean values depicted in Table 7.28 are indicative of the high importance given to the expanded marketing mix instruments in all the PLC phases. The standard deviations depicted

in Table 7.28 are indicative of heterogeneity on the importance of aspects pertaining to people, processes and physical evidence.

Table 7.28: The importance of the marketing mix instruments in the different PLC phases

	PLC phase	Mean	Standard deviation
People	Introductory	4.32	0.75
	Growth	3.88	0.57
	Maturity	4.13	0.59
	Decline	4.47	0.71
Processes	Introductory	3.95	0.92
	Growth	4.32	0.74
	Maturity	2.62	0.66
	Decline	4.21	0.70
Physical evidence	Introductory	4.76	0.78
	Growth	4.09	0.71
	Maturity	3.80	0.70
	Decline	4.04	0.74

If the mean values in table 7.28 on the marketing mix aspects are compared among the four PLC phases, then:

- **Physical evidence (4.76)** is the most important marketing mix instrument in the introductory phase of the PLC,
- **Processes (4.32)** is the most important marketing mix instrument in the growth phase of the PLC,

- **People (4.13)** is the most important marketing mix instrument in the maturity phase of the PLC, and
- **People (4.47)** is the most important marketing mix instrument in the decline phase of the PLC.

The main finding is that marketing decision-makers regard physical evidence as the most important marketing mix instrument in the introductory phase of the product life cycle.

Another main finding is that marketing decision-makers regard processes as the most important marketing mix instrument in the growth phase of the product life cycle.

The last main finding from Table 7.28 is that marketing decision-makers regard people as the most important marketing mix instrument in both the maturity and decline phase of the product life cycle.

(f) **Question 16**

Provide a short description of the appropriate marketing objective that you would associate within each phase of the product life cycle

The different marketing objectives in each PLC phase will be shown in a table format including the objectives provided by all the respondents.

(ii) **Question 16.1**

Provide a short description of the appropriate **marketing objective** that you would associate with the **introductory phase** of the product life cycle.

Marketing decision-makers of small manufacturing organisations in Northern Cyprus mentioned 13 different marketing objectives that can be associated with the introductory phase of the product life cycle as depicted in Table 7.29.

Table 7.29 shows that small manufacturing organisations provided heavy/intense advertising (no. 1) 32.14% (9/28), build strong brand image and awareness (no. 2) 17.86% (5/28) and simple product/product line (no. 8) 10.71% (3/28) as the three main marketing objectives in the introductory phase of the product life cycle. However, it is also noticed that marketing decision makers in small manufacturing organisations may have confused marketing objectives and marketing strategies in the introductory phase of the PLC. They reported marketing objectives that are in fact marketing strategies such as offering a simple product/product line.

Table 7.29: Marketing objectives in the introductory phase of the PLC

Marketing objectives	Frequency	
	Manufacturers	
	Number*	Percentage
1. Heavy/intense advertising	9	32.14%
2. Build strong brand image and awareness	5	17.86%
3. Lower prices	1	3.57%
4. Personal selling	1	3.57%
5. Cold calling	1	3.57%
6. High sales	1	3.57%
7. Simple product/product line	3	10.71%
8. Building customer base	1	3.57%
9. Competitiveness	1	3.57%
10. Establishing good distribution	2	7.14%
11. Build strong relationships	1	3.57%
12. Research for better quality	1	3.57%
13. Limited product/lines	1	3.57%
TOTAL	28	100%

* Number of times that these objectives were mentioned by the respondents

The main finding is that small manufacturing organisations in Northern Cyprus described heavy/intense advertising as the primary objective in the introductory phase of the PLC, followed by building strong brand image and awareness and simple product/product line objectives.

(ii) Question 16.2

Provide a short description of the appropriate **marketing objective** that you would associate with the **growth phase** of the product life cycle.

Marketing decision-makers of manufacturing organisations in the sample described 11 different marketing objectives to be associated with the growth phase of the product life cycle as depicted in Table 7.30.

Table 7.30: Marketing objectives in the growth phase of the PLC

Marketing objectives	Frequency	
	Manufacturers	
	Number*	Percentage
1. Increase advertising	8	29.63%
2. Building brand image	1	3.70%
3. High turnover	9	33.33%
4. Build relationships	2	7.41%
5. Increase advertising and sales promotion	1	3.70%
6. Variety	1	3.70%
7. Be innovative	1	3.70%
8. Low price	1	3.70%
9. Increase sales force	1	3.70%
10. Warranties	1	3.70%
11. Product differentiation	1	3.70%
TOTAL	27	100%

* Number of times these objectives were mentioned by the respondents

According to the Table 7.30, small manufacturing organisations consider high turnover (no. 3) 33.33% (9/27), increased advertising (no. 1) 29.63 (8/27), and building relationships (no. 4)

7.41% (2/27) as the three main marketing objectives in the growth phase of the product life cycle.

It can be assumed that marketing decision-makers in small manufacturing organisations may have confused marketing objectives and marketing strategies in the growth phase of the PLC. They reported marketing objectives such as increase sales force that are in fact marketing strategies.

The main finding is that marketing decision-makers in small manufacturing organisations identified high turnover as the primary marketing objective in the growth phase of the PLC, followed by increase in advertising and building relationships.

(iii) Question 16.3

Provide a short description of the appropriate marketing objective that you would associate with the maturity phase of the product life cycle.

Marketing decision-makers of organisations in Northern Cyprus mentioned 13 different marketing objectives to be associated with the maturity phase of the product life cycle as depicted in Table 7.31.

Table 7.31: Marketing objectives in the maturity phase of the PLC

Marketing objectives	Frequency	
	Manufacturers	
	Number*	Percentage
1. Reduce advertising	2	7.41%
2. Maximise/high profit	4	14.81%
3. Reduce cost	3	11.11%
4. Research and development	3	11.11%
5. Quality	1	3.70%
6. Added value	2	7.41%
7. Maximise sales	3	11.11%
8. Customer retention	4	14.81%
9. Evaluating products and lines	1	3.70%
10. Identify key clients	1	3.70%
11. Maintain standards	1	3.70%
12. Additional services	1	3.70%
13. Rely on workmanship	1	3.70%
TOTAL	27	100%

* **Number of times that these objectives were mentioned by the respondents**

Table 7.31 shows that small manufacturing organisations in the sample considered maximise/high profit (no. 2) and customer retention (no. 8) 14.81% (4/27) each, reduced cost (no. 3), research and development (no. 4) and maximise sales (no. 7) 11.11% (3/27) each as the main marketing objectives in the maturity phase of the product life cycle.

It can be assumed that marketing decision-makers in small manufacturing organisations may have confused marketing objectives and marketing strategies in the maturity phase of the PLC. They reported marketing objectives such as reduce cost that are in fact marketing strategies.

The main finding is that marketing decision-makers in small manufacturing organisations described maximised/high profit and customer retention as the primary marketing objectives to be associated with maturity phase of the PLC, followed by reduced cost and research and development.

(iv) **Question 16.4**

Provide a short description of the appropriate marketing objective that you would associate with the **decline phase** of the product life cycle.

Marketing decision makers of small manufacturing organisations in Northern Cyprus mentioned 13 different marketing objectives to be associated with the decline phase of the product life cycle as depicted in Table 7.32.

Table 7.32: Marketing objectives in the decline phase of the PLC

Marketing objectives	Frequency	
	Manufacturers	
	Number*	Percentage
Phase out the product	1	3.85%
New product should be available	1	3.85%
Milk product	1	3.85%
Reduce prices	13	50.00%
Sell out old stock	1	3.85%
Extend product life as long as possible	1	3.85%
Evaluate product success	1	3.85%
Maintain relationships with key clients	1	3.85%
Maintain standards	1	3.85%
Research and development	1	3.85%
Feed on reputation/use reputation	2	7.69%
New product development	1	3.85%
Increase price	1	3.85%
TOTAL	26	100%

Number of times that these objectives were mentioned by the respondents

Table 7.32 depicts that small manufacturing organisations provided reduced prices (no. 4) 50% (13/26) and the use of reputation (no. 11) 7.69% (2/26) as the main marketing objectives in the decline phase of the product life cycle.

The main finding is that marketing decision-makers in small manufacturing organisations described reducing prices as the primary marketing objective to be associated with the decline phase of the PLC, followed by the feed on/use of reputation.

It can be assumed that marketing decision-makers in small manufacturing organisations may have confused marketing objectives and marketing strategies in the decline phase of the PLC. They reported marketing objectives such as increase price and reduce price that are indeed marketing strategies. In fact, the results in Tables 7.29 to 7.32 suggest that the respondents may have confused some objectives with marketing strategies.

The main finding is that marketing decision-makers in small manufacturing organisations may have confused certain marketing objectives with marketing strategies in the different PLC phases.

From the results in tables 7.29 to 7.32, the most important primary objectives are illustrated in Table 7.33.

Table 7.33: The primary marketing objectives in the different PLC phases put forward by the responding small manufacturers

Primary objectives in the different PLC phase			
Introductory	Growth	Maturity	Decline
<ul style="list-style-type: none"> • Heavy/intense advertising • Build strong brand image and awareness • Simple product/product line 	<ul style="list-style-type: none"> • High turnover • Increase advertising • Build relationships 	<ul style="list-style-type: none"> • Maximise/high profit • Customer retention • Reduce cost • Research and development • Maximise sales 	<ul style="list-style-type: none"> • Use reputation • Reduce prices
Table 7.29	Table 7.30	Table 7.31	Table 7.32

The marketing objectives listed in Table 7.29 to 7.32 will be used to compare the marketing objectives provided by the respondents within the marketing objectives provided by Kotler (2000: 316).

When compared to the marketing objectives provided by Kotler (2000: 316) and described in Table 3.5, the primary marketing objectives given by small manufacturers are not exactly the same as the theory. Table 7.34 compares the marketing objectives by Kotler (2000: 316) and the marketing objectives provided by the sample.

Table 7.34: Comparison between the marketing objectives by Kotler (2000: 316) and the marketing objectives provided by the sample

Marketing objectives	PLC phases			
	Introductory phase	Growth phase	Maturity phase	Decline phase
- Kotler's Theory	<ul style="list-style-type: none"> • Create product awareness and trial 	<ul style="list-style-type: none"> • Maximise market share 	<ul style="list-style-type: none"> • Maximise profit while defending current market share 	<ul style="list-style-type: none"> • Reduce expenditure and milk the brand
- Survey responses	<ul style="list-style-type: none"> • Heavy/intense advertising • Build strong brand image and awareness • Simple product/product line 	<ul style="list-style-type: none"> • High turnover • Increase advertising • Build relationships 	<ul style="list-style-type: none"> • Maximise/high profit • Customer retention • Reduce cost • Research and development • Maximise sales 	<ul style="list-style-type: none"> • Use reputation • Reduce prices

In the introductory phase objectives provided by the sample namely building of a strong brand image and awareness can be related to Kotler's creation of product awareness and trial. The other objective of heavy/intense advertising may have been interpreted by the respondents as how they can create awareness. Simple product/product line suggested by the survey responses is a product strategy of the introductory phase as also agreed by Kotler (2000: 316).

The rest of the survey responses can be associated with Kotler's marketing objectives in the growth, maturity and decline phases of the product life cycle.

The main finding is that marketing decision-makers in small manufacturing organisations described marketing objectives, in the different phases of the PLC, which are relatively similar to the theory provided by Kotler (2000. 316).

(g) Question 17

What is the likelihood that you will continue using the product life cycle concept in future for (a) general management decision-making and (b) marketing decision-making? (**"1" indicates very unlikely and "5" indicates extremely likely**).

The likelihood that marketing decision-makers in organisations will continue using the product life cycle concept for marketing and general management decision-making in future is an important indicator of the utilisation potential and value of the product life cycle concept. Table 7.35 and Table 7.36 will provide an indication of the likelihood that marketing decision-makers in the sample will continue using the product life cycle in future for general management and marketing decision-making purposes respectively.

Table 7.35: Likelihood of continuing with the use of the product life cycle in future for general management decision-making

Extent of influence	Frequency	Percentage	Cumulative frequency	Cumulative percentage
1	0	0.00%	0	0.00%
2	2	9.10%	2	9.10%
3	6	27.27%	8	36.37%
4	8	36.36%	16	72.73%
5	6	27.27%	22	100%
TOTAL	N = 22	100%	-	-

Mean score from the total sample = 3.82

A majority of 63.63% (36.36%+27.27%) of the marketing decision-makers in organisations in Northern Cyprus indicated an average (a scale value of 3) to high likelihood of the continued use of the product life cycle for general management decision-making in future as depicted in Table 7.35.

This result provides a positive indication that the product life cycle concept has a continuous usage potential among manufacturers in Northern Cyprus for general management decision-making purposes in the future.

Table 7.36 illustrates the likelihood of the continued use of the product life cycle for marketing decision-making in the future.

Table 7.36: Likelihood of continuing with the use of the product life cycle in future for general marketing decision-making

Extent of influence	Frequency	Percentage	Cumulative frequency	Cumulative percentage
1	0	0.00%	0	0.00%
2	1	4.55%	1	4.55%
3	6	27.27%	7	31.82%
4	8	36.36%	15	68.18%
5	7	31.82%	22	100%
TOTAL	N = 22	100%	-	-

Mean score from the total sample = 3.95

A majority of 68.18% of the marketing decision-makers in organisations in Northern Cyprus indicated a high likelihood (scale value of 4 and 5) of continuously using the product life cycle for marketing decision-making in future as depicted in Table 7.36.

As can be deduced from Tables 7.35 and 7.36 there is no large difference between the mean scores of the likelihood of the continued use of the product life cycle concept for general management decision-making and for marketing-decision making in the future. Table 7.37 will, however, reveal whether the differences in the mean scores on the future likelihood of using the product life cycle for general and marketing decision purposes are significant or not.

Table 7.37: Significance test of the likelihood of continuing with use of the product life cycle in future for general management and marketing decision-making

Likelihood of using the PLC	Frequency	Mean	p-value
V68. General management decision-making	22	3.82	0.0956
V69. Marketing decision-making	22	3.95	

The likelihood of the continued use of the product life cycle concept in future is higher for marketing decision-making than for general management decision-making as depicted by the mean scores in Table 7.37; the difference, however, is very small. The Wilcoxon t-test statistic to determine differences between dependent groups was executed and a p-value of 0.956 resulted. If the decision-rule that a p-value ≤ 0.05 signals a significant difference, then the p-value of 0.0956 depicted in Table 7.37 shows that the difference in the means scores for the total sample on the likelihood on the continuous use of the product life cycle for general management and marketing decision-making purposes in future is not significant.

The main finding is that there is no significant difference between general management and marketing decision-making with regard to the likelihood of continued future use of the product life cycle.

The results on question 4 as discussed in paragraph 7.4.1(a) and the results on question 17 as illustrated in Table 7.37 will be used for cross-tabulation. This cross tabulation result will be illustrated in Table 7.38.

Table 7.38: Likelihood of continuing with the use of PLC in future with or without a marketing department

Likelihood of using the PLC		Mean		p-value
		Organisations with a marketing department	Organisations without a marketing department	
V68	General management decision making	3.71	4.03	0.1584
V69	Marketing decision making	3.88	4.00	0.5096

The Mann-Whitney U test to compare the mean scores of variables between two independent groups was executed. If the decision-rule is applied that a p-value ≤ 0.05 is an indication of a significant difference, then the p-values shown in Table 7.38 are not significant. Therefore,

the likelihood using the PLC for general and marketing decision making is equally respective whether organisations have a marketing department or not.

4.4 Section D

Section D was mainly focusing on testing the ability of marketing decision-makers in manufacturing organisations in Northern Cyprus to match the different marketing characteristics with the various product life cycle phases as provided in the theory by Kotler (2000: 316) and illustrated in Table 3.5. This section, furthermore, tested the ability of marketing decision-makers in manufacturing and organisations in Northern Cyprus to link the different marketing strategies with the various product life cycle phases provided in the theory by Kotler (2000: 316). The results are aimed at providing information on the ability of marketing decision-makers to apply their knowledge according to existing theory.

(a) Question 18

Match the following **characteristics** in **Column A** to the most appropriate phase in **Column B** by means of a cross next to the word or description in **Column A**.

The main objective with question 18 was to determine whether organisations differ or concur with the theory on marketing characteristics associated with the various product life cycle phases provided by Kotler (2000: 316). Table 7.39 provides a frequency of the total sample.

The total frequency for each characteristic associated with the PLC phases is reflected in Table 7.39 and the highest frequency of each characteristic in each phase is highlighted.

Table 7.39: Frequency distribution of the total sample with regard to the characteristics in each of the PLC phases

Characteristics		Phases in the PLC			
		Manufactures			
		Introductory	Growth	Maturity	Decline
143-146	Low sales	4	0	4	14
151-154	Increasing sales	5	20	2	0
199-202	Peak sales	0	9	8	0
159-162	Declining sales	0	0	4	21
171-174	High cost per customer	12	1	7	8
175-178	Average cost per customer	3	16	5	3
155-158	Low cost per customer	5	6	14	6
163-166	Negative profits (losses)	11	2	2	16
195-198	Increasing profits	7	19	3	0
147-150	High profits	1	8	15	2
187-190	Declining profits	0	0	5	18
167-170	Few competitors	11	2	8	17
191-194	Growing number of competitors	13	15	3	1
179-182	Stable number of competitors but beginning to decline	0	3	17	5
183-186	Declining number of competitors	0	4	8	1

Total frequencies depicted in Table 7.39 seem to be high but a characteristic could have appeared in more than one PLC phase (see the questionnaire in Appendix 1).

All the highest frequencies as depicted in Table 39 were used to compile Table 7.40 indicating the highest frequencies achieved for each characteristic in each PLC phase for the total sample of small manufacturers. This result was then compared with Kotler's theory.

Table 7.40 provides a comparison between the responses of the total sample and Kotler's

Table 7.40: Comparison of the total sample's responses of characteristics with the theory in each of the PLC phases

Characteristics		Phases in the PLC			
		Manufactures			
		Introductory	Growth	Maturity	Decline
	143-146 Low sales	T			M
	151-154 Increasing sales		TM		
	199-202 Peak sales		M	T	
	159-162 Declining sales				TM
	171-174 High cost per customer	TM			
	175-178 Average cost per customer		TM		
	155-158 Low cost per customer			TM	T
	163-166 Negative profits (losses)	T			M
	195-198 Increasing profits		TM		
	147-150 High profits			TM	
	187-190 Declining profits				TM
Competitors	167-170 Few competitors	T			M
	191-194 Growing number of competitors		TM		
	179-182 Stable number of competitors but beginning to decline			TM	
	183-186 Declining number of competitors			M	T

T = Theory as provided by Kotler (2000: 316)

M = Small manufacturers

TM = Small manufacturers providing a fit with theory

illustrated in Table 7.40 small manufacturers (M) matched 62.5% ($10/16 \times 100$)

characteristics to the appropriate phases in the product life cycle as depicted in Kotler's theory

indicated by TM in the same PLC phase.

The main finding is that small manufacturers achieved a match success rate of 62.50%

with Kotler's (2000: 316) theory on characteristics in each phase of the PLC.

Table 7.41 demonstrates possible differences or similarities between organisations with a marketing department or function and Kotler's theory (T). The fit in the Table 7.41 is based on the characteristics with the highest reported frequency in that specific PLC Phase.

Table 7.41: Association of respondents' perceptions of marketing characteristics with Kotler's theory in each of the PLC phases for the total sample of organisations with a marketing department or function

Characteristics		Phases in the PLC			
		Manufactures			
		Introductory	Growth	Maturity	Decline
Sales	143-146 Low sales	T			M ^D
	151-154 Increasing sales		T M ^D		
	199-202 Peak sales			T M ^D	
	159-162 Declining sales				T M ^D
Cost	171-174 High cost per customer	T			M ^D
	175-178 Average cost per customer		T M ^D		
	155-158 Low cost per customer		D	T M ^D	T
Profits	163-166 Negative profits (losses)	T			M ^D
	195-198 Increasing profits		T M ^D		
	147-150 High profits		M ^D	TD	
	187-190 Declining profits				T M ^D
Competitors	167-170 Few competitors	T			M ^D
	191-194 Growing number of competitors		T M ^D		
	179-182 Stable number of competitors but beginning to decline			T M ^D	
	183-186 Declining number of competitors				T M ^D

Note: T = Theory as provided by Kotler

M^D = Manufacturing organisations in the total sample with a marketing department

Small manufacturing organisations with a marketing department reported a 62.50% (10/16 x 100) fit with Kotler's theory depicted in Table 7.41.

The main finding is that small manufacturing organisations with a marketing department or function and Kotler's characteristics (T with M^D) are:

Sales

11 manufactures with a marketing department reported low sales in the decline phase while Kotler indicated low sales in the introductory phase.

Cost

11 manufactures with a marketing department reported high cost per customer in the decline phase while Kotler indicated high cost per customer in the introductory phase.

Profits

11 manufactures with a marketing department reported negative profits in the decline phase while Kotler indicated negative profits in the introductory phase.

Competitors

11 manufactures with a marketing department reported few competitors in the decline phase while Kotler indicated few competitors in the introductory phase.

The main finding is that marketing decision-makers in small manufacturing organisations with a marketing department provided a relatively good association (62%) with Kotler's theory as far as the characteristics within the different PLC phases are concerned.

Question 19

How important is each of the following aspects when you associate them with the four phases of the product life cycle. ("1" would indicate that the aspect is not important at all and "5" would indicate that the aspect is extremely important).

Marketing decision-makers in manufacturing organisations were asked to rate the importance of marketing mix related aspects of product, price, place and promotion in each product life cycle phase. The importance of the marketing mix related aspects regarding the traditional marketing mix instruments of product, price, place and promotion in the various product life cycle phases are illustrated in Tables 7.43, 7.44, 7.45 and 7.46 respectively.

Before these tables are provided, it is necessary to show the mean scores on all four marketing mix instruments in total of these aspects tested. These mean scores are depicted in Table 7.42.

Table 7.42: Importance of the traditional marketing mix related aspects

Marketing mix instrument	Mean
Product (aspects no 203 – 218)	3.97
Price (aspects no 219 – 234)	3.31
Place (aspects no 235 – 250)	3.25
Promotion (aspects no 251 – 266)	3.85

It is evident from Table 7.42 that product (no 203 – 218) is regarded as the most important traditional marketing mix instrument (according to the marketing mix related aspects) by the total sample with a mean score of 3.97. The mean scores on the other three marketing mix instruments are lower than 4 but higher than the average scale value of 3.

Table 7.43 provides an exposition of the importance of the marketing mix aspects in the introductory phase of the product life cycle.

Table 7.43: The importance of marketing mix (product, price, place, and promotion) related aspects in the introductory phase of the PLC

Marketing mix instrument	Introductory phase					
	Aspects	Responses	Mean	Top-box score	Low-box score	Standard deviation
Product	203 Quality	22	4.50	63.64%	2.27%	0.75
	207 Brand name	22	4.67	72.42%	0.00%	0.56
	211 Features and options	22	4.72	73.56%	0.00%	0.47
	215 Warranties	22	4.54	61.63%	0.00%	0.62
Price	219 High price	22	2.28	13.64%	32.95%	1.32
	223 Discounts	22	2.78	18.18%	19.23%	1.32
	227 Low price	22	3.30	25.00%	9.09%	1.24
	231 Payment terms	22	3.29	18.18%	12.50%	1.23
Place	235 Location of premises	22	3.97	52.27%	7.95%	1.31
	239 Large number of outlets (intensive)	22	4.03	48.28%	2.30%	1.13
	243 Small number of outlets (selective)	22	3.98	45.45%	2.27%	1.15
	247 Specialised outlets (exclusive)	22	3.94	45.45%	3.41%	1.21
Promotion	251 Sales promotion	22	4.39	53.41%	0.00%	0.76
	255 Advertising	22	4.58	66.67%	1.15%	0.65
	259 Personal selling	22	3.94	38.64%	5.68%	0.97
	263 Publicity/PR	22	3.45	36.35%	5.68%	1.38

Table 7.43 indicates that the respondents rated product features and options (no. 211) to be the most important product aspect in the introductory phase of the PLC with a mean score of 4.72, a top-box score of 73.56%. Low price (no. 227) achieved a mean score of 3.30. A large number of outlets (no. 239) with a mean score of 4.03 and advertising (no. 255) with a mean score of 4.58 are regarded as the most important aspects of price, place and promotion respectively.

he main finding is that the respondents regarded product features and options as the most important marketing mix related aspect in the introductory phase of the PLC.

another main finding is that respondents regarded product features and options as the most important product aspect, low price as the most important price aspect, intensive distribution as the most important place aspect and advertising as the most important promotion aspect in the introductory phase of PLC.

The low mean scores on price aspects (no's 219, 223, 227 and 231) together with the high low-box scores are indicating that price is regarded by the respondents as the least important marketing mix instrument in the introductory phase.

The main finding is that the respondents regarded price as the least important marketing mix instrument in the introductory phase.

Table 7.44 indicates that the total sample rated product features and options (no. 212) as the most important aspect in the growth phase of the PLC with a mean score of 4.29, a top-box score of 52.78% and a low-box score of 2.30%

Payment terms (no. 232) with a mean score of 4.00, specialised outlets (no. 248) with a mean score of 3.34 and advertising /no. 256) with a mean score of 4.51 are regarded as the most important aspects of price, place and promotion respectively. The advertising aspect (no. 256) achieved the highest top-box score of 57.47% and the highest mean score of 4.51 when compared to all the other aspects.

Table 7.44: The importance of marketing mix (product, price, place and promotion) related aspects in the growth phase of the PLC

Marketing mix instrument	Growth phase					
	Aspects	Responses	Mean	Top-box score	Low-box score	Standard deviation
Product	204 Quality	22	4.04	51.14%	1.14%	1.15
	208 Brand name	22	4.25	51.72%	1.15%	0.94
	212 Features and options	22	4.29	52.87%	2.30%	0.91
	216 Warranties	22	2.90	54.02%	1.15%	0.95
Price	220 High price	22	2.89	18.18%	19.32%	1.38
	224 Discounts	22	3.06	15.91%	7.95%	1.22
	228 Low price	22	3.82	18.18%	0.00%	0.84
	232 Payment terms	22	4.00	32.95%	1.14%	0.92
Place	236 Location of premises	22	3.04	31.82%	28.41%	1.66
	240 Large number of outlets (intensive)	22	3.18	30.68%	19.32%	1.55
	244 Small number of outlets (selective)	22	3.09	25.00%	19.32%	1.46
	248 Specialised outlets (exclusive)	22	3.34	17.24%	20.69%	1.38
Promotion	252 Sales promotion	22	4.31	47.73%	0.00%	0.75
	256 Advertising	22	4.51	57.47%	1.15%	0.62
	260 Personal selling	22	3.72	30.68%	1.14%	1.05
	264 Publicity/PR	22	3.12	28.41%	11.36%	1.43

The main finding is that the respondents regarded advertising as the most important marketing mix related aspect in the growth phase of the PLC.

Another main finding is that respondents regarded product features and options as the most important product aspect, payment terms as the most important price aspect,

exclusive distribution as the most important place aspect and advertising as the most important promotion aspect in the growth phase of the PLC.

Table 7.45 illustrates the importance of the marketing mix aspects to small manufacturers in the maturity phase of the product life cycle. It can be deduced from Table 7.45 that the total sample regards product features and options (no. 213) as the most important product aspect in the maturity phase of the PLC with a mean score of 3.85, a top-box score of 41.38% and a low-box score of 10.34%.

Table 7.45: The importance of marketing mix (product, price, place and promotion) related aspects in the maturity phase of the PLC

Marketing mix instrument	Maturity phase					
	Aspects	Responses	Mean	Top-box score	Low-box score	Standard deviation
Product	205 Quality	22	3.46	38.64%	9.09%	1.44
	209 Brand name	22	3.63	35.63%	10.34%	1.33
	213 Features and options	22	3.85	41.38%	10.34%	1.28
	217 Warranties	22	3.75	36.05%	8.14%	1.23
Price	221 High price	22	3.86	31.85%	6.82%	1.15
	225 Discounts	22	3.56	21.59%	5.68%	1.12
	229 Low price	22	3.20	13.64%	9.09%	1.12
	233 Payment terms	22	3.31	27.27%	6.82%	1.28
Place	237 Location of premises	22	2.96	13.64%	13.64%	1.24
	241 Large number of outlets (intensive)	22	2.87	11.63%	13.95%	1.23
	245 Small number of outlets (selective)	22	3.14	14.94%	10.34%	1.16
	249 Specialised outlets (exclusive)	22	3.20	14.77%	12.50%	1.23
Promotion	253 Sales promotion	22	4.26	48.86%	2.27%	0.92
	257 Advertising	22	4.34	51.72%	2.30%	0.84
	261 Personal selling	22	3.90	31.82%	2.27%	0.99
	265 Publicity/PR	22	3.76	31.82%	6.82%	1.19

High price (no. 221) with a mean score of 3.86, specialised outlets (no. 249) with a mean score of 3.20 and advertising (no. 257) with a mean score of 4.34 are regarded as the most important aspects of price, place and promotion respectively.

The main finding is that the respondents regarded advertising as the most important aspect in the maturity phase of the PLC.

Another main finding is that respondents regarded product features and options as the most important product aspect, high price as the most important price aspect, exclusive distribution as the most important place aspect and advertising as the most important promotion aspect in the maturity phase of the PLC.

Table 7.46 provides results of the importance of the marketing mix aspects by small manufactures in the decline phase of the product life cycle.

Table 7.46: The importance of marketing mix (product, price, place and promotion) related aspects in the decline phase of the PLC

Marketing mix instrument	Decline phase					
	Aspects	Responses	Mean	Top-box score	Low-box score	Standard deviation
Product	206 Quality	22	3.42	43.18%	19.32%	1.62
	210 Brand name	22	3.70	41.38%	11.49%	1.38
	214 Features and options	22	3.89	36.78%	10.34%	1.23
	218 Warranties	22	3.89	37.21%	9.30%	1.22
Price	222 High price	22	3.20	29.55%	17.05%	1.50
	226 Discounts	22	3.40	26.14%	11.36%	1.34
	230 Low price	22	3.66	28.74%	10.34%	1.21
	234 Payment terms	22	3.60	28.74%	9.20%	1.23
Place	238 Location of premises	22	2.43	19.54%	39.08%	1.53
	242 Large number of outlets (intensive)	22	2.63	18.60%	29.07%	1.47
	246 Small number of outlets (selective)	22	3.06	23.26%	19.77%	1.42
	250 Specialised outlets (exclusive)	22	3.16	26.44%	21.84%	1.48
Promotion	254 Sales promotion	22	3.45	31.82%	7.95%	1.34
	258 Advertising	22	3.61	37.50%	9.09%	1.35
	262 Personal selling	22	3.27	23.86%	7.95%	1.26
	266 Publicity/PR	22	3.04	25.00%	14.77%	1.42

Table 7.46 indicates that the respondents rated product features and options (no. 214) and warranties (no. 218) as the most important product aspects in the decline phase of the PLC both with a mean score of 3.89 each and a top-box score of 36.78% and 37.21% respectively.

Low-box scores of 10.34% and 9.30% respectively for product features and options (no. 214) and warranties (no. 218) were recorded in the decline phase of the product life cycle. Low price (no. 230) with a mean score of 3.66, specialised outlets (no. 259) with a mean score of

and advertising (no. 258) with a mean score of 3.61 are regarded as the most important aspects of price, place and promotion respectively.

quality aspect (no. 206) achieved the highest top-box score of 43.18% compared to warranties with a top-box score of 37.21%. These two aspects may be indicative of the fact that respondents feel that they still have to maintain their standards to customers when a product is in the decline phase of the PLC.

One main finding is that the respondents regarded product features and options as well as warranties as the most important aspects in the decline phase of the PLC.

Another main finding is that respondents regarded product features and options and warranties as the most important product aspect, low price as the most important price aspect, exclusive distribution as the most important place aspect and advertising as the most important promotion aspect in the decline phase of PLC.

The standard deviations depicted in Table 7.46 are indicative of relative equal homogeneity in the importance aspects pertaining to product, price, place and promotion.

The different mean scores on the four marketing mix instruments that typify the importance of marketing mix instruments in the different PLC phases for the total sample are provided in Table 7.47.

Table 7.47: The importance of the marketing mix instruments in the different PLC phases

Marketing mix instrument	PLC phase	Mean	Standard deviation
Product	Introductory	4.60	0.38
	Growth	3.87	0.85
	Maturity	3.67	0.78
	Decline	3.72	0.77
Price	Introductory	2.91	0.74
	Growth	3.44	0.68
	Maturity	3.48	0.58
	Decline	3.46	0.58
Place	Introductory	3.98	0.85
	Growth	3.16	0.87
	Maturity	3.04	0.87
	Decline	2.82	0.87
Promotion	Introductory	4.09	0.78
	Growth	3.91	0.72
	Maturity	4.06	0.83
	Decline	3.34	1.05

The mean values depicted in Table 7.47 are indicative of the high importance placed on all the marketing mix instruments in the PLC phases except for price (2.91) in the introductory phase and place (2.82) in the decline phase.

The main finding is that marketing decision-makers in the sample attached a very high importance to the four traditional marketing mix instruments across all the PLC phases except for price in the introductory phase and place in the decline phase (price and place with mean values lower than 3).

When the mean scores illustrated in Table 7.47 on the marketing mix instruments are compared per PLC phase then product is the most important marketing mix instrument in the introductory phase, promotion is the most important marketing mix instrument in the growth and maturity phases, while product is the most important marketing mix instrument in the decline phase.

Another main finding is that marketing decision-makers in the sample regarded promotion as the most important marketing mix instrument in both the growth and maturity phases, while product is regarded as the most important marketing mix instrument in the introductory and decline phases.

(d) **Question 20**

Link the following **strategies** in **Column A** to the most appropriate phase in **Column B** by means of a cross next to the strategy described in **Column A**.

Marketing decision-makers in manufacturing organisations were asked to link the strategies in the different product life cycle phases to the strategies provided in the theory (Kotler, 2000: 316). Table 7.48 illustrates the linkage with theory for the sample. The marketing strategies with the highest frequencies in each phase of the product life cycle are highlighted in Table 7.48.

Table 7.48: Frequency distribution of the sample in linking the theory on the marketing strategies in each of the PLC phases

Marketing strategies	Product life cycle cases							
	Introductory phase		Growth phase		Maturity phase		Decline phase	
	T	M	T	M	T	M	T	M
V70 Diversity brands and models		4		2	✓	10		5
V71 Offer a basic product	✓	15		4		1		1
V72 Phasing out weak products		0		0		7	✓	14
V73 Offer product extensions, service and warranties		1		2	✓	11		7
V74 Cut prices		5		4		7	✓	5
V75 Charge a cost plus price	✓	9		5		5		2
V76 Set a price to much or better the prices of competitors		11		7	✓	2		1
V77 Set a price to penetrate the market		21	✓	0		0		0
V78 Build awareness and interest in the mass market through advertising		18	✓	3		0		0
V79 Reduce the advertising level needed to retain hard core loyal customers		2		1		16	✓	2
V80 Build product awareness among early adapters	✓	20		1		0		0
V81 Stress brand differences and benefits		10		4	✓	6		1
V82 Increase and encourage brand switching		9		5	✓	6		1
V83 Reduce sales promotion to the minimum level		0		0		5	✓	16
V84 Use heavy sales promotion to entice trial	✓	9		12		0		0
V85 Reduce sales promotion to take advantage of a heavy consumer demand		0	✓	1		17		3
V86 Build intensive distribution		16	✓	5		0		0
V87 Build selective distribution	✓	1		0		10		10
V88 Go selective and phase out all unprofitable outlets		1		0		0	✓	12
V89 Build more intensive distribution		2		19	✓	0		0

Note: ✓ = Appropriate marketing strategy according to Kotler's in the different PLC phases

M = Small manufacturers

The main deductions from the Table 7.48 are the following:

(i) Introductory phase

The highest frequencies that were mentioned are:

- Set a price to penetrate the market (V77)
- Build product awareness among early adopters (V80)
- Build intensive distribution (V86)
- Offer a basic product (V71)
- Build awareness and interest in the mass market through advertising (V78)

(ii) Growth phase

The highest frequencies that were mentioned are:

- Build more intensive distribution (V89)
- Use heavy sales promotion to entice trial (V84)
- Build awareness and interest in the mass market through advertising (V78)
- Increase and encourage brand switching (V82)
- Set a price to penetrate the market (V77)

(iii) Maturity phase

The highest frequencies that were mentioned are:

- Reduce advertising level needed to retain hard core loyal customers (V79)
- Reduce sales promotion to take advantage of a heavy consumer demand (V85)
- Diversify brands and models (V70)
- Charge a cost plus price (V75)

(iv) Decline phase

The highest frequencies that were mentioned are:

- Go selective and phase out all unprofitable outlets (V88)
- Phasing out weak products (V72)
- Reduce sales promotion to the minimum level (V83)
- Build selective distribution /V87)
- Offer product extensions, service and warranties (V73)

The responses on the strategies within the different PLC phases in Table 7.48 are shown in Table 7.49, which will enable calculating a linkage or fit of the total sample.

Table 7.49 illustrates the comparison between the sample and Kotler's theory.

Table 7.49: Comparison of the total sample response of marketing strategies with the theory in each of the PLC phases

Marketing mix instrument	Marketing strategies		Product life cycle cases			
			Introductory phase	Growth phase	Maturity phase	Decline phase
Product (V70-V73)	V70	Diversity brands and models			✓	
	V71	Offer a basic product	✓			
	V72	Phasing out weak products				✓
	V73	Offer product extensions, service and warranties		T		×
Price (V74-V77)	V74	Cut prices			×	T
	V75	Charge a cost plus price	T		×	
	V76	Set a price to much or better the prices of competitors			✓	
	V77	Set a price to penetrate the market	×	T		
Advertising (V78-V81)	V78	Build awareness and interest in the mass market through advertising	×	T		
	V79	Reduce the advertising level needed to retain hard core loyal customers			×	T
	V80	Build product awareness among early adapters	✓			
	V81	Stress brand differences and benefits			✓	
Sales promotion (V82-V85)	V82	Increase and encourage brand switching			✓	
	V83	Reduce sales promotion to the minimum level				✓
	V84	Use heavy sales promotion to entice trial	T	×	×	
	V85	Reduce sales promotion to take advantage of a heavy consumer demand		T		
Distribution (V86-V89)	V86	Build intensive distribution	×	T		
	V87	Build selective distribution	T			×
	V88	Go selective and phase out all unprofitable outlets				✓
	V89	Build more intensive distribution		×	T	

Note: ✓ = Perfect association/agreement of the total sample with the theory on the marketing strategies in the specific PLC phase

× = No association of the total sample with the theory on the marketing strategies in the specific PLC phase

T = Kotler's theory

Table 7.49 indicates that the sample generated a linkage success rate of 45% ($9/20 \times 100$) as indicated by (\checkmark). The sample achieved the best linkage with the strategies on product (V70 to V73) of 75% ($3/4 \times 100$) and the weakest linkage of 25% ($1/4 \times 100$) with strategies on price (V74 to V77)= and distribution (V86 to V89).

The main finding is that the total sample provided a 45% linkage with Kotler's theory on marketing strategies in each PLC phase.

Another main finding is that the total sample showed the best linkage with the strategies on product (75%).

The last main finding from Table 7.49 is that the total sample showed the weakest linkage with price strategies (25%) and distribution strategies (25%).

It is also important to determine whether there are differences in the linkage of marketing strategies with Kotler's theory for organisations with or without a marketing department.

Manufacturing organisations (M) with a marketing department reported a 45% $9/20 \times 100$ linkage success rate with Kotler's theory (T). This is the same linkage percentage achieved by manufacturers as indicated in Table 7.49.

The main finding is that marketing decision-makers in manufacturing organisations with a marketing department or function concurred slightly more with regard to strategies used in the different phases of the PLC when compared to Kotler's theory.

7.5 MAJOR FINDINGS

The results obtained in this study yielded the following findings that are representative of small manufacturers in Northern Cyprus between 10-49 employees. It is important to note that more than one finding will be used to determine whether the hypotheses in this study can be supported or not.

The following major findings are reported:

Forty percent of marketing decision-makers within small manufacturing organisations of the sample in Northern Cyprus with between 10-49 employees indicated that their organisations know of and apply the product life cycle concept as a decision-making instrument. (p. 236)

2. Eighty two percent of the manufacturer organisations have a marketing department or function although 86.36% indicated that they also have a sales function. (p. 242)

3. The majority of manufacturer organisations in the sample can be regarded as small, based on the fact that they have between 11 and 20 employees. (p. 243)

4. The small manufacturer organisations in Northern Cyprus see buying, pricing and costing as the most important aspects while they see product development and monitoring market share as the least important aspects when applying the product life cycle concept. (p. 245)

5. Price is the major aspect responsible for creating a competitive advantage as reported by

- the total sample. (p. 248)
6. Price and product are the most important marketing mix instruments for creating a competitive advantage based on the collective summation of marketing related aspects as reported by the total sample. (p. 249)
 7. Relationships are the most important other marketing mix related aspect creating a competitive advantage (more important than place, promotion, people, processes and physical evidence) as reported by the total sample. (p. 249)
 8. Small manufacturing organisations in Northern Cyprus have mostly multiple product ranges, less one product ranges and the least single products. (p. 250)
 9. Less than half of the marketing decision-makers in manufacturing organisations that have indicated they have multiple product ranges apply the product life cycle concept on each individual product within each product range. (p. 252)
 10. Forty-five percent of the marketing decision-makers in small manufacturing organisations indicated that their primary products or best sellers are positioned in the growth phase of their product life cycles. (p. 253)
 11. The majority of the marketing decision-makers in manufacturing organisations indicated that necessity of the product is the primary reason for individual products or product ranges to be best sellers, followed by price. (p. 256)

12. Marketing decision-makers in small manufacturing organisations provided primary objectives in each PLC phase: high/maximum sales, increased advertising and sales promotion in the introductory phase, high/maximum sales and low price in the growth and maturity phases respectively and high/maximum sales, increased advertising and sales promotion and evaluation the product in the decline phase. (p. 260)
13. More than three-quarters of manufacturing organisations in Northern Cyprus engage in strategic marketing planning and development by using the product life cycle phases. (p. 260)
14. Small manufacturing organisations in Northern Cyprus do strategic planning and development on an annual basis or less frequently. (p. 261)
15. More than ninety percent of manufacturing organisations in Northern Cyprus indicated that the product life cycle influences marketing strategy and development from an average to an above average extent. (p. 262)
16. Small manufacturing organisations have a good degree of control over the marketing mix instruments and highest degree of control over the product element. (p. 264)
17. Marketing decision-makers in small manufacturing organisations in Northern Cyprus regard incentives to personnel as the most important people aspects in the introductory phase of the PLC. (p. 266)
18. Policies and procedures are regarded by marketing decision-makers in small

manufacturing organisations in Northern Cyprus as the most important process aspect in the introductory phase of the PLC. (p. 266)

19. The organisation's name is regarded by marketing decision-makers in small manufacturing organisations in Northern Cyprus as the most important physical evidence aspect in the introductory phase of the PLC. (p. 266)

20. Marketing decision-makers in small manufacturing organisations in Northern Cyprus regard incentives to personnel as the most important people aspect in the growth phase of the PLC. (p. 268)

21. Marketing decision-makers in small manufacturing organisations in Northern Cyprus regard complaints handling (followed by a toll free number) as the most important process aspects in the growth phase of the PLC. (p. 268)

22. Marketing decision-makers in small manufacturing organisations in Northern Cyprus the organisation's logo as the most important physical evidence aspect in the growth phase of the PLC, followed by the organisation's name. (p. 268)

23. Marketing decision-makers in small manufacturing organisations in Northern Cyprus regard incentives to personnel as the most important people aspect in the maturity phase of the PLC, followed by training of personnel. (p. 270)

24. Marketing decision-makers in small manufacturing organisations in Northern Cyprus regard complaints handling as the most important process aspect in the maturity phase of

the PLC (although the mean score was relatively low). (p. 270)

25. Marketing decision-makers in small manufacturing organisations in Northern Cyprus regard the organisation's logo as the most important physical evidence aspect in the maturity phase of the PLC, followed by the organisation's name. (p. 270)
26. Marketing decision-makers in small manufacturing organisations in Northern Cyprus regard incentives to personnel as the most important people aspect in the decline phase of the PLC, followed by the training of personnel. (p. 272)
27. Marketing decision-makers in small manufacturing organisations in Northern Cyprus regard a toll free number as the most important process aspect in the decline phase of the PLC, followed by the organisation's name. (p. 272)
28. Marketing decision-makers in small manufacturing organisations in Northern Cyprus regard the organisation's logo as the most important physical evidence aspect in the decline phase of the PLC although the organisation's name had virtually the same importance. (p. 272)
29. All the marketing mix related aspects pertaining to people, processes and the physical evidence mix are important except for the marketing mix aspects linked to processes in the maturity phase. (p. 273)
30. Marketing decision-makers in the sample attached high importance to the people, processes and physical evidence (expended marketing mix) across all four phases of the

product life cycle concept. (p. 274)

31. Marketing decision-makers regard physical evidence as the most important marketing mix instrument in the introductory phase of the product life cycle. (p. 276)
32. Marketing decision-makers regard processes as the most important marketing mix instrument in the growth phase of the product life cycle. (p. 276)
33. Marketing decision-makers regard people as the most important marketing mix instrument in both the maturity and decline phase of the product life cycle. (p. 276)
34. Small manufacturing organisations in Northern Cyprus described heavy/intense advertising as the primary objective in the introductory phase of the PLC, followed by building strong brand image and awareness and simple product/product line objectives. (p. 278)
35. Marketing decision-makers in small manufacturing organisations identified high turnover as the primary marketing objective in the growth phase of the PLC, followed by increase in advertising and building relationships. (p.280)
36. Marketing decision-makers in small manufacturing organisations described maximised/high profit and customer retention as the primary marketing objectives to be associated with maturity phase of the PLC, followed by reduced cost and research and development. (p. 282)

37. Marketing decision-makers in small manufacturing organisations described reducing prices as the primary marketing objective to be associated with the decline phase of the PLC, followed by the feed on/use of reputation. (p. 283)
38. Marketing decision-makers in small manufacturing organisations may have confused certain marketing objectives with marketing strategies in the different PLC phases. (p. 284)
39. Marketing decision-makers in small manufacturing organisations described marketing objectives, in the different phases of the PLC, which are relatively similar to the theory provided by Kotler (2000. 316). (p. 286)
40. There is no significant difference between general management and marketing decision-making with regard to the likelihood of continued future use of the product life cycle. (p. 289)
41. Small manufacturers achieved a match success rate of 62.50% with Kotler's (2000: 316) theory on characteristics in each phase of the PLC. (p. 292)
42. Small manufacturing organisations with a marketing department or function and Kotler's characteristics are:
 - (i) **Sales**

Small manufactures with a marketing department reported low sales in the decline phase while Kotler indicated low sales in the introductory phase.
 - (ii) **Cost**

Small manufactures with a marketing department reported high cost per customer in the decline phase while Kotler indicated high cost per customer in the introductory phase.

(iii) Profits

Small manufacturers with a marketing department reported negative profits in the decline phase while Kotler indicated negative profits in the introductory phase.

(iv) Competitors

Small manufactures with a marketing department reported few competitors in the decline phase while Kotler indicated few competitors in the introductory phase.

(p. 293)

43. Marketing decision-makers in small manufacturing organisations with a marketing department provided a relatively good association (62%) with Kotler's theory as far as the characteristics within the different PLC phases are concerned. (p. 294)
44. The respondents regarded product features and options as the most important marketing mix related aspect in the introductory phase of the PLC. (p. 297)
45. The respondents regarded product features and options as the most important product aspect, low price as the most important price aspect, intensive distribution as the most important place aspect and advertising as the most important promotion aspect in the introductory phase of PLC. (p. 297)
46. The respondents regarded price as the least important marketing mix instrument in the introductory phase. (p. 297)
47. The respondents regarded advertising as the most important marketing mix related aspect

in the growth phase of the PLC. (p. 298)

48. The respondents regarded product features and options as the most important product aspect, payment terms as the most important price aspect, exclusive distribution as the most important place aspect and advertising as the most important promotion aspect in the growth phase of the PLC. (p. 298)
49. The respondents regarded advertising as the most important aspect in the maturity phase of the PLC. (p. 300)
50. The respondents regarded product features and options as the most important product aspect, high price as the most important price aspect, exclusive distribution as the most important place aspect and advertising as the most important promotion aspect in the maturity phase of the PLC. (p. 300)
51. The respondents regarded product features and options as well as warranties as the most important aspects in the decline phase of the PLC. (p. 302)
52. The respondents regarded product features and options and warranties as the most important product aspect, low price as the most important price aspect, exclusive distribution as the most important place aspect and advertising as the most important promotion aspect in the decline phase of PLC. (p. 302)
53. The marketing decision-makers in the sample attached a very high importance to the four traditional marketing mix instruments across all the PLC phases except for price in the

introductory phase and place in the decline phase (price and place with mean values lower than 3). (p. 303)

54. Marketing decision-makers in the sample regarded promotion as the most important marketing mix instrument in both the growth and maturity phases, while product is regarded as the most important marketing mix instrument in the introductory and decline phases. (p. 304)
55. The total sample provided a 45% linkage with Kotler's theory on marketing strategies in each PLC phase. (p. 309)
56. The total sample showed the best linkage with the strategies on product (75%). (p. 309)
57. The total sample showed the weakest linkage with price strategies (25%) and distribution strategies (25%). (p. 309)
58. The marketing decision-makers in manufacturing organisations with a marketing department or function concurred slightly more with regard to strategies used in the different phases of the PLC when compared to Kotler's theory. (p. 309)

7.6 RESEARCH HYPOTHESES

The research hypotheses as formulated in chapter one and motivated in chapter five will be evaluated against the literature review, research results and main research findings.

7.6.1 Hypothesis 1:

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

The theoretical assumptions by Kotler (2000: 316) consisted of marketing objectives, characteristics and marketing strategies reflected in questions 16, 18 and 20 respectively.

- **Results on question 16:**

Marketing decision-makers in small manufacturing organisations described marketing objectives, which to a large extent are similar to theory, provided by Kotler (**Major finding 39, p. 316**).

It can be concluded that this finding cannot support the aspect of marketing objectives in hypothesis 1.

- **Results on question 18:**

The total sample of small manufacturing organisations in Northern Cyprus achieved a 62.5% match with characteristics in each product life cycle phase as provided by the theory (Kotler, 2000: 316) (**Major finding 41, p. 316**).

This finding indicates that the characteristics portion of the assumptions in hypothesis 1 cannot be supported.

- **Results on question 20**

The total sample provided a 45% linkage with Kotler's theory on marketing strategies in each PLC phase (**Major finding 55, p. 319**).

The results showed that marketing strategies as part of the assumptions in hypothesis 1 differed substantially from Kotler's theory. This part (strategies) of hypothesis 1 can be *supported*.

If the results above are collectively viewed then this hypothesis cannot conclusively be supported or not supported because of the mix results.

7.6.2 Hypothesis 2

Marketing managers of small organisations in Northern Cyprus use the product life cycle concept to strategically plan and manage their products through the various phases of the product life cycle.

Hypothesis 2 can be supported by the empirical research results from questions 2, 11, 13 and 17.

Before the support will be motivated it is important to realise that the substance of the support should be treated and viewed against the result that 62% of small manufacturing organisations

indicated that they have a marketing function or department responsible for making marketing decisions (**Major finding 43 p. 317**).

- (i) More than three-quarters of small manufacturing organisations in Northern Cyprus are using the product life cycle phases when they engage in strategic marketing planning and development (**Major finding 13, p. 312**).
- (ii) Ninety two percent of small manufacturing organisations in Northern Cyprus indicated that the product life cycle influences marketing strategy and development from an average to an above average extent (**Major finding 15, p. 312**).
- (iii) Marketing decision-makers in manufacturing organisations indicated a high likelihood of continued use of the product life cycle in future for general management decision purposes (**see page 287**).
- (iv) The likelihood of continuing with the use of the product life cycle concept in future for general management and marketing decision making purposes is irrespective of the fact whether small manufacturing organisations have a marketing department or not (**see page 289**).

If the results above are collectively viewed then this hypothesis should be **supported**.

7.6.3 Hypothesis 3

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

Hypothesis 3 can be supported by the questions 2, 17.

The support from the empirical results on this hypothesis should be viewed against the results of the 22 small manufacturing organisations in the sample on current and future use tested in this study.

Current use can be supported by:

- (i) Forty percent of small manufacturing organisations of the sample in Northern Cyprus know of and apply the product life cycle concept as a decision making instrument **(Major finding 1, p. 310).**
- (ii) Marketing decision-makers in small manufacturing organisations indicated a high likelihood of continued use of the product life cycle in future for marketing decision-making purposes **(see page 287).**
- (iii) The likelihood of continuing with the use of the product life cycle concept in future for marketing decision-making is equally high irrespective of whether small manufacturing organisations have a marketing department **(see page 289).**

If the results above are collectively viewed then this hypothesis should be **supported**.

7.6.4 Hypothesis 4

Small manufacturing organisations in Northern Cyprus do not have a marketing function responsible for applying the product life cycle concept when marketing strategy is developed and marketing decisions are taken.

Hypothesis 4 cannot be supported by the results of question 4.

Small manufacturing organisations in Northern Cyprus have, in eighty-two percent of the cases, a marketing department or function responsible for marketing decision-making (**major finding 2, p. 310**).

The converse is that in eighteen percent of the cases other functional departments or functions are responsible for making marketing decisions in manufacturing organisations in Northern Cyprus.

This hypothesis can, therefore, **not** be **supported** based on the above-mentioned results.

7.7 CONCLUSION

This chapter provided results on a question-by-question basis for the total sample.

A list of main findings was developed and the various hypotheses were evaluated against the literature review and/or empirical results (major findings).

Hypothesis 1 and 4 could not be conclusively supported from the findings while the hypotheses 2 and 3 were supported by the findings.

Chapter 8 will provide conclusions and recommendations based on the major findings presented in this chapter.

CHAPTER 8

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

8.1 INTRODUCTION

In the previous chapter the research results were discussed. The final chapter focuses on the main conclusions, recommendations and the limitations of this exploratory study. Specific emphasis will be placed on the application of 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 to Kotler's 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 applied the product life cycle concept theory compared to the product life cycle 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 in Northern Cyprus apply this concept)

	Product life cycle phases			
	Introductory phase	Growth phase	Maturity phase	Decline phase
Sales characteristics				
• Kotler	Low sales	Rapidly growing sales	Peak sales	Declining sales
• Sample results	<i>Low sales</i>	<i>Rapidly growing sales</i>	<i>Peak sales</i>	<i>Declining sales</i>
Cost characteristics				
• Kotler	High cost per customer	Average cost per customer	Low cost per customer	Low cost per customer
• Sample results	High cost per customer	Average cost per customer	Low cost per customer	High cost per customer ⁽¹⁾
Profit characteristics				
• Kotler	Negative profits	Increasing profits	High profit	Declining profits
• Sample results	<i>Negative profits</i>	<i>Increasing profits</i>	<i>High profit</i>	<i>Negative profits</i> ⁽¹⁾
Competitor characteristics				
• Kotler	Few competitors	Growing number of competitors	Stable number of competitors	Declining number of competitors
• Sample results	<i>Growing number of competitors</i> ⁽¹⁾	<i>Growing number of competitors</i>	<i>Stable number of competitors</i>	<i>Declining number of competitors</i>
Marketing objectives				
• Kotler	Create product awareness and trial	Maximise market share	Maximise profit while defending current market share	Reduce expenditure and milk the brand
• Sample results	<i>Heavy/intense advertising</i> ⁽¹⁾	<i>High turnover</i> ⁽¹⁾	<i>Maximise sales</i> ⁽¹⁾	<i>Reduce prices</i> ⁽¹⁾
Product strategy				
• Kotler	Offer a basic product	Offer product extensions, service and warranties	Diversify	Phase out the weak performers
• Sample results	<i>Offer a basic product</i>	<i>Diversify</i> ⁽¹⁾	<i>Diversify</i>	<i>Phase out the weak performers</i>
Price strategy				
• Kotler	Charge cost plus	Price to penetrate the market	Price to match or beat competitors	Cut price
• Sample results	<i>Set a price to penetrate the market</i> ⁽¹⁾	<i>Set a price to match or better the price of competitors</i> ⁽¹⁾	<i>Charge cost plus</i> ⁽¹⁾	<i>Cut price</i>
Distribution strategy				
• Kotler	Build selective distribution	Build intensive distribution	Build more intensive	Phase out the unprofitable outlets

			distribution	
• <i>Sample results</i>	<i>Build intensive distribution ⁽¹⁾</i>	<i>Build more intensive distribution ⁽¹⁾</i>	<i>Build selective distribution ⁽¹⁾</i>	<i>Selective to phase out the unprofitable outlets</i>
Advertising strategy				
• Kotler	Build product awareness	Build awareness and interest in the market	Highlight brand differences and benefits	Reduce the level to retain loyal customers
• <i>Sample results</i>	<i>Build product awareness</i>	<i>Build awareness and interest in the market</i>	<i>Reduce the level to retain loyal customers ⁽¹⁾</i>	<i>Reduce the level to retain loyal customers</i>
Sales promotion				
• Kotler	Use heavy sales promotion to entice trial	Reduce to take advantage of heavy consumer demand	Increase to encourage brand switching	Reduce to a minimal level
• <i>Sample results</i>	<i>Use heavy sales promotion to entice trial</i>	<i>Use heavy sales promotion to entice trial ⁽¹⁾</i>	<i>Reduce to take advantage of heavy consumer demand ⁽¹⁾</i>	<i>Reduce to a minimal level</i>
People strategy ⁽²⁾				
• <i>Sample results</i>	<i>Incentives to personnel/Training of personnel</i>	<i>Incentives of personnel/Knowledge of personnel</i>	<i>Incentives to personnel/Training of personnel</i>	<i>Incentives to personnel/Training of personnel</i>
Processes strategy ⁽²⁾				
• <i>Sample results</i>	<i>Develop company policies and procedures. Toll free number</i>	<i>Focus on complaints handling. Toll free number</i>	<i>Focus on complaints handling. Toll free number</i>	<i>Toll free number. Complaints handling</i>
Physical evidence ⁽²⁾				
• <i>Sample results</i>		<i>Organisation's logo. Organisation's name</i>	<i>Organisation's logo/Organisation's name</i>	<i>Organisation's logo/Organisation's name</i>

Note: ⁽¹⁾ The sample results that differ from Kotler's theory in the specific PLC phase

⁽²⁾ Not covered in Kotler's theory

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 three and the results depicted in Table 7.49 in chapter seven.
- The application of the marketing objectives proposed by Kotler (2000: 316) in Table 3.5 in chapter three and from the results depicted in Table 7.34 in chapter seven.

- The application of the marketing strategies proposed by Kotler (2000: 316) in Table 3.5 in chapter three and from the results in Table 7.48 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 8.2 illustrate how marketing decision-makers of small manufacturing organisations corresponded with Kotler's theory and indicate where the sample differed from Kotler's theory. It can be assumed that marketing decision-makers in small manufacturing organisations confused certain characteristics and marketing strategies as discussed in chapter seven.

Similarly, 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. 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 organisations in Northern Cyprus employing 10-49 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. This study 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 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 product life cycle.

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.

The implication is that marketing decision-makers should bear this in mind in developing strategies in the different product life cycle 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 organisations in Northern Cyprus, it seems that the concept has a great application potential and incidence rate of uses as a marketing decision-making instrument.

- More than three-quarters of small manufacturing organisations are using the product life cycle concept when they engage in strategic marketing planning and developing, primarily on annual basis.

- Marketing decision-makers in small manufacturing organisations indicated that the product life cycle concept influences marketing strategy and development on an above average extent.
- Marketing decision-makers in small manufacturing organisations indicated a high likelihood for the continued use of the product life cycle concept in future for marketing decision-making purposes.

The main conclusion is that marketing decision-makers in small manufacturing organisations in Northern Cyprus do realise the application value of the product life cycle concept. One of the screening questions was that organisations should know and should apply the product life cycle concept. Sixty percent did not apply with this question.

The implication is that sixty percent of small manufacturing 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 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 organisations in Northern Cyprus.

- Marketing decision-makers did not indicate the application of the product life cycle concept to be a reason or instrument as such 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.
- 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. A pure marketing related reason was not revealed as the primary reason.
- Marketing decision-makers in small manufacturing organisations associated some of the marketing strategies in the product life cycle phases differently from those marketing strategies predicted in the theory.
- Marketing decision-makers in small manufacturing organisations with a marketing department or function concurred slightly more with Kotler's theory with regard to strategies used in the different phases of the product life cycle.

The main conclusion is that marketing decision-makers in small manufacturing organisations in Northern Cyprus use the product life cycle concept as a marketing mix instrument. These decision-makers, however, have different views and application practices of the product life cycle concept when compared to the existing 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.

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.

In addition, the marketing decision-makers regarded all the marketing mix related aspects pertaining to people, processes and physical evidence as important except for the marketing mix aspects linked to processes in the maturity phase.

Marketing decision-makers in small manufacturing 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.

The following suggestions based on the results 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 product 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 than marketing mix related aspect creating a competitive advantage.

- **Process 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 new product in the market.

- (c) Maturity phase – complaints handling and a toll free number are also important to provide back-up service and support in the maturity 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 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 and enhance the brand image and support an existing corporate image after the introduction of a product in 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.
- (e) 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 these 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 future research.

These findings further strengthen the view of Rafiq and Ahmed (1995: 5), in paragraph 2.4, in chapter two, who 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 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.

(f) Main finding 5

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 chapter one, paragraph 1.6.1 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 or an 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.

8.4 LINKING THE QUESTIONS AND RESEARCH RESULTS TO THE DIFFERENT RESEARCH OBJECTIVES

The results in chapter seven enabled the study to support, or not support, the research hypotheses. 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

Secondary objectives		Questions	Major findings
(a)	To determine whether marketing decision-makers in small organisations in Northern Cyprus can identify in what phase of the product life cycle an individual product or a product range is.	8, 9, 10	8,9,10
(b)	To identify the application of marketing-decision making variables in the various phases of the product life cycle concept by small organisations.	15, 19	21 to 33 44 to 54
(c)	To identify the importance of elements of the marketing mix variables by small manufacturing organisations in the different product life cycle phases.	2,15,19	21 to 33 44 to 54
(d)	To investigate the ability of small organisations to describe the marketing objectives within the various product life cycle phases as indicated in the theory.	16	34 to 39
(e)	To establish the ability of small organisations to identify product life cycle characteristics as depicted in marketing literature.	18	41 to 43
(f)	To investigate the ability of small organisations to link marketing strategies with phases of the product life cycle theory according to the theory classification.	20	55 to 57
(g)	To identify the different marketing objectives that small organisations formulate for their products in each phase of the product life cycle.	10.3	12 to 14
(h)	To identify the factors influencing a product through the various phases of the product life cycle among small organisations in Northern Cyprus.	10.2	11
(i)	To determine the potential of the product life cycle concept for decision-making in small manufacturing organisations in Northern Cyprus.	2, 3	15, 16
(j)	To determine who is responsible for marketing decision-making in small manufacturing organisations.	2, 14	2

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 manufacturing organisations in Northern Cyprus with between 10-49 employees. 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 following limitations are formulated:

- The aim of the literature was to conclude 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.
- This study has 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 the business organisations in Northern Cyprus.

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 for a 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 one industry; the manufacturing industry in Northern Cyprus.
- The criteria for respondents to be included in the sample were very stringent. This was necessary to test the actual application of the PLC and not allowing marketing decision-makers in small manufacturing organisations to report their perceptions on the use and application of the product life cycle concept.

8.6 RECOMMENDATIONS

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

8.6.1 Recommendations 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 Northern Cyprus 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 by using the same methodology and measurement instrument.

- 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 a physical product.
- Empirical research on the use and applicability of the product life cycle concept should concentrate more on small 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 Northern Cyprus concentrating on small organisations, due to the contribution of small organisations to the local economy expressed by their contribution to employment and exports.
- 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 Northern Cyprus 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
- A replication study should be conducted in other third world countries as well as in other first world countries.

8.6.2 Recommendations based on the literature review

The following recommendations for possible future empirical research in reaction to current available literature on the application and use of the product life cycle concept were formulated by this study:

- It was observed during the literature search carried out by this study that marketing definitions in current literature (for 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 product life cycle 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 theory should be treated with greater responsibility in marketing curricula and teaching on undergraduate or postgraduate 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 product life cycle 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.

8.7 SUMMARY

This study was carried out to investigate the product life cycle concept as an instrument in marketing decision-making among marketing decision-makers in small manufacturing organisations in Northern Cyprus.

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.

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Questionnaire number

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QUESTIONNAIRE**Interviewer Instruction:**

Phone the number indicated on the list provided and ask the following.

Good day, Sir/Madam. My name is ...(state your name). I represent Mr Ahmet Ertugan who is a lecturer/doctorate student at the Near East University, Lefkoşa and he is currently collecting data for his thesis. **Can you please tell me who in your organisation is responsible for marketing decision-making?**

Interviewer Instruction:

Ask to speak to this person, **INTRODUCE YOURSELF** and ask the following questions to him or her.

Good day, Sir/Madam. My name is ...(state your name). I represent Mr Ahmet Ertugan who is a lecturer/doctorate student at the Near East University, Lefkoşa and he is currently collecting data for his thesis on the product life cycle concept.

May I please use a minute of your time to ask a few questions?

Screening question:

Are you familiar with the product life cycle concept (PLC) and does your organisation apply this concept?

Yes, I am familiar with the PLC concept and my organisation does apply the PLC concept	Yes, I am familiar with the PLC concept and my organisation does not apply the PLC concept	No, I am not familiar with the PLC concept
<u>Interviewer Instruction:</u> Ask to make an appointment with this person	<u>Interviewer Instruction:</u> Terminate the interview and thank the respondent for his/her time	<u>Interviewer Instruction:</u> Terminate the interview and thank the respondent for his/her time

Date of Interview: _____

Time of Interview: _____

Address: _____

V1

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 1-3

INTRODUCTION AT THE START OF THE INTERVIEW

Good day, Sir/Madam. My name is ...(state your name). I represent Mr Ahmet Ertugan who is a lecturer/doctorate student at the Near East University, Lefkoşa and he is currently collecting data for his thesis. The topic of his thesis is **"The value of the product life cycle concept in setting up marketing strategy in small organisations in Northern Cyprus."**

May I please use a minute of your time to ask a few questions? The interview should take about **25 minutes**. I want to ensure you that the interview will be treated with the strictest confidence and that all information given to me will be used for research purposes only.

SECTION A

Q1. Location of the organisation

Q2. Classification

Q3. What is the nature of your core business?

Manufacturer	SIC

V2		4
V3		5

V4		6-7
V5		8-9

Appendix 1

Q4: Name all the **departments or functions** in your organisation.

Interviewer Instruction:	
Please do not read the list to the respondent.	
Mark the verbatim answer in the appropriate block!	
Accounts	
Buying/Purchasing	
Communication	
Customer service	
Finance	
Human resources	
Information Technology (IT)	
Legal	
Marketing	
Production	
Public Relations (PR)	
Sales	
Technical Support	
Research and Development (R&D)	

Other:

Q5. How many employees are working in your organisation?	11-15	18-20	21-30	31-40	41-50
	Other: _____				

V6	<input type="checkbox"/>	10
V7	<input type="checkbox"/>	11
V8	<input type="checkbox"/>	12
V9	<input type="checkbox"/>	13
V10	<input type="checkbox"/>	14
V11	<input type="checkbox"/>	15
V12	<input type="checkbox"/>	16
V13	<input type="checkbox"/>	17
V14	<input type="checkbox"/>	18
V15	<input type="checkbox"/>	19
V16	<input type="checkbox"/>	20
V17	<input type="checkbox"/>	21
V18	<input type="checkbox"/>	22
V19	<input type="checkbox"/>	23
V20	<input type="checkbox"/>	24-25
V21	<input type="checkbox"/>	26

SECTION B

Q6: How **important** is the application of the product life cycle concept in the execution of the following aspects in your organisation? (Use the scale in such a way that "1" would indicate that the aspect is not important at all and that "5" would indicate that the aspect is extremely important).

	Not important at all			Extremely important		
	1	2	3	4	5	Don't know
Buying						
Costing						
Forecasting						
Manufacturing						
Product development						
Pricing						
Distribution						
Advertising						
Sales promotion						
Monitoring market share						
Competitive evaluation						
Managing brands						
Allocating resources						

Q7: Name three aspects that provide a competitive advantage for your organisation?

7.1

7.2

7.3

V22		27
V23		28
V24		29
V25		30
V26		31
V27		32
V28		33
V29		34
V30		35
V31		36
V32		37
V33		38
V34		39

V35		40-41
V36		42-43
V37		44-45

Appendix 1

Q8: Indicate the **nature** of your **product assortment**.

A single product	One product range	Multiple product ranges
------------------	-------------------	-------------------------

Q9: If you have **multiple product ranges**, will you apply the PLC concept on each individual product within each product range?

Yes	No
-----	----

Q10: In what phase of the product life cycle concept is your **primary product** positioned? **The primary product can be regarded as the best selling product or product range in your organisation.**

Introductory phase	Growth phase	Maturity phase	Declining phase
--------------------	--------------	----------------	-----------------

Q10.1: Provide a **short description** of your **primary product/product range**:

V38		46
V39		47
V40		48
V41		49-50
V42		51-52
V43		53-54

Appendix 1

Q10.2: Provide a **reason(s)** why this product or product range is your **best seller**:

V44			55-56
V45			57-58
V46			59-60

Interviewer instruction.

Show the flash card to the respondent to familiarise the respondent with the meaning of a marketing objective

Q10.3: Describe the **marketing objective** for the primary product or product range in the product life cycle phase indicated in **Q10**.

V47			61-62
V48			63-64
V49			65-66

Interviewer instruction:

Show the flash card to the respondent to familiarise him/her with the meaning of strategic marketing, strategic marketing planning & development and marketing strategy.

SECTION C

Q11: Does your organisation engage in **strategic marketing planning and development** using the product life cycle stages?

Yes	No
-----	----

V50

67

Q12: **If yes**, how often does your organisation do **strategic marketing planning and development**?

Monthly	Six monthly	Annually	Other
---------	----------------	----------	-------

V51

68

Q13: To what extent does the product life cycle concept influence **marketing strategy planning and development** in your organisation? (Use the scale in such a way that "1" would indicate a very low influence and "5" an extremely high influence).

Very low influence		Extremely high influence		
1	2	3	4	5

V52

69

Appendix 1

Q14: What **degree of control** does your organisation have over the following marketing mix instruments? (Use the scale in such a way that a “1” would indicate no degree of control and “5” would indicate a full degree of control).

Interviewer instruction:

Show the flash cards to the respondent to familiarise the respondent with a description of each marketing instrument.

Marketing mix instruments	No control					Full control				
	1	2	3	4	5	1	2	3	4	5
Product										
Price										
Place										
Promotion										
People										
Processes										
Physical evidence										

V53		70
V54		71
V55		72
V56		73
V57		74
V58		75
V59		76

Q15: How **important** is each of the following aspects when you associate them with the four phases of the product life cycle. (Use the scale in such a way that a “1” would indicate that the aspect is not important at all and that a “5” would indicate that the aspect is extremely important).

PHASES IN THE PRODUCT LIFE CYCLE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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Not important at all		Extremely important			Not important at all		Extremely important		Not important at all		Extremely important		Not important at all		Extremely important																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
People	Training of personnel	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

Interviewer instruction:

Show the flash card to the respondent to familiarise the respondent with the meaning of a marketing objective



Q16: Provide a short description of the appropriate marketing objective that you would associate within each phase of the product life cycle.

16.1 Introductory phase:

16.12 Growth phase:

16.13 Maturity phase

16.14 Declining phase

V60 125-126

V61 127-128

V62 129-130

V63 131-132

V64 133-134

V65 135-136

V66 137-138

V67 139-140

Q17: What is the **likelihood** that you will continue using the product life cycle concept in future for general management decision-making and marketing decision-making? (Use the scale in such a way that “1” would indicate very unlikely and that “5” would indicate extremely likely).

	Very unlikely			Extreme ly likely	
General management decision-making	1	2	3	4	5
Marketing decision-making	1	2	3	4	5

114

V69

142

Q18: Match the following **characteristics** in **Column A** to the most appropriate phases in **Column B** by means of a cross next to the word or description in **Column A**.

A characteristic in COLUMN A can appear in one or more phases of the product life cycle in COLUMN B. Give the flash card with COLUMN A and COLUMN B to the respondent.

COLUMN A	COLUMN B			
	Introductory phase	Growth phase	Maturity phase	Declining phase
Low sales				
High profits				
Increasing sales				
Low cost per customer				
Declining sales				
Negative profits (losses)				
Few competitors				
High cost per customer				
Average cost per customer				
Stable number of competitors but beginning to decline				
Declining number of competitors				
Declining profits				
Growing number of competitors				
Increasing profits				
Peak sales				

				143-145
				147-150
				151-154
				155-158
				159-162
				163-166
				167-170
				171-174
				175-178
				179-182
				183-186
				187-190
				191-194
				195-198
				199-202

Q19: How important is each of the following aspects when you associate them with the four phases of the product life cycle? (Use the scale in such a way that a “1” would indicate that the aspect is not important at all and that a “5” would indicate that the aspect is extremely important).

PHASES IN THE PRODUCT LIFE CYCLE																		
	Introductory phase			Growth phase			Maturity phase			Declining phase								
	Not important at all	Extremely important	Not important at all	Extremely important	Not important at all	Extremely important	Not important at all	Extremely important	Not important at all	Extremely important								
Product	Quality	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	203-206	
	Brand name	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	207-210	
	Features and options	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	211-214	
	Warranties	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	215-218	
Price	High price	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	219-222	
	Discounts	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	223-226	
	Low price	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	227-230	
	Payment terms	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	231-234	
Place	Location of premises	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	235-238	
	Large number of outlets (incentive)	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	239-242	
	Small number of outlets (selective)	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	243-246	
	Specialised number of outlets (exclusive)	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	247-250	
Promotion	Sales promotion	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	252-254	
	Advertising	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	255-258	
	Personal selling	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	259-262	
	Publicity (PR)	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	263-266	

Appendix 1

Q20: Link the following strategies in **Column A** to the most appropriate phase in **Column B** by means of a cross next to the strategy described in **Column A**.

Interviewer instruction:
Each strategy can only be linked once!
Give the flash card with **COLUMN A** and **COLUMN B** to the respondent

COLUMN A	COLUMN B			
	Introductory phase	Growth phase	Maturity phase	Declining phase
Diversify brands and models				
Offer a basic product				
Phasing out weak products				
Offer product extensions, service and warranties				
Cut prices				
Charge a cost plus price				
Set a price to match or better the prices of competitors				
Set a price to penetrate the market				
Build awareness and interest in the mass market through advertising				
Reduce the advertising level needed to retain hard core loyal customers				
Build product awareness among early adopters				
Stress brand differences and benefits				
Increase and encourage brand switching				
Reduce sales promotion to the minimum level				
Use heavy sales promotion to entice trial				
Reduce sales promotion to take advantage of a heavy consumer demand				
Build intensive distribution				
Build selective distribution				
Go selective and phase out all unprofitable outlets				
Build more intensive distribution				

V70					267
V71					268
V72					269
V73					170
V74					271
V75					272
V76					273
V77					274
V78					275
V79					276
V80					277
V81					278
V82					279
V83					280
V84					281
V85					282
V86					283
V87					284
V88					285
V89					286

THANK YOU FOR YOUR CO-OPERATION!

Anket numarası

--	--	--

For office use
onlyANKETV1

--	--	--

 1-3Görüşmeci talimatı

Listede verilen numarayı arayıp aşağıdakileri sorunuz.

İyi günler, efendim.. Ben ...(adınızı veriniz). Yakın Doğu Ünivertitesi'nde öğretim görevlisi ve doktora öğrencisi Ahmet Ertugan'ı temsilen, onun doktora tezine veri toplamak için arıyorum. **İşletmenizdeki, pazarlama kararlarıyla ilgilenen sorumlu kişi ile görüşebilir miyim?**

Görüşmeci talimatı

Pazarlama kararlarından sorumlu kişi ile görüşmeyi rica ediniz.

KENDİNİZİ TANITINIZ ve bu kişiye aşağıdaki soruları yöneltiniz.

İyi günler, efendim.. Ben ...(adınızı veriniz). Yakın Doğu Ünivertitesi'nde öğretim görevlisi ve doktora öğrencisi Ahmet Ertugan'ı temsilen arıyorum. Kendisi, ürün yaşam dönemi ve kavramı üzerine hazırladığı doktora tezine veri topluyor. Bir şey sormak için **bir dakikanızı rica edebilir miyim?**

Eleme sorusu:

"Ürün yaşam dönemi (ÜYD)" diye bir kavram biliyor musunuz? Bu kavramı işletmenizde uyguluyor musunuz?

Evet, ÜYD kavramını biliyorum ve işletmemiz ÜYD kavramını uyguluyor.	Evet, ÜYD kavramını biliyorum ancak işletmemiz bu kavramı uygulamıyor.	Hayır, ÜYD kavramını hiç duymadım.
Görüşmeci talimatı: Bu kişi ile görüşmek için bir randevu rica ediniz.	Görüşmeci talimatı: Görüşmeye son veriniz ve görüştüğünüz kişiye ayırdığı zaman için teşekkür ediniz.	Görüşmeci talimatı: Görüşmeye son veriniz ve görüştüğünüz kişiye ayırdığı zaman için teşekkür ediniz.

Görüşme tarihi:Görüşme saati:Adres:

GÖRÜŞMEYE BAŞLARKEN TANITIM:

. İyi günler, efendim.. Ben ...(adınızı veriniz). Yakın Doğu Ünivertitesi'nde öğretim görevlisi ve doktora öğrencisi Ahmet Ertugan'ı temsilen gelmiş bulunuyorum. Kendisi, ürün yaşam dönemi ve kavramı üzerine hazırladığı doktora tezine veri topluyor. Tezin konusu, **“Kuzey Kıbrıs'taki küçük işletmelerde ürün yaşam dönemi kavramının pazarlama stratejileri belirlenmesindeki değeri”** olarak geçiyor.

Sormak istediklerim için zamanınızı rica ediyorum. Görüşmemiz **25 dakika** kadar sürecektir. Sizi temenni ederim ki görüşeceğimiz her şey son derece gizli tutulacak ve alacağım bilgiler yalnızca araştırma amaçlarına uygun olarak kullanılacaktır.

BÖLÜM A

S1. İşletmenin bulunduğu bölge

S2. Sınıfı

S3. İşletmenizin esas işi nedir?

İmalatçı	SIC

V2		4
V3		5

V4		6-7
V5		8-9

Appendix 3

S4: İşletmenizdeki iş bölümleri ya da görevler nelerdir?

Görüşmeci talimatı	
Aşığıdaki listeyi göstermeyiniz. Aynı anlama gelenleri işaretleyiniz!	
Muhasebe	
Alım işleri	
İletişim	
Müşteri hizmeti	
Finans	
İnsan kaynakları	
Bilgi işlem (bilgisayarlı)	
Yasal	
Pazarlama	
İmalat	
Halkla İlişkiler	
Satış	
Teknik destek	
Araştırma-Geliştirme (Ar-Ge)	

Diğer:

S5. İşletmenizde kaç eleman çalışıyor?	11-15	18-20	21-30	31-40	41-50
	Diğer: _____				

V6	<input type="checkbox"/>	10
V7	<input type="checkbox"/>	11
V8	<input type="checkbox"/>	12
V9	<input type="checkbox"/>	13
V10	<input type="checkbox"/>	14
V11	<input type="checkbox"/>	15
V12	<input type="checkbox"/>	16
V13	<input type="checkbox"/>	17
V14	<input type="checkbox"/>	18
V15	<input type="checkbox"/>	19
V16	<input type="checkbox"/>	20
V17	<input type="checkbox"/>	21
V18	<input type="checkbox"/>	22
V19	<input type="checkbox"/>	23
V20	<input type="checkbox"/>	24-25
V21	<input type="checkbox"/>	26

BÖLÜM B:

S6: Aşağıdaki işlevlerin yürütülmesinde ürün yaşam dönemi kavramı işletmeniz için ne kadar önem taşıyor? (Aşağıdaki ölçekte değerlendirme yaparken “1” hiç önem taşıyor, “5” ise çok önem taşıyor şeklinde olmalı).

	Hiç önem taşıyor		Çok önem taşıyor			
Satın alma	1	2	3	4	5	Bilmiyorum
Maliyetlendirme	1	2	3	4	5	Bilmiyorum
Tahmin yürütme	1	2	3	4	5	Bilmiyorum
İmalat	1	2	3	4	5	Bilmiyorum
Ürün geliştirme	1	2	3	4	5	Bilmiyorum
Fiyatlandırma	1	2	3	4	5	Bilmiyorum
Dağıtım	1	2	3	4	5	Bilmiyorum
Reklam	1	2	3	4	5	Bilmiyorum
Satış promosyonu	1	2	3	4	5	Bilmiyorum
Pazar payını gözlemleme	1	2	3	4	5	Bilmiyorum
Rakiplerle kıyaslama	1	2	3	4	5	Bilmiyorum
Marka yönetimi	1	2	3	4	5	Bilmiyorum
Kaynak tahsisi	1	2	3	4	5	Bilmiyorum

V22		27
V23		28
V24		29
V25		30
V26		31
V27		32
V28		33
V29		34
V30		35
V31		36
V32		37
V33		38
V34		39

S7: İşletmenize rekabet avantajı sağlayan üç işlev belirtiniz.

7.1

7.2

7.3

V35		40-41
V36		42-43
V37		44-45

Appendix 3

S8: Ürün çeşitlerinizi nasıl tanımlıyorsunuz.

Tek bir ürün	Tek bir ürün ve çeşitleri	Birçok ürün ve çeşitleri
--------------	---------------------------	--------------------------

V38

46

S9: Birçok ürün çeşidiniz varsa, ÜYD kavramını her bir ürün ve çeşitlerinde uyguluyor musunuz?

Evet	Hayır
------	-------

V39

47

S10: Ürün yaşam dönemi kavramına göre birincil ürününüzün konumu nedir? En çok satan ürününüzü ya da çeşitlerini birincil ürün olarak tanımlayabilirsiniz.

Giriş aşaması	Büyüme aşaması	Olgunluk aşaması	Düşüş aşaması
---------------	----------------	------------------	---------------

V40

48

S10.1: Birincil ürün/ürün çeşitlerinizin kısa bir tanımını yapınız.

V41

49-50

V42

51-52

V43

53-54

Appendix 3

S10.2: En çok satan ürününüzün ya da çeşitlerinin neden en çok sattığına bir ya da daha fazla neden gösteriniz.

V44	<table><tr><td></td><td></td></tr></table>			55-56
V45	<table><tr><td></td><td></td></tr></table>			57-58
V46	<table><tr><td></td><td></td></tr></table>			59-60

Görüşmeci talimatı

Pazarlama amacının ne anlama geldiğini belirtmek için konuştuğunuz kimseye bilgilendirme kartını gösteriniz.

S10.3: Ürün yaşam dönemi aşamasını S10'da belirttiğiniz birincil ürün ve çeşitlerinize ilişkin pazarlama amacınızı tanımlayınız.

V47	<table><tr><td></td><td></td></tr></table>			61-62
V48	<table><tr><td></td><td></td></tr></table>			63-64
V49	<table><tr><td></td><td></td></tr></table>			65-66

Görüşmeci talimatı:

Stratejik pazarlama, stratejik pazarlama planlaması ve geliştirilmesi, ve pazarlama stratejisi kavramlarının ne anlama geldiğini belirtmek için konuştuğunuz kimseye bilgilendirme kartını gösteriniz.

BÖLÜM C

S11: İşletmeniz, ürün yaşam dönemi aşamalarına bakarak stratejik pazarlama planlaması ve geliştirilme çalışmaları yapıyor mu?

Evet	Hayır
------	-------

V50

67

S12: Evet diyorsanız, işletmeniz, stratejik pazarlama planlaması ve geliştirilme çalışmaları ne kadar sık yapıyor?

Aylık	Altı ayda bir	Yıllık	Diğer
-------	---------------	--------	-------

V51

68

S13: Ürün yaşam dönemi kavramı işletmenizdeki stratejik pazarlama planlaması ve geliştirilme çalışmalarını ne derecede etkiliyor? (Aşağıdaki ölçekte değerlendirme yaparken "1" hiç önem taşımıyor, "5" ise çok önem taşıyor şeklinde olmalı).

Çok az etkiliyor				Çok fazla etkiliyor
1	2	3	4	5

V52

69

Appendix 3

S14: Aşağıda sıralanan pazarlama karması araçları üzerinde işletmenizin ne ölçüde denetimi bulunuyor? (Aşağıdaki ölçekte değerlendirme yaparken “1” hiç önem taşıyor, “5” ise çok önem taşıyor şeklinde olmalı).

Görüşmeci talimatı:

Bilgilendirme kartlarını gösterip konuştuğunuz kimseye pazarlama karması araçlarının her birini tanıtınız.

Pazarlama karması araçları	Hiç denetimsiz					Tam denetimli	
	1	2	3	4	5		
Ürün						V53	70
Fiyat						V54	71
Yer (dağıtım)						V55	72
Özendirme (promosyon)						V56	73
İş görenler						V57	74
İşlemler						V58	75
Fiziksel görünüm						V59	76

S15: Aşağıdaki işlevleri ürün yaşam döngüsü aşamalarına ilişkilendirdiğinizde bu işlevleri ne kadar önemli buluyorsunuz. (Aşağıdaki ölçekte değerlendirme yaparken “1” hiç önem taşıyor, “5” ise çok önem taşıyor şeklinde olmalı).

ÜRÜN YAŞAM DÖNEMİ AŞAMALARI																
	Giriş aşaması				Büyüme aşaması				Olgunluk aşaması				Çöküş aşaması			
	Hiç önem taşımıyor	Çok önem taşıyor			Hiç önem taşımıyor	Çok önem taşıyor			Hiç önem taşımıyor	Çok önem taşıyor			Hiç önem taşımıyor	Çok önem taşıyor		
İş görülenler	Personel eğitimi	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	Personel teşvikleri	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	Personelin bilgisi	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	Personelin bağlılığı	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
İşlemler	Bilişim sistemleri	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	Şikayetlerin dinlenmesi	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	Hasarsız işlem	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	Tutum ve işlemler	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Fiziksel görünüm	İşletmenin şöhreti	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	İşletmenin adı	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	İşletmenin amblemi	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	İş görenlerin giyimi	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

[illegible]

Görüşmeci talimatı

Pazarlama amacının ne anlama geldiğini belirtmek için konuştuğunuz kimseye bilgilendirme kartını gösteriniz.

S16: Ürün yaşam dönemi aşamalarının her birine uygun gördüğünüz pazarlama amacını kısaca anlatınız.

16.1 Giriş aşaması:

16.12 Büyüme aşaması:

16.13 Olgunluk aşaması:

16.14 Çöküş aşaması:

V60 125-126

V61 127-128

V62 129-130

V63 131-132

V64 133-134

V65 135-136

V66 137-138

V67 139-140

12

Appendix 3

S20: Aşağıda SÜTUN A'da belirtilen stratejileri SÜTUN B'deki aşamalarla bir çarpı işareti koyarak eşleştiriniz.

Görüşmeci talimatı

Her strateji ancak bir defa eşleştirilmeli!

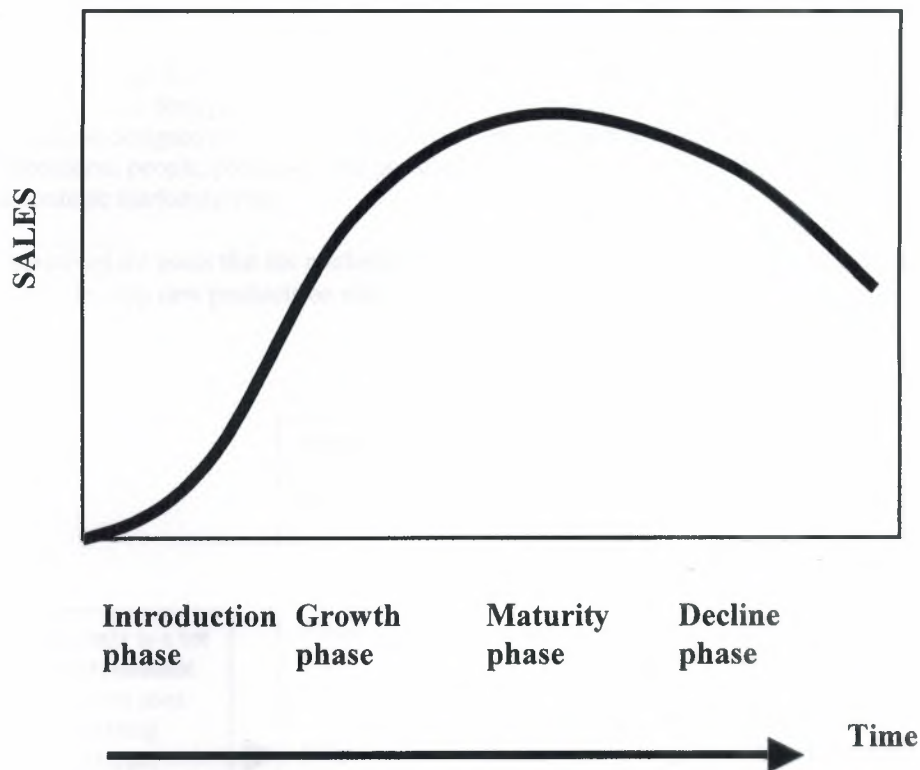
SÜTUN A ve SÜTUN B için bilgilendirme kartını görüştüğünüz kişiye veriniz.

SÜTUN A	SÜTUN B			
	Giriş aşaması	Büyüme aşaması	Olgunluk aşaması	Çöküş aşaması
Marka ve modelleri çeşitleme				
Sade bir ürün önerme				
Zayıf ürünleri elden çıkarma				
Ürün yan çeşitleri, servis ve garanti önerme				
Fiyatlarda indirim yapma				
Maliyet artı bir fiyat belirleme				
Rekabet fiyatlarına uygun ya da altında fiyat belirleme				
Pazara yayılmak için fiyat belirleme				
Reklam aracılığıyla toplu pazarda bilinç ve ilgiyi artırma				
Reklam kısıtlamalarına giderek işletmeye bağlı esas müşterileri elde tutma				
İlk dalga müşteriler arasında ürün bilincini devam ettirme				
Marka farklılık ve faydalarını vurgulama				
Marka değiştirmeyi çoğalt ve cesaretlendirme				
Satış promosyonlarını en aza indirme				
Satış promosyonlarını yoğunlaştırarak ürünün denenmesini özendirme				
Satış promosyonlarını azaltarak yoğun tüketici talebinden yararlanma				
Dağıtımı yoğunlaştırma				
Dağıtımda seçici olma				
Seçici olma kazanç sağlamayan satış noktalarını kapama				
Dağıtımı yoğunlaştırıp yayma				

V70					267
V71					268
V72					269
V73					170
V74					271
V75					272
V76					273
V77					274
V78					275
V79					276
V80					277
V81					278
V82					279
V83					280
V84					281
V85					282
V86					283
V87					284
V88					285
V89					286

KATKILARINIZ İÇİN TEŞEKKÜR EDERİZ

FLASH CARD
THE PRODUCT LIFE CYCLE (PLC)



FLASH CARD TERMINOLGY

Strategic marketing is a market driven process of strategy development, taking into account a constantly changing business environment and the need to achieve high levels of customer satisfaction. Strategic marketing focuses on organisational performance rather than the traditional concern about increasing sales. Strategic marketing links the organisation with the environment and views marketing as a responsibility of the entire organisation.

Strategic marketing planning and development involves the planning and development of the broad marketing objectives and strategy based on analysis of the current market situation and opportunities. It is the process of planning, developing and maintaining a strategic fit between the organisation's goals and capabilities and its changing environment.

Marketing strategy is the marketing logic by which an organisation hopes to achieve its marketing objectives. It involves the formulation of marketing objectives, developing, implementing and managing the marketing programme designed to meet the needs of customers in each market target. It includes product, price, place, promotion, people, processes, and physical evidence decisions and can be seen as specific tactics to execute the strategic marketing plan.

Marketing objectives are goals that the marketing department like to attain; e.g., marketing management must continuously develop new products on which a high rate of return can be realised.

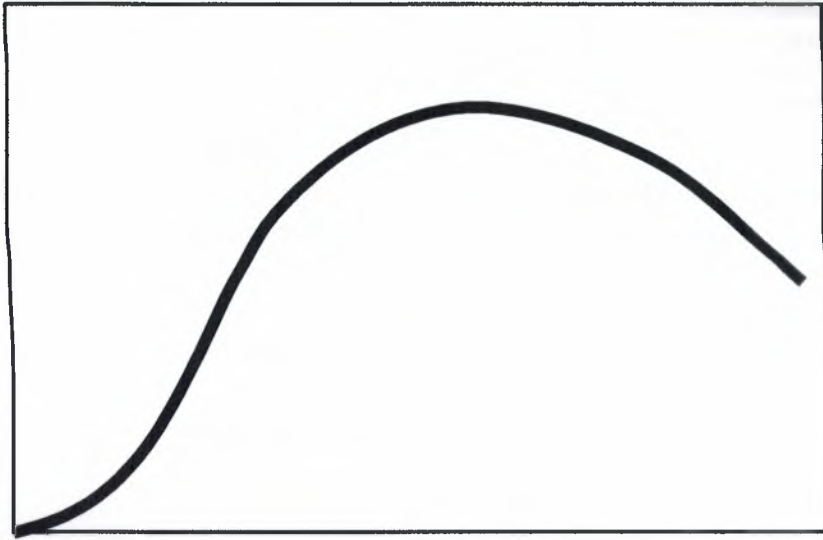
The **marketing mix** is a set of marketing **instruments** that the organisation uses to pursue its marketing objectives in the target market

Marketing mix instruments

Product:	quality, brand name, warranty, features and options
Price:	price level, discounts, allowances, payment terms, customers' perceived value
Place:	location, accessibility, distribution channels, and distribution coverage
Promotion:	advertising, publicity, sales promotion, personal selling, direct marketing
People:	personnel training, personnel direction, personnel commitment, personnel incentives, personnel appearance, interpersonal behaviour, attitudes
Processes:	quality, speed, information systems, complaints handling, toll free number and policies & procedures
Physical evidence:	layout and noise level of the environment reputation, name, logo and corporate dress

BİLGİLENDİRME KARTI
ÜRÜN YAŞAM DÖNEMİ (ÜYD)

SATIŞLAR



**Giriş
aşaması**

**Büyüme
aşaması**

**Olgunluk
aşaması**

**Çöküş
aşaması**



Zaman

BİLGİLENDİRME KARTI TERİMLERİ

Stratejik pazarlama sürekli değişim içinde olan iş çevresini ve müşteriye yüksek ölçüde hoşnut kılma gerekliliğini hesaba katan , **pazarlama odaklı** bir strateji geliştirme işlemidir. Stratejik pazarlama, satışların artırılması gibi geleneksel endişelerin yerine örgütün performansına odaklanır. Stratejik pazarlama, örgütün çevre ile bağlantısını sağlar, ve pazarlamanın tüm örgütün sorumluluğunda olduğu görüşünü benimser.

Stratejik pazarlama ve geliştirme, yaşanan pazar durumu ve fırsatların incelenmesi temelinde kapsamlı pazarlama amaçları ve stratejilerin tasarlanıp geliştirilmesini içerir. Örgütün amaçları, yetenekleri ve değişim içinde olan çevresi arasında stratejik uyum sağlayan bir planlama, geliştirme ve sürdürme işlemidir.

Pazarlama stratejisi, bir örgütün umduğu, pazarlama amaçlarına ulaşabileceği yolun pazarlama mantığıdır. Hedef Pazar kitlelerinin her birinde, müşterilerin gereksinimlerini karşılamak için tasarlanan pazarlama amaçlarının formülasyonu, geliştirilmesi, uygulanması ve pazarlama program yönetimini içerir. Ürün, fiyat, yer, promosyon, iş görenler, işlemler ve işletmenin fiziksel görünümünden oluşan stratejik pazarlama planının yürütülmesinde kullanılan özgün taktikler olarak da görülebilir.

Pazarlama amaçları, pazarlama bölümünün ulaşmayı arzuladığı hedeflerdir. Örnek: pazarlama yönetimi yüksek getiri sağlayabilecek yeni ürünleri sürekli olarak geliştirmelidir.

Pazarlama karması, örgütün hedef kitlesine yönelik pazarlama hedeflerine ulaşmak için kullandığı bir dizi **pazarlama araçlarından** oluşur.

Pazarlama karması araçları

Ürün:	kalite, marka adı, teminat, özellikler ve seçenekler
Fiyat:	fiyat seviyesi, indirimler, muafiyet, ödeme yöntemleri, müşterilerin algıladığı değer
Yer:	konum, ulaşılabilirlik, dağıtım kanalları, ve dağıtım kapsam
Promosyon:	reklam, tanıtım, satış promosyonu, doğrudan satış, doğrudan pazarlama
İnsanlar:	personel eğitimi, personelin yönlendirilmesi, personelin bağlılığı, personel teşvikleri, personelin görünümü, kişiler arası davranış, tavırlar
İşlemler:	kalite, hız, bilişim sistemleri, şikayet dinleme, hasarsız işlem ve tutum & uygulamalar
Fiziksel görünüm:	yerleşim düzeni ve çevredeki gürültü seviyesi şöhret, ad, amblem ve iş görenlerin giyimi