

**THE ADOPTION OF THE MARKETING CONCEPT
IN THE OPERATIONS OF FREE TRADE ZONES:
A COMPARATIVE GLOBAL STUDY**

by

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DEDICATION

**The work and efforts exerted on this study is dedicated to:
the soul of my father, my mother, my wife, my daughter
Fadwa, and my sons Mohammed and Abdulkarim.**

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'THE ADOPTION OF THE MARKETING CONCEPT IN THE OPERATIONS OF FREE TRADE ZONES: A COMPARATIVE GLOBAL STUDY'

ABSTRACT

This study is an empirical investigation of the marketing concept adoption by the authorities of Free Trade Zones (FTZs) throughout the world. The aim of the study is to gain an insight into the marketing orientation of the FTZs authorities by systematically identifying, analysing and evaluating the attitudes of selected FTZs authorities towards the adoption of the marketing concept in the operations of their zones. Therefore, forty variables representing the key elements of the marketing concept (i.e., satisfying the customer needs, achieving organisational goals and integrating the marketing functions) are developed to describe and profile the FTZs according to their marketing orientation.

Before starting the data analysis, an attempt is made to develop a proper understanding of FTZs. Therefore, a thorough investigation is conducted on FTZs in terms of a variety of aspects including the historical development, the broad concept of free trade; the definitions, the types, the characteristics, and the advantages of FTZs; the FTZs development, spread, and status in modern times; and the future of FTZs. The efforts made here resulted in the production of two different models. One model shows how FTZs are related to and distinguished from other forms of the broader concept of free trade. The other model presents an alternative way of classifying the different types of FTZs. In addition, since this study is about the marketing orientation of FTZs, the marketing concept is explored in terms of: its evolution, its contrast with other management philosophies, its criticism, and its relevance to this study. The presentation of the marketing concept is concluded with a further model depicting the flow of transactions involved in a FTZ enterprise.

Of particular interest to this research is the establishment of the "confidence limits" of the marketing orientation in the FTZs operations. Such limits are obtained through taking the average of the received responses of the FTZs experts panel, and on which we would be able to assign the FTZs into three suggested groups on the basis of their marketing orientation (i.e., most, moderate, and less marketing-oriented). With such "a priori" classification of the FTZs, under study, the data can be readily available for further applications of statistical techniques, and more meaningful analysis can be carried out.

The design of the research is guided by a number of hypotheses about discrimination among/between the FTZs groups according to their authorities' attitudes toward the variables related to the marketing concept in the operations of the zones. The discrimination is made among/between: (a) the most, the moderate, and the less marketing-oriented FTZs; (b) the marketing-oriented (i.e., the most and the moderate combined together) and the less marketing-oriented FTZs; and (c) the FTZs in the developed and developing countries. In addition, the research is based upon another set of hypotheses regarding the significant differences between the FTZs experts and each of the above mentioned groups of FTZs' authorities, in their evaluative attitudes toward the marketing concept variables.

The required primary data are collected via international mail survey preceded by pre-contacts by telephone and telex. All the attitudinal measures developed for this study are assessed in terms of their reliability (using Cronbach's alpha) and validity (using content validity). Then the data are analysed by the application of a variety of statistical tests and techniques: (1) Discriminant Function Analysis (using both versions the Multiple and the Two-group DFA); (2) the Wilks' Lambda for testing the significance of the hypotheses related to the DFA applications by considering all the variables in aggregate; (3) the Univariate F-ratio also for testing the significance of the hypotheses related to the DFA applications but by considering each of the variables individually; (4) using the Jackknife method to validate each of the three DFA functions; (5) Profile Analysis; (6) the Hotelling's

T^2 statistic for testing the significance of the hypotheses related to the application of Profile Analysis; and (7) Correlation Analysis.

The Multiple DFA is applied to analyse the differences among the most, the moderate and the less marketing-oriented FTZs. And the hypotheses regarding the significance of the differences among the three groups are tested by both the Wilks' Lambda when all the variables are considered in aggregate, and the Univariate F-ratio when each variable is considered individually. The results indicate that there are significant differences among the three FTZs groups when all the variables are taken together and when each variable is considered separately. The multiple DFA findings show that there are 19 good discriminating variables among the three FTZs groups. Among the most important discriminators are: the maintenance of telecommunication systems, the offering of a facsimile system, the size of area available for manufacturing, the maximisation of sales, the maximisation of market share, marketing research activities, and expanding the area available for the zone privileges.

The Two-group DFA is applied twice. First, to analyse the differences between the marketing-oriented FTZs group (by combining the most and the moderate) and the less marketing-oriented FTZs group. Second, to analyse the differences between the FTZs in the developed countries and the FTZs in the developing countries. And the hypotheses regarding the significance of the differences between each set of the two FTZs groups is also tested by both the Wilks' Lambda when considering all the variables together, and the Univariate F-ratio when each variable is considered individually. In the first run of the Two-group DFA, the results indicate that there are significant differences between the marketing-oriented and the less marketing-oriented FTZs, in both cases when the marketing variables were considered collectively and when each variable is considered individually. Here there are 14 good discriminating variables, and among the main discriminators are: the marketing research activities, the maximisation of market share, the maximisation of sales, and the quality of the work force. The findings of the second run of the Two-group DFA shows that there are significant differences between the FTZs in the developed countries and the FTZs in the developing countries when all the variables are considered collectively. However, when each variable is considered individually, the results indicate that there are significant differences between the two typologies but only with respect to 9 variables including: the size of area available for manufacturing activities, the utilities for manufacturing activities, the capacity of space for warehousing and storage, and size of the work force.

Later on, Profile Analysis is applied twice. First, to compare the attitudes of the three FTZs groups (the most, the moderate, and the less marketing-oriented) and the attitudes of the FTZs' experts towards key discriminating variables. Second, to compare the attitudes of the FTZs in the developed and developing countries with the attitudes of the FTZs experts. In addition, the hypotheses regarding the differences/similarities, in both cases, are tested by the Hotelling's T^2 statistic. The first application of Profile Analysis shows that while the attitudes of the moderate marketing-oriented FTZs are similar to the attitudes of the FTZs experts, the attitudes of both the most and the less marketing-oriented FTZs are significantly different from the attitudes of the FTZs experts particularly with respect to the well-being of the work force, the capacity of storage and warehousing, and the marketing research activities. The second application of Profile Analysis indicates that the attitudinal differences among the three compared groups, towards most of the variables are not too big.

Finally, Correlation Analysis (the Pearson's Product-Moment) is applied. The main findings indicate that multicollinearity does not exist between any pair of variables, most of the variables are negligibly correlated, and that a number of variables are moderately correlated. And on the basis of these findings, the study is concluded with a number of interesting implications and potential applications for both the FTZs' authorities and the World Export Processing Zones Association (WEPZA).

TABLE OF CONTENTS

		<u>PAGE NO</u>
<u>CHAPTER ONE</u>	<u>INTRODUCTION</u>	1
1.1	Preface	2
1.2	Statement of the Research Problem	3
1.3	The Research Questions	6
1.4	The Research Objectives	8
1.5	The Research Hypotheses	9
1.6	Organisation of the Thesis	10
<u>CHAPTER TWO</u>	<u>THE FREE TRADE PHENOMENA</u>	18
2.1	Introduction	19
2.2	The Roots and Development of Free Trade Zones	20
2.3	The Broad Concept of Free Trade	28
2.4	The Nature of Free Trade Zones	35
	2.4.1 Definitions of Free Trade Zones	35
	2.4.2 Types of Free Trade Zones	39
	2.4.3 Characteristics of Free Trade Zones	50
	2.4.4 Advantages of Free Trade Zones	54
2.5	The FTZs Development, Spread, and Status in Modern Times	63
2.6	The Future of Free Trade Zones	68
	2.6.1 The Future of the FTZs Development: Spread and Decline	69
	2.6.2 The Future of the FTZ Concept	70
2.7	Summary	72
<u>CHAPTER THREE</u>	<u>THE MARKETING CONCEPT</u>	76
3.1	Introduction	77
3.2	Evolution of The Marketing Concept	77
	3.2.1 The Production-Oriented Philosophy	78
	3.2.2 The Product-Oriented Philosophy	79
	3.2.3 The Selling-Oriented Philosophy	79
	3.2.4 Emphasis on the Marketing Concept	80
	3.2.5 The Societal Marketing Philosophy	83

	<u>PAGE NO</u>
3.3 The Marketing Concept: Definition and Elements	85
3.4 Criticism of the Marketing Concept	89
3.5 Applying the Marketing Concept to the study of FTZs Operations	95
3.6 Summary	99
<u>CHAPTER FOUR</u> <u>THE LITERATURE REVIEW</u>	102
4.1 Introduction	103
4.2 Theoretical Studies	103
4.3 Empirical Studies	107
4.4 Articles	108
4.5 Published Reports	112
4.6 Books	122
4.7 Criticising the Literature	125
4.8 Summary	131
<u>CHAPTER FIVE</u> <u>RESEARCH DESIGN AND DATA COLLECTION</u>	140
5.1 Introduction	141
5.2 Research Design : Definition and Concept	141
5.3 Research Design Approaches	142
5.4 The Process of Research Design	145
5.4.1 Data Types and Sources	147
5.4.2 Deciding on the Appropriate Data Collection Methods	150
5.4.3 Questionnaire Development	154
5.4.4 Generating and Selecting the Marketing Concept Variables	157
5.4.5 Scale of Measurement	162
5.4.6 Specifying the Domains of Study	165
5.5 Data Collection	167
5.5.1 Stage 1: Collecting Data from the FTZ's Panel of Experts	168
5.5.2 Stage 2: Data Collection for the Main Survey	173
5.6 Preparing for Data Analysis	174
5.7 Summary	175

<u>CHAPTER SIX</u>	<u>THE METHODOLOGY OF ANALYSIS</u>	177
6.1	Introduction	178
6.2	Selecting the Methodology of Analysis	179
6.2.1	Selecting Among the Multivariate Techniques	180
6.2.2	Review of the Research Questions	182
6.3	Discriminant Function Analysis (DFA)	189
6.3.1	The Objectives and Assumptions of DFA	194
6.3.2	Description of the DFA Programme	195
6.3.3	The output of DFA	197
6.3.4	Justification of the Application of DFA	199
6.3.5	Validating the Discriminant Functions	201
6.4	Profile Analysis	204
6.5	Correlation Analysis	205
6.6	Statistical Tests of the Research Hypotheses	208
6.6.1	The Wilks' Lambda	209
6.6.2	The Univariate F-ratio Test	211
6.6.3	The Hotelling's T^2 Statistic	212
6.7	Reliability and Validity Assessment	214
6.7.1	Testing the Internal Consistency Reliability: Application of Cronbach's Alpha	215
6.7.2	Validity Assessment: Content (face) Validity	220
6.8	Summary	224
<u>CHAPTER SEVEN</u>	<u>RESEARCH FINDINGS</u>	227
7.1	Introduction	228
7.2	Testing the Research Hypotheses	230
7.2.1	The Wilks' Lambda Test	231
7.2.2	The Univariate F-Ratio Test	234
7.2.3	The Hotelling's T^2 Statistic	241
7.3	Main Results of Discriminant Function Analysis (DFA)	245
7.3.1	Validating the Discriminant Functions	246
7.3.2	Discrimination Among the Most, Moderate and Less Marketing-Oriented FTZs According to their Adoption of the Marketing Concept	249

7.3.3	Discriminating between the Groupings of the Marketing-Oriented (Most and Moderate) and the Group of Less Marketing-Oriented FTZs on the basis of their Authorities' Attitudes toward the Marketing Concept Adoption	263
7.3.4	Discriminating between the Attitudes of FTZs' Authorities, in the Developed Countries and in the Developing Countries, toward the Marketing Concept Adoption	269
7.4	Profile Analysis of the Evaluative Attitudes of the Authorities in the various FTZs' Groupings and The FTZs Experts Panel toward the Marketing Concept Adoption	277
7.4.1	Comparative Attitudes Between the Authorities of the FTZs Groupings (most/moderate/less marketing-oriented) and the FTZs' Experts Panel toward the Marketing Concept Adoption	278
7.4.2	Comparative Attitudes Between the FTZs' Authorities in the Developed/Developing Countries and the FTZs Experts Panel towards the Marketing Concept Adoption	281
7.5	Correlation Analysis	286
7.6	Reliability and Validity Assessment	290
7.6.1	Testing the Internal Consistency Reliability: Application of Cornbach's Alpha	290
7.6.2	Examining the Content (Face) Validity	295
7.7	Summary	298
<u>CHAPTER EIGHT</u>	<u>CONCLUSIONS AND RECOMMENDATIONS</u>	306
8.1	Summary	307
8.2	Main Conclusions of the Research Findings	311
8.3	Contributions of the Research	323
8.3.1	The Methodological Contributions	324
8.3.2	The Theoretical Contributions	325
8.3.3	The Practical Contributions	326
8.4	Recommendations	327
8.4.1	Recommendations for the FTZs Authorities	327
8.4.2	Recommendations for the World Export Processing Zones Associations (WEPZA)	333
8.5	Research Limitations	335
8.6	Areas for further Research	336

<u>REFERENCES</u>		337
<u>BIBLIOGRAPHY</u>		350
<u>APPENDICES</u>		357
APPENDIX [1]	An Alphabetical List of the Names, Addresses and Telephone Numbers of the Identified FTZs Panel of Experts	358
APPENDIX [2]	Questionnaire Package sent to the FTZs Experts Panel	363
APPENDIX [3]	A List of Free Trade Zones Around the World	370
APPENDIX [4]	Questionnaire Package sent to Free Trade Zones Authorities	384
APPENDIX [5]	Translations of Questionnaire Package:	390
	APPENDIX [5a] Arabic Translation	391
	APPENDIX [5b] Chinese Translation	396
	APPENDIX [5c] French Translation	401
	APPENDIX [5d] German Translation	406
	APPENDIX [5e] Malaysian Translation	412
	APPENDIX [5f] Spanish Translation	417
	APPENDIX [5g] Turkish Translation	423
APPENDIX [6]	Group Means Profile	429
APPENDIX [7]	The lower half matrix of Pearson Correlation Coefficients Among the Forty Marketing Concept Variables.	434
APPENDIX [8]	How a FTZ Authority can assess its Marketing Orientation.	436

LIST OF FIGURES

	<u>PAGE NO</u>	
1.1	The main steps of the scientific method	12
2.1	Free Trade Zones Development Since Antiquity Until Modern Times	29
2.2	A Model for the Free Trade Phenomena	31
2.3	Types of Free Trade Zones (The Al-Sanie Model)	45
2.4	FTZs Development throughout the World (1965-1989)	67
3.1	A Model Depicting the Flow of Transactions involved in a FTZ Enterprise Operation	97
5.1	The Importance of the Exploratory Research to the Early Stages of a Marketing Study	144
5.2	The Research Process	146
5.3	The Key Steps followed in Collecting Data from the FTZs' Panel of Experts	170
6.1	A Taxonomy of Multivariate Techniques in Marketing Research	181
7.1	All Groups Scatterplot of the Three FTZs Groups (the Most vs the Moderate vs the Less Marketing-Oriented)	252
7.2	A Flow Chart of the Sampled FTZs' Classification According to their Marketing Orientation	253
7.3	All Group Histogram of the Two FTZs Groups (the Marketing-Oriented vs the Less Marketing-Oriented)	265
7.4	All Group Histogram (FTZs in the Developed vs Developing Countries)	271
7.5	Profile of the Comparative Attitudes between the FTZs Authorities of the Various Groupings and the FTZs experts panel toward the adoption of the Marketing Concept	279
7.6	Profile of the Comparative Attitudes between the FTZs Authorities in the Developed and Developing countries and the FTZs experts panel toward the adoption of the Marketing Concept	283

LIST OF TABLES

	<u>PAGE NO</u>	
2.1	A comparison of four FTZs classification models	49
2.2	The Evolution of Free Trade Zone Terminology	51
2.3	A Summary of the Advantages of FTZs	62
3.1	Comparison among the five Concepts of the Marketing Philosophies	85
4.1	Summary of Previous Studies and Publications on Free Trade Zones	132
5.1	The Main Variables and Sub-Variables of the Marketing Concept Variables As Related to the FTZ Operations	159
5.2	Types of Scales of Measurement	163
6.1	The Ascending Order of the FTZs Experts' Average Responses to the Marketing Concept Variables	185
6.2	The Research Plan of Data Analysis and Hypothesis Testing	190
7.1	Wilks' Lambda Values for the first Three Hypotheses and the Corresponding Values of their Transformation into the Chi-Square and Univariate F-ratio Distributions	232
7.2	Univariate F-Values and its Significant Level for the Three Hypotheses H ₀ (1), H ₀ (2), and H ₀ (3)	235
7.3	The Results of the Hotelling's T ² statistic and the Corresponding Values of their Transformation into the Univariate F-ratio Distributions for each of the Last Five Hypotheses	243
7.4	A comparison between the hit ratios of the DFA and the Jackknife method	248
7.5	Canonical Discriminant Functions, Classifications and Group Membership (Main results of classifications: MDFA)	250
7.6	Standardised Canonical Discriminant Coefficients and Group Means: MDFA Output	255
7.7	Canonical Discriminant Functions, Classifications and Group Membership, (Main Results of Classifications: DFA Output of the Marketing-Oriented Grouping vs the Less Marketing-Oriented FTZs Group)	264
7.8	Standardised Canonical Discriminant Coefficients and Group Means: DFA Output of the FTZ Marketing-Oriented Grouping vs Less Marketing-Oriented	267

7.9	Canonical Discriminant Functions, Classifications and Group Membership of the FTZs in the Developed Versus the Developing Countries	270
7.10	A Whole Classification of the FTZs according to their Marketing Orientation and their Geographical Locations	272
7.11	Standardised Canonical Discriminant Coefficients and Group Means: DFA Output of FTZs in the Developed vs Developing Countries	273
7.12	Pearson's Correlation Coefficients for Pairs of Variables which are Moderately Correlated	288
7.13	Reliability Coefficients for the Variables of Satisfying Industrial Buyer Needs	291
7.14	Reliability Coefficients for the Variables of Achieving the Organisational Goals	292
7.15	Reliability Coefficients for the Variables of Integrating the Marketing Functions	293
7.16	Summary of the Reliability Analysis for the Entire Dimensions of the Marketing Concept Variables	294

CHAPTER ONE

INTRODUCTION

	Page No
1.1 Preface	2
1.2 Statement of the Research Problem	3
1.3 The Research Questions	6
1.4 The Research Objectives	8
1.5 The Research Hypotheses	9
1.6 Organisation of the Thesis	10

1.1 Preface

The operations of Free Trade Zones (FTZs) have been involved in business enterprise among nations since 1940's, and since the 1960's FTZs have been flourishing and contributing widely to the economy of various countries throughout the world. Papadopoulos (1985) pointed out that if the growth trend continues, FTZs may soon account for as much as 20 percent of the world trade, a fact that has many ramifications for business strategies and public policies.

FTZs operations can be viewed from many disciplines such as, law, politics, finance, economics, marketing, environment, management and administration. According to our survey of the literature on FTZs, only economic related issues (including employment) have been studied. None of the other aspects have been researched. Therefore, this empirical study is an attempt to investigate FTZs operations from the marketing perspectives.

From a marketing point of view, marketing skills are recognised as potential contributors to improve the level of performance in the market place of every kind of existing organisations, the profit sector, non-profit sector and the international sector. At the international level, multi-national companies (MNCs) have introduced and spread modern marketing practices throughout the world. This had prodded small domestic companies in various countries to start looking in two ways, locally and internationally, to strengthen their marketing muscle so they can compete effectively with the multinationals (Kotler, 1984).

In practice, the FTZs' authorities need:

- (a) to know how to define and segment a FTZs' market and develop satisfying privileges, facilities and services for their chosen target market in order to make them attractive to the industrial buyers.
- (b) to know how to achieve their goals in terms of maximizing market share, sales, profits, return on investment and various others; and
- (c) to know how to price, promote and sell their privileges, facilities and services.

The present research is a global investigation of the marketing concept in the operations of the FTZs throughout the world. The adoption of the marketing concept in the FTZs operations is assessed by a set of attitudinal measures which are administered to the FTZs experts and authorities. Forty marketing variables are employed to assess the adoption of the marketing concept in the FTZs operations, and involve three key dimensions; satisfying the industrial buyer (customer*) needs; achieving the organisational goals; and integrating the marketing functions.

The study reported here is the first attempt of its kind to investigate the FTZs not from the economic, financial, administrative, or legislative aspects, but from the marketing aspect which is of equal importance to their operations. Thus, we attempt to find out how the FTZs' authorities are differently oriented by the marketing concept in their managerial philosophies.

1.2 Statement of the Research Problem

In the real world of FTZs, Jean Currie (1985) observed that the performance of FTZs operations tend to vary significantly from one another. She made an elaborate analysis of the activities of the FTZs operations on the basis of such economic factors as: Cost-benefits, the number of firms using the FTZ and the nature of their businesses, level of employment, the bulk of investment and the generation of foreign exchange. The author, in her report, made some evaluative statements on the performances of a variety of FTZs around the world. Below, we quote some of these statements from her book (Export Processing Zones in the 1980's, 1985):

'Shannon FTZs, in the Republic of Ireland, succeeded in attracting substantial foreign investment. . . . facilities similar to those provided at Shannon and intended for

* For the purposes of this research, the term 'industrial buyer' is used instead of the term 'customer'. The reason is that the type of customers of the FTZs analysed in this study usually are industrial buyers.

export oriented industries have been established throughout the developing world, most follow the model of Shannon. . . . the Colon Free Zone, in Panama, continues to be a highly successful commercial zone. . . . the Mauritius FTZ, in the Indian Ocean, represents the success story of the free zone concept. . . . the FTZs, in the Republic of China (Taiwan), have been experiencing extremely rapid growth. . . . the zone at Masan, in South Korea, with its good location and its reputation in the Far East for technological activities, has been witnessing increasing demand of subcontracting to local firms, however, the zone at Iri, also in South Korea, has been less successful. . . . In Sri Lanka, the Katunayake FTZ developed very quickly from the start in 1978 and still continues to grow. . . . the two small FTZs in Costa Rica were well formulated and benefited from the experience of the highly successful Taiwan FTZ authority. . . . the FTZs in Egypt has shown little growth of industrial activities. . . . Bataan FTZ, in the Philippines, has not been very successful, in attracting foreign investment. . . . the FTZs in Indonesia and Thailand have been of little use. . . . the FTZs in India have been of very minor importance. . . . the Chittagong FTZ, in Bangladesh, has made a much slower start. . . . the FTZs in Central America and Caribbean include a large number of unsuccessful or only marginally successful. . . . None of the FTZs in South America have played a significant role. . . . the mainland of Africa, South of the Sahara contains few zones and none of importance."

As for the performance of U.S. FTZs, Feldmann (1983) reported that the San Francisco Bay area is one of many instances where the operation of zones has not led to success. Of the three zones in the bay area, for example, San Francisco's zone is barely profitable; Oakland's zone is operating at a loss; and San Jose's zone is so unprofitable its private operator wants out.

Moreover, some FTZs are near closure, for example, as of this writing, the Damascus FTZ authorities in Syria are planning to get out of business. Even few FTZs no longer exist such as Stephenville International FTZ in Canada.

Many academics as well as notable former FTZs managers and other high officials of FTZs had expressed their views regarding the slow/lack of progress experienced by some

FTZs throughout the world. For example, Eric Feldmann (1983) made this quip: "It has become increasingly clear that zones are far easier to obtain than to operate". Hinting at this problem, Marshall Miller, the former secretary and legal counsel for the Greater Kansas City FTZ, Inc. made this remark at an interview with Business Week Magazine, (May 11, 1974): "We felt other FTZs were unsuccessful for reasons a good businessman would never put up with".

These authorities and others also stress the point that many of the FTZs users, including the multinationals and the other firms, are not well aware of the potential benefits of FTZs. With this respect, Eric Feldmann commenting in his article (1983): "Although zones have been around for some time, even the largest multinational firms often lack expertise of their potential usage". The University of North Dakota Marketing Professor, John Widdifield in his article (1983) made this graphic statement: "... But many firms may be unwittingly by-passing the cash-flow advantages of FTZs, advantages which could greatly enhance operating profitability in an increasingly international market place". Also, Jeffrey Robinson (1983) quoted Marshall Miller's comment: "It has been within the past few years that the FTZ concept has taken off. The boom is on. Yet some of the greatest benefits are only now being realised by companies involved in some sort of assembling, processing or manufacturing inside a FTZ".

Notable FTZs experts who recognise the adversity of the problem have contended that the major cause for the slow/lack of progress of the FTZs business enterprises is ascribed to the lack of understanding and poor employment and application of marketing principles. In the light of this implication, Nat Turnbull, Jr., the US specialist on FTZs development, in his article (March, 1981) expressed the following elaborate observation: "Most communities wait until a FTZ charter is granted before beginning any implementation of marketing for their project if the preliminary feasibility study proves positive, the marketing activities for the FTZ should begin immediately". In the same article, Turnbull stresses the importance of advertising and marketing campaigns: "An advertising programme at an early stage is often necessary to stimulate business inquiries and shorten the time

interval between the initial awareness of the potential zone user and the actual industry move into a zone This problem is often caused by the lack of aggressive marketing in the early stages of the zone's development". Also in the same article, Turnbull emphasises the significance of the marketing programmes for the FTZs in attracting firms: "Good developmental planning and marketing strategy will add appeal for firms who plan to expand their operations or establish new facilities within FTZs. The increased number of FTZs makes market evaluation and planning for future FTZs even more critical than in previous times". To confirm Turnbull views and to sum up the roots of the FTZs lack of progress, Eric Feldmann in his article (1983) made this remarkable comment: "The poor performance and failure of many FTZs in existence today can be traced to a fundamental misunderstanding or ignorance of the "Marketing Concept" a concept which should permeate all facets of FTZ evaluation, development, operation, and promotion":

These are only observations and views expressed by people concerned about the operations of FTZs. Up to the time of this writing, however, there has been no serious academic study done to explore the operations of the FTZs business enterprises from the marketing perspectives. Therefore, it is the goal of this research to fill this gap. In this empirical study we attempt to investigate the foregoing observation regarding the significant variation in FTZs operations as mentioned by Currie, and to test the views concerning the importance of the marketing concept/principles in the operations of FTZs as expressed by Turnbull, Feldmann and others.

1.3 The Research Questions

In essence, we conduct this research to find out whether the FTZs authorities, around the world, adopt the marketing concept in the operations of their zones, and if so, to find out if there is any variation among the FTZs authorities in employing the marketing concept variables in the operations of their zones. Providing appropriate and convincing

answers to these two rhetorical questions from the marketing point of view requires a probing investigation and evaluation of six key questions:

1. Can the FTZs be classified into three distinct groups - most, moderate, and less marketing-oriented, on the basis of the authorities' attitudes towards the adoption of the marketing concept in the operations of their zones?
2. What are the marketing concept variables* that would best discriminate among the 'a priori' three FTZs groups (i.e., the most, moderate, and less marketing-oriented zones)?
3. What are the most discriminating marketing concept variables* between the grouping of marketing-oriented FTZs (i.e. the most and the moderate) and the group of less marketing-oriented FTZs?
4. Do variables of the marketing concept discriminate between the FTZs in the developed and developing countries? and what are the most discriminating marketing variables between these two typologies?
5. Are the authorities of the three classified FTZs groups (i.e., the most, the moderate, and the less marketing-oriented FTZs) different from the FTZs experts panel in their evaluative attitudes towards the importance attached to the employment of the marketing concept variables in the operations of the zones?
6. Are the authorities of the FTZs operating in both the developed and developing countries different from the FTZs experts panel in their evaluative attitudes towards the importance attached to the employment of the marketing concept variables in the operations of the zones?

This empirical study is devoted to handling the above questions.

* These variables are related to the three key elements of the marketing concept: (i) satisfying the customer (industrial buyer) needs; (ii) achieving organisation goals; and (iii) integrating the marketing functions. These variables are presented in Table 5.1, Chapter 5.

1.4 The Research Objectives

The aim of this research is to study the adoption of the marketing concept in the operations of FTZs. More specifically, the research has the following objectives:

- (1) To classify the FTZs into three groups; as most, moderate, and less marketing-oriented; on the basis of the authorities' attitude towards the importance attached to the employment of the forty marketing concept variables in the operations of their zones.
- (2) To identify the key marketing variables that would best profile and discriminate among the most, the moderate, and the less marketing-oriented FTZs groups according to the authorities' attitudes towards the importance attached to the employment of the forty marketing concept variables in the operations of their zones.
- (3) To identify the key marketing variables that would best profile and discriminate between the marketing-oriented FTZs group (i.e., the most and the moderate, combined) and the less marketing-oriented FTZs group according to the authorities attitudes towards the importance attached to the employment of the forty marketing concept variables in the operations of their zones.
- (4) To find out whether there is any differentiation (variation) between the FTZs in the developed and developing countries with respect to the authorities' attitudes towards the importance attached to the employment of the forty marketing concept variables in the operations of their zones. And to identify the key marketing variables that would best profile and discriminate between the FTZs in the two typologies.
- (5) To examine to what extent the authorities of the three FTZs groups (the most, the moderate, and the less marketing-oriented) are different from the attitudes of the FTZs experts panel towards the importance of the key discriminating marketing concept variables identified by the Multiple Discriminant Function Analysis (MDFA).
- (6) To examine to what extent the authorities' attitudes of the FTZs, in both the developed and developing countries, are different from the attitudes of the FTZs

experts panel towards the importance of the key discriminating marketing concept variables identified by the second run of the Two-group Discriminant Function Analysis (Two-group DFA).

1.5 The Research Hypotheses

This empirical study attempts to support/reject eight fundamental hypotheses, as follows:

- HO(1): There is no significant discrimination (variation) among the three FTZs groups according to the authorities' attitudes towards the importance attached to the employment of the forty marketing concept variables* in the operations of their zones.
- HO(2): There is no significant discrimination (variation) between the marketing-oriented FTZs grouping (i.e., the most and the moderate, combined) and the less marketing-oriented FTZs group according to the authorities' attitudes towards the importance attached to the employment of the forty marketing concept variables* in the operations of their zones.
- HO(3): There is no significant discrimination (variation) between the FTZs, in the developed and developing countries, with regard to the authorities' attitudes towards the importance attached to the employment of the forty marketing concept variables* in the operations of their zones.
- HO(4): The authorities' attitudes of the most marketing-oriented FTZs group are similar to the attitudes of the FTZs experts panel towards the importance of the key discriminating marketing concept variables** identified by the Multiple Discriminant Function Analysis (MDFA).

* A list of these forty variables is shown in Table 5.1, Chapter 5.

** A list of these key discriminating variables is shown in Table 7.6, Chapter 7.

- HO(5): The authorities' attitudes of the moderate marketing-oriented FTZs group are similar to the attitudes of the FTZs experts panel towards the importance of the key discriminating marketing concept variables** identified by the MDFA.
- HO(6): The authorities' attitudes of the less marketing-oriented FTZs group are similar to the attitudes of the FTZs experts panel towards the importance of the key discriminating marketing concept variables** identified by the MDFA.
- HO(7): The authorities' attitudes of the FTZs in the developed countries are similar to the attitudes of the FTZs experts panel towards the importance of the key marketing concept variables*** identified by the second run of the two-group Discriminant Function Analysis.
- HO(8): The authorities' attitudes of the FTZs in the developing countries are similar to the attitudes of the FTZs experts panel towards the importance of the key discriminating marketing concept variables*** identified by the second run of the Two-group Discriminant Function Analysis (Two-group DFA).

1.6 Organisation of the Thesis

According to Kerlinger (1986), the scientific approach to inquiry usually undergoes the following developments: first there is an indeterminate situation of a particular phenomena crying out to be made determined. The researcher experiences vague doubt, emotional disturbance, and confused ideas, as he struggles to come up with a clear definition of the research problem. He studies the literature, scans his own experience and the experience of others. Often, he simply has to wait an inventive leap of the mind. Maybe it will occur; maybe not. With the problem identified, with the basic question or questions properly asked, the hypothesis is constructed. Efforts are then made to collect

** A list of these key discriminating variables is shown in Table 7.6, Chapter 7.

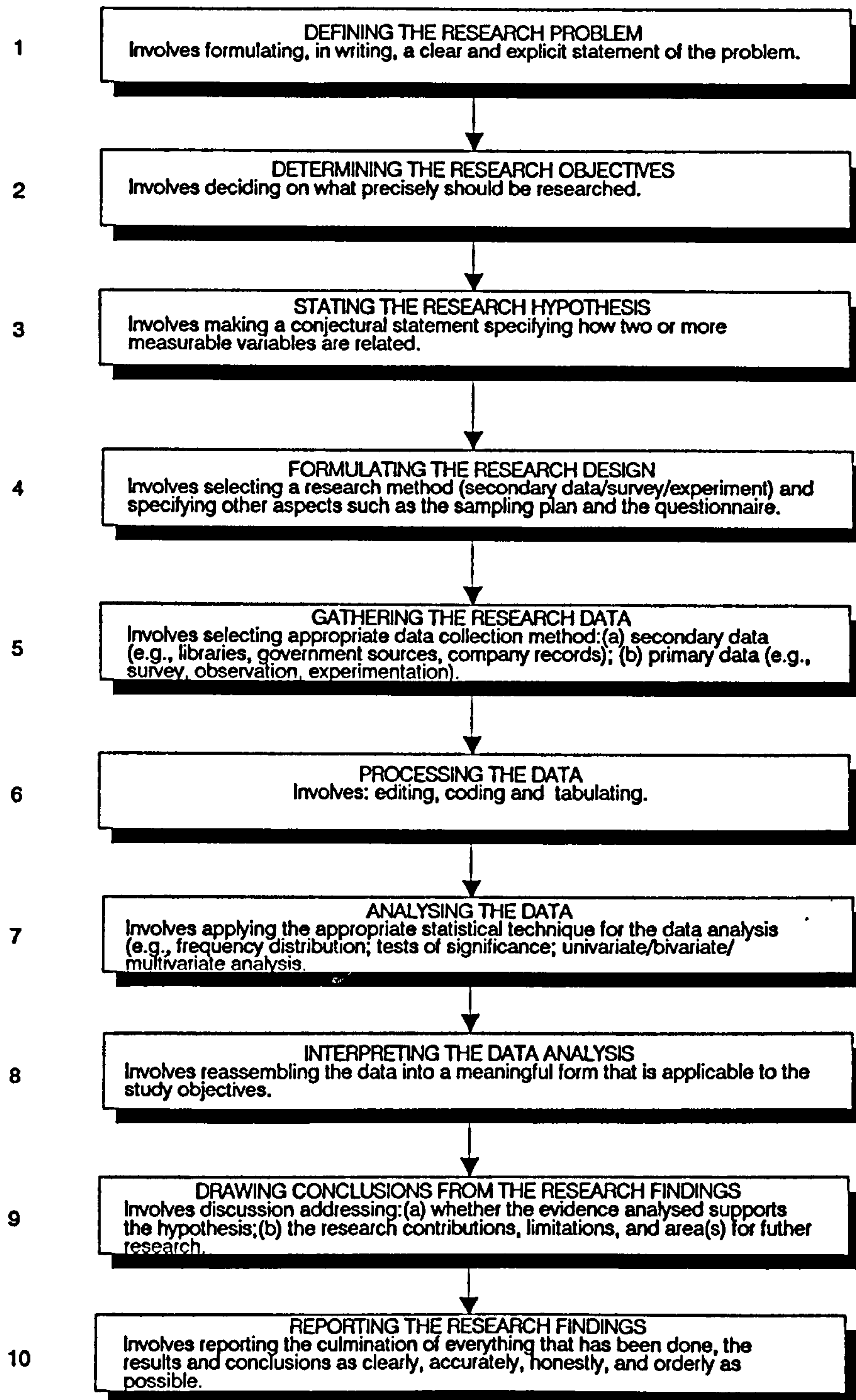
*** A list of these key discriminating variables is shown in Table 7.11, Chapter 7.

the required data so that the relation expressed by the hypothesis is tested by observation and experimentation. This usually involves the application of statistical analysis. Finally, on the basis of the research evidence, a decision is made as either to accept or reject the hypothesis. This information is then fed back to the original problem, and the problem is either kept or altered as dictated by the evidence.

In his efforts to find solutions to marketing problems, the marketing researcher follows the pattern of the scientific approach. In fact, marketing research has sometimes been defined as "the application of scientific method to marketing". The main steps involved in the scientific method are (Dowdy and Wearden, 1983; Bailey, 1987; Tull and Hawkins, 1987; Green, et al, 1988; Aaker and Day, 1990; Lehman, 1991), see Figure 1.1:

1. ***Defining the Research Problem.*** This involves determining the problems or opportunities that are to be studied. One simple technique for getting a problem in focus is to formulate a clear and explicit statement of the problem and to put the statement in writing. Careful attention to the problem definition stage allows the researcher to set the proper research objectives.
2. ***Determining the Research Objectives.*** After identifying and clarifying the research problem, a decision must initially be made as to precisely what should be researched. The researcher should make a formal statement of what the research should achieve as objectives. This, in turn, delineates the type of information that should be collected and provides a framework for the scope of the study.
3. ***Stating the Research Hypothesis.*** An hypothesis is, simply, an "educated guess" about the outcome of an empirical test designed to answer a research question. In technical terms, it is a conjectural statement that specifies how two or more measurable variables are related. The hypothesis must be stated in a precise way so that an experiment (usually a statistical test of significance) can be carried out that will lead to a decision to accept or reject the hypothesis. In this step, it is called an experimental hypothesis. Later on, in a formal research setting, a null and

Figure 1.1: The main steps of the scientific method



Source: Dowdy and Wearden, 1983; Bailey, 1987; Tull and Hawkins, 1987; Green, et. al, 1988; Aaker and Day, 1990; Lehman, 1991.

an alternate hypotheses are involved in each experimental hypothesis. The null and alternate hypotheses represent a set of two contradictory and often mutually exclusive and exhaustive possibilities. The null hypothesis is tentatively held true and always assumes that the independent variable (treatment) has no effect on the dependent variable. The null hypothesis is customarily symbolized by H_0 . The alternate hypothesis assumes the opposite conclusion and is represented by H_1 . Several experimental hypotheses may be connected with a single problem.

4. *Formulating the Research Design.* A research design is the basic plan which guides the data collection and analysis of the phases of the research project. It is the blueprint that is followed in completing the research. A research design usually involves both the selection of a research method (e.g., a survey vs an experiment vs using secondary data) and the specification of other aspects of the study such as the sampling plan and the questionnaire.

5. *Gathering the Research Data.* Once the research design has been formulated, the stage of data gathering may begin. Obviously, because there are many research techniques, there are many methods of data gathering. All the different data collection methods fall under two main categories, the secondary and the primary data. The secondary data are data potentially useful in solving a current problem but which were collected, by other researchers, for different purposes. Examples of secondary data sources include libraries, government sources, records of individual companies, professional organisations specialising in collecting and providing secondary data. The primary data, on the other hand, are data gathered and assembled, by the research or the group of researchers, specifically for the project at hand. Examples of primary data methods include: (a) survey methods (e.g., personal interviews, telephone interviews, mail surveys); (b) observation methods (e.g., direct and mechanical); experimentation (usually involve mathematical and statistical techniques).

6. ***Processing the Data.*** Data processing includes editing, coding, and tabulating. Editing involves: (a) inspecting the data forms for accuracy, completeness, and consistency; (b) making editorial additions or deletions where necessary; and classifying the data into meaningful categories. Coding involves assigning numbers to each of the answers so that they may be analysed, typically, by a computer. Tabulating involves the orderly arrangement of data in table(s) or other summary format(s).

7. ***Analysing the Data.*** Once the data have been processed, the critical tasks of data analysis and interpretation begin. Data Analysis is concerned with dissecting the data and breaking the data down into its basic parts so that they take on greater meaning. This task involves the application of logic to the understanding of the data that have been gathered about the subject. The appropriate analytical technique for data analysis is determined by the characteristics of the particular research design (e.g., sampling procedures and data collection instruments). In its simplest form, data analysis may involve determining consistent patterns and summarising the appropriate details revealed in the investigation. Depending on the nature of the research objectives, the statistical analysis of the data may range from portraying a simple frequency distribution, tests of significance, to complex multivariate analysis.

8. ***Interpreting the Data Analysis.*** Interpretation of the analysis involves the reassembly of the data into a form that is applicable to the study objectives and is also meaningful to the people interested in the research findings.

9. ***Drawing Conclusions from the Research Findings.*** The basic conclusions of the typical research project involve a discussion that addresses whether the evidence analysed supports the hypothesis(es). Based on the conclusions emerging from the analysis and interpretation, the researcher can evaluate recommendations for various courses of actions. In addition, an academic research

should include, as an integral part of the conclusion, discussions addressing three main aspects:

(a) the research contributions (e.g., theoretical, methodological, practical) (b) the research limitation(s); and (c) suggestions of area(s) for further research.

10. *Reporting the Research Findings.* The culmination of the research process is the research report. Everything that has been done, the results, and conclusions should be included and presented clearly, accurately, and honestly. It is essential that the research be reported in an organised manner appropriate for the interested research users. The report will hopefully provide insight or stimulate action from the person(s) initially requesting the research.

The American philosopher and scholar John Dewey (1933) had pointed out that in the scientific process one phase may be expanded and be of great importance, another may be skimmed, and there may be fewer or more steps involved as demanded by the problem under investigation. Hence, a scientific research is rarely an orderly process. Indeed, it is much more disorderly than it is usually implied. Order and disorder, however, are not of primary importance. What is much more important is the soundness and rationality of the scientific research as a process of reflective inquiry (Kerlinger, 1986).

Hopefully, the basic tenets of these steps of the scientific method have been followed in conducting this empirical study. After opening with a preface, we continued this first chapter by presenting the research problem, the research questions, the objectives of the study, and the hypotheses to be tested.

In Chapter Two we present a comprehensive short overview of the phenomena of free trade. This overview includes a discussion of: the roots and development of free trade; the broad concept of free trade; the nature of free trade zone in terms of its history, definitions, types, characteristics, advantages, status in modern times, and future.

Chapter Three deals with the marketing concept. The chapter begins with a literature review of the evolution of the marketing concept, its definition, and its key

elements. Next, the chapter outlines the various criticisms on the marketing concept. Finally, we suggest a model for the application of the marketing concept to the FTZs operations.

Chapter Four is devoted to reviewing the literature available on FTZs. The survey of the literature was necessary to determine if a substantial work had already been done in the area and to uncover any related work that might prove to be helpful to our research. This chapter begins with a review of the theoretical studies which are mainly concerned with the economic aspects of FTZs. Next, a number of reports, articles, and books were surveyed. Then, we provide our own criticism on each body of the literature surveyed. The chapter concluded with a table highlighting the literature reviewed in this chapter.

Chapter Five is concerned with the research design and data collection. We first discuss the research design in terms of its definition and importance, followed by its various possible approaches. Next, we turn to the design of the present research which is mainly based upon survey research. Special emphasis is placed upon the data types and sources, data collection methods, questionnaire design, scale of measurement and the domains of the study. Finally, the key steps needed to prepare the data for analysis are provided.

Chapter Six deals with the research methodology used in analysing the collected data. The chapter begins with a rational approach for selecting the methodology of analysis from a plethora of multivariate statistical techniques. Next, we present the analytical procedures suggested to arrive at 'a priori' classification of the FTZs, under study, so that the data can be readily available for the application of further statistical techniques. The statistical techniques employed in this study include: Multiple Discriminant Function Analysis (MDFA); Two-group DFA (for two runs); the Jackknife method for validating the three DFA functions; Profile Analysis (twice); Correlation Analysis; the Wilks' Lambda test statistic, the Univariate F-ratio test; the Hotelling's T^2 test statistic; the Reliability Assessment (using the Alpha Correlation); and the Validity Assessment (using the Content Validity). This

chapter gives a description of these analytical techniques and the justification for their use in this research.

Chapter Seven comprises the research findings and interpretation that are based upon the output of the statistical techniques employed in analysing the data of this research. In this chapter, the findings are reported in terms of: testing the eight research hypotheses; validating the three discriminant functions; the outputs of the MDFA and the two runs of the Two-group DFA; the results of the two applications of Profile Analysis; the interpretation of the coefficients of Pearson's Correlation; and the assessment of both the Reliability and Validity of the measures used in this research.

In Chapter Eight we present the conclusion of the study with some implications for FTZs operations. Next, the research contributions in terms of theory, practice, and methodology are also presented. Then, we discuss our recommendations which are twofold: recommendations for the FTZs authorities and recommendations for the World Export Processing Zones Association (WEPZA). After that, we present a discussion on the limitations of the research. Finally, we conclude the chapter and the study with an evaluation of areas for further research.

CHAPTER TWO

THE FREE TRADE PHENOMENA

	Page No
2.1 Introduction	19
2.2 The Roots and Development of Free Trade Zones	20
2.3 The Broad Concept of Free Trade	28
2.4 The Nature of Free Trade Zones	35
2.4.1 Definitions of Free Trade Zones	35
2.4.2 Types of Free Trade Zones	39
2.4.3 Characteristics of Free Trade Zones	50
2.4.4 Advantages of Free Trade Zones	54
2.5 The FTZs Development, Spread, and Status in Modern Times	63
2.6 The Future of Free Trade Zones	68
2.6.1 The Future of the FTZs Development: Spread and Decline	69
2.6.2 The Future of the FTZ Concept	70
2.7 Summary	72

2.1 Introduction

A Free Trade Zone (FTZ) simply means a part of a territory of a country where any goods, be it raw materials, semi-processed or wholly processed brought inside the defined area are generally regarded, in so far as import duties and taxes are concerned, as being outside the customs territory and are not subject to the usual customs control.

This idea of FTZ has antecedent forms which began in antiquity. However, it did not gain world wide acceptance until the mid-1960's when a modern version of a FTZ, called Export Processing Zones (EPZs), was spreading throughout the developing world. Since then, the device of a FTZ has been incorporated into the economic policies of many governments of the developing countries for the hope of generating foreign exchange earnings, creating employment, and transferring technology. Meanwhile, manufacturing companies of the industrial countries are looking for FTZs that would provide the best deal in terms of labour, tax incentives, financial benefits, convenience and flexibility. This in turn contributed to the overall integration of the world economy.

Notwithstanding, free trade zones remain one of the least understood economic events among ordinary people. In this chapter, we delve into the realm of FTZs in the hope of reaching and developing a proper understanding of the phenomena of FTZs. First, we trace FTZs back to its remote history and view the geopolitical circumstances that shaped the development of FTZs through the past centuries and into the recent times. Next, we consider the broader concept of free trade and look into the related concepts and how they are set apart and how they are converged and where FTZs fit in relation to the other concepts. Then, we examine the nature of FTZs in terms of the attempts made at defining FTZs, the efforts made at classifying FTZs, the characteristics and advantages that are common among all types of FTZs. Later on, we investigate the status of FTZs in modern times and touch on the most recent, important developments, and survey the world-wide FTZs distribution. We conclude the chapter with extrapolating views on the future of FTZs with respect to the prospects for its developments and the outlook awaiting its concept.

On the whole, we hope that the coverage in this chapter should serve as a concise compendium on FTZs of which the available literature falls short.

2.2 The Roots and Development of Free Trade Zones

Richard S. Thoman (1959) provides a detailed historical account of the development of free trade zones or free ports from time immemorial through the Greeks and the Roman Empire until the first half of the twentieth century. Here is a summary of his observation:

The free port of today, although basically simple in structure, has varied antecedents in the forms of free cities, quasi-free ports, and special trade privileges of which many have doubtless been lost from the written record. Its earliest vestiges, which probably began with commerce itself, might well have been concessions by the inhabitants of a prehistoric settlement to a visiting merchant; concessions granting some variety of favour with respect to future exchange.

In the City-States of the Eastern and Southern Mediterranean Sea. Whatever the actual origin, certain qualities of the device were being employed by the Phoenicians who were the rulers of Tyre, Carthage, Utica, and lesser places that thrived on trade by sea along the eastern and southern shores of the Mediterranean prior to conquest from the north. Like their Hanseatic League counterparts, two millenniums later, these were free cities depending for livelihood upon commerce with satellite communities. Trade was closely and jealously regulated, the principal measure being that of granting foreign merchants access only to stipulated ports, and ruthlessly prohibiting them from all others. Apparently such ports were "free" only in the sense that they granted a limited freedom from bodily harm to non-local traders who were treated in a wholly different manner if they attempted direct service to the satellite ports. The effect was analogous to that of modern free ports; i.e., transportation routes were focused on the chosen centre. However, the tools used in the process were those of force rather than attraction.

In Greece. The Greeks brought the free port to a level of development possibly comparable to that of today. The City-States levied duties, usually revenue tariffs, on imports, exports, and transited goods. Of such tariffs, most were collected at selected trans-shipment points, of which Chalcis and Piraeus were among the most active. Within Piraeus seaport, a plot of ground was set aside from the rest of the harbour by a stone wall, and was placed under jurisdiction of officials responsible for customs collection. Whether it was a free port in the modern sense has not been firmly established; but it did have all of the basic physical requirements.

In Rome. The gradual incorporation of Mediterranean city-states and neighbouring areas into the Roman Republic and subsequent Empire, did not result in relative intensification of free port use. Trade and commerce in Rome itself were left largely to neighbours from the east and south. As a result, distinct colonies of foreign merchants were established in the major Roman ports. Although such merchants rented warehouses, there is no evidence that the ports themselves, or any specific portions, were set aside after the manner of the modern free port. However, the Romans were not without appreciation of the free port device; for it was established in some form by Rome on the Aegean island of Delos after the third Macedonian War, with political control of the islands placed in the hands of Athens. Such an establishment may have been a means of creating a duty-free storehouse from which to supply Roman armies in this section of the Mediterranean; but whatever the motivation, its effect was apparently that of stimulating commerce with Greece, Syria and Egypt.

In the expansion of trade that accompanied the growth of the Roman Empire, the free port apparently did not play the vital role that might have been expected. By this time Rome had abandoned its *laissez faire* policy in the conduct of commerce, but established and maintained more intensive trade with the known world, and had pushed the frontiers of trade appreciably beyond those of political control - eastward to the east coast of India, Sri Lanka, the East Indies, and the China coast; and southward across the Sahara;

northward to the Black and Caspian Seas and Lake Aral, and the British Isles and the Baltic. Such long sea lanes were maintained partially through the use of transshipment ports situated either within the Empire or near its margins. Particularly in the east, where trade routes were longest, such devices were employed in Antioch, in Alexandria and in other seaports, mostly along the Nile River, the Red Sea, and the Gulf of Oman. On the west, Marseilles also offered comparative freedom from normal port restrictions. Although the exact nature of such arrangements is not clear, it is known that the Mediterranean fringe ports were points of transshipment for merchandise moving between Putoeli and the outer world. Such re-export transshipment has been the major historical reason for the existence of various free port forms. However, the origin of early antecedent of the modern free trade zone dates from 1189, when Frederick I, Emperor of the Holy Roman Empire, granted a charter to Hamburg, exempting that port city from the payment of customs duties on the lower Elbe River. Thus, Hamburg became the first known free port.

In the Middle Ages. The centuries immediately following the defeat and division of the Roman Empire appear to have marked a reversal of the free port device to its ancient form of the free city. The fourteenth century witnessed the growing power of cities, particularly those strategically located on natural harbours, estuaries and rivers. In a succession of political and military events which marked European history, cities like Bruges, Antwerp, Amsterdam and London followed each other in commercial ascendancy through the fortunes of their respective countries. These cities were preserved and witnessed more development during the Middle Ages, particularly in the granting of relinquishment from entry tolls to or from "Market fairs". However, it was not until the rebirth of active trade from Europe to the Levant - trade stimulated in large measure by the Crusades - that the favoured privilege, and later, the free port were once again important tools in a lively international commerce.

In the early and mature stages of Mercantilism. Some form of special privilege is known to have re-appeared during the sixteenth century in the Mediterranean Sea. The little

town of Livorno in Tuscany was created in 1547, and became a toll-free city for all incoming and outgoing commerce in 1675.

A forerunner of the modern free zone is known to have been established during this period in Genoa. By an ordinance liberalizing earlier special privileges, a definite free zone - including some port facilities but excluding the residential quarters - was set aside and fenced during the early portion of the seventeenth century. Within the zone were warehouses for storing non-liquidated goods of foreign origin.

On the North Atlantic Coast, Dunkirk was granted some free city privileges in 1662 by France, and Altona (today incorporated into Hamburg) similar privileges in 1664 by Denmark. Bayonne and Lorient in France were also made free cities in 1784.

Both Britain and the Netherlands were aware of the free port mechanism during these stages of mercantilism. Britain, for example, converted Gibraltar to a free city in 1705. Between 1766 and 1822, Britain also established "free ports" in key colonies of the West Indies. The Caribbean free ports, created by Britain to capture trade from neighbouring Spanish colonies, worked well until Latin American independence. The Netherlands were engaged in similar activities in their colony of Willemstadt on the island of Curacao, offshore from Venezuela.

In the 17th and 18th Centuries, when Western Europe had emerged from the stagnation and economic and social rigidities of the Middle Ages, the Hanseatic League of Cities was the focal point for dynamic private trade and enterprise. In this League the major cities of Western Europe declared themselves to be "Free Merchant Cities". They formed an interest group lobbying for the freedom of trade with the innumerable petty principalities that asserted their sovereignty by imposing barriers to trade all over Europe.

In the late Mercantilism and early Industrialism. During the first half of the nineteenth century, free port antecedents or forms were accepted more widely and enthusiastically in Northern Europe and less so in the Mediterranean, were essentially eliminated from France, and were ignored in the home countries and concomitantly established in some colonial outposts of England and Spain. In Germany, Hamburg, Bremen, and Luebeck had

all experienced, since the fifteenth century, a transition from the tight commercial restrictions of the Hanseatic League to independently functioning, commercially competitive city-states that were essentially free of import or export duties. By 1835 all three had reached this status; but they were shortly to be forced into the Customs Union (*Zollverein*) of Bismark's Second Reich.

In the Mediterranean area, Venice - which had enjoyed special privileges for over a century and a half - was accorded free city status by Austria in 1830. This status was lost some 36 years later, however, when the city became a part of Italy.

In France, Napoleon I, wished to establish a free zone in Marseilles modelled after that in Genoa, but the idea was strongly resisted by the local citizenry.

Britain, in transition from a policy of strictly-controlled trade to that of free trade, did not require a free port for the very large transshipment and reconsignment commerce that was developing in London, Liverpool, Bristol, Glasgow and lesser ports. In the Empire, however, free port forms designed for exchange of merchandise with outlying areas and for ship chandlery in Singapore (1819), Hong Kong (1842), Colombo (1845), Aden (1853), and other outlets.

Meanwhile Spain, perhaps realising belatedly the significance of free ports in colonial areas, established free city status among settlements in its territorial possessions. A number of ports in the Canaries received this status in 1852, and still more along the north and west coasts of Africa in 1907. At least in the Canaries, they were not completely free; only vessels flying the Spanish flag could trade with Europe, and tariffs were charged on alcohol, sugar, coffee, cocoa, and other commodities.

During the period of Industrialisation. In the first half of the century that began in 1850, the European free port assumed essentially its present-day legal structure and areal form; and, as such, became a vital component of the largest seaports of Germany and Denmark. During and shortly after World War I, it was introduced into Sweden, into several of the smaller Baltic states then independent, and into some of the smaller nations of Southern Europe. It was during this period - specifically, after World War I and before the

depression of the early 1930's - that the European free port experienced its most widespread distribution on the continent proper.

In Germany: Hamburg, upon entering the Customs Union of Bismark's Second Reich (*Zollverein*), agreed to reduce the customs-free area from the entire city state to an isolated and fenced zone that encompassed all existing port facilities plus ground allotted for future port growth. This zone, termed a "free port" (*Freihafen*), was exempt from customs jurisdiction of the Union. It enjoyed essentially unrestricted freedom of import, export, transit, warehousing, ship's provision, manipulating and sorting, etc. Management of the zone was in the hands of Hamburg officials.

In 1902, Bremen's free port succeeded in acquiring the status of "out-of-toll territory" (*Zollausschlussgebiet*), and thus gained a measure of freedom from national customs. However, the long-sought privilege of manufacturing within the free zone has never been granted. Soon after Bremen's admission into the Customs Union, varieties of the free port device were established in other German ports.

Present-day free ports of the German Federal Republic include units in Hamburg, Cuxhaven, Bremen, Bremerhaven, Emden and Kiel. Of these, Hamburg and Bremen are predominant. They are significant not only because they have been and are very enduring examples of the device, but also because they were the models after which the free ports of Scandinavia and North America have been fashioned.

In Scandinavia and the Eastern Baltic. During the latter part of the nineteenth and the first quarter of the twentieth centuries, free ports were blue-printed for a large number of seaports in Northern Europe. In anticipation of the opening of Kiel Canal (1895), the free port of Copenhagen was pushed to completion in 1894. Since that date it has been Hamburg's major source of free port competition in the Baltic Sea. With Germany's defeat in World War I, a number of other Scandinavian and Baltic seaports became interested in attracting the transshipment trade that had belonged to the German free ports. Some of them established free zones (called "free ports") to facilitate the process. The most enduring

of these were in Sweden, where the device was inaugurated in Stockholm (1919), Göteborg (1922), and Malmö (1922). Plans were also made for a number of such devices in Finland and the smaller Baltic states of Estonia, Latvia, and Lithuania; but, for political and/or economic reasons, no free port of lasting significance has been instituted along this section of the Baltic coast.

Alfred L. Lomax (1947) observed that: subsequent to World War I there was a widespread movement of European ports to establish zones exempt from customs regulations. In 1940 there were 43 free zone ports in the world. There are already several free ports in Latin America countries; both the Philippine Republic and China have plans for free zones to be established in the 1950's. Yet, almost without exception, European free zones were provided for sorting, mixing, manipulating, regrading, and packing of imported merchandise for re-export; most of them prohibit manufacturing. Also, newspaper publishing, music printing, and bookbinding were not allowed, partly for the reason that such activities were directly under the control of the state and operations in the free zone, if permitted, would be highly competitive. Retailing was generally prohibited. Hamburg was the most important exception; all kinds of manufacturing were permitted in Hamburg.

In the United States, New York Congressman Emmanuel Celler introduced the H.R. 9322 in the House of Representative on April 15, 1934. After a debate and a conference of both houses, H.R. 9322 was signed by the speaker of the House and by President Roosevelt on June 18, 1934. Known as the Foreign-Trade Zones Act or the Celler Act, this legislation culminated a forty year effort to legalise the principal of the foreign-trade zone in the United States (Price, 1984).

The first ports to apply for foreign-trade zones status were New York; San Francisco; New Orleans; and Mobile, Alabama. New York received the first grant and opened its zone at Staton Island on February 1, 1937. As of December, 1989 there were 142 foreign trade zones of which 48 were engaged in manufacturing operations, and 125 special purpose subzones throughout the United States (Diamond, 1989).

Nearly twenty years ago, a new form of free trade zone has been gaining in popularity. It is concerned, not so much with trade but rather with the employment and development of manufactured exports. It is designed to attract a portion of the flow of international investment in manufacturing industry. The first such zone was established in Ireland, at Shannon in 1959. It acted as a major turning point in the development of the free trade zone idea (Kelleher, 1976).

The developing countries neglected to focus on free trade zones until after the United Nations' Economic and Social Council (1506th Plenary meeting, 4th August 1967) adopted a resolution suggesting that one of the fundamental avenues of export expansion was for the developing countries to improve port customs and trade zone facilities. Soon afterwards the United Nations Industrial Development Organization (UNIDO) drew up a plan for a model free trade zone. Several governments have adopted UNIDO's provisions for zone administration, infrastructure, tax holidays, and other investment incentives (Diamond, 1989).

As a result; there has been a remarkable proliferation of free trade zones in the developing countries since 1966, when there were only two zones: Kandla in India and Mayaguez in Puerto Rico. In 1970 their number had risen to eight situated in eight countries: in addition to the previous two, Kachciung in Taiwan, Bataan in the Philippines, La Romana in the Dominican Republic, the zones along the Mexican U.S. Border, Colon in Panama, and Manaus in Brazil (Brasile and Germidis, 1984).

From 1971 to 1975, twenty three zones were set up in eleven countries, mainly situated in Asia; nine in Malaysia, two in Taiwan, two in South Korea and one in India. In Central and South America three zones were established in Colombia, one in El Salvador and one in Guatemala. Over the same period three zones were set up in the Caribbean: two in the Dominican Republic and one in Haiti. The African zone was set up in Mauritius.

From 1976 to 1978 twenty one zones were created, but the focus was now outside Asia where only Malaysia and Sri Lanka set up new zones, followed later by Thailand. On the other hand ten zones were set up in the Middle East: Four in Egypt, Five in Syria and

one in Jordan. Three African countries followed the example of Mauritius, these were Liberia, Senegal, and Togo. Jamaica did the same, and Belize, Honduras, Nicaragua, and Chile in Central and South America followed suit and started to operate FTZs.

In 1980 many projects were in the planning or developing stage: twenty one in Asia and the Pacific, four in the Middle East and Europe, seven in Africa and three in the Caribbean, Central and South America. In mid-1984, there were 79 significant operational special economic zones, export processing zones and science parks available in 35 different developing countries. Four of these were in operation in Communist China (Currie, 1985). As of December, 1989, there were 506 export processing zones, free ports, bonded warehouses, free perimeters and similar forms of zones operating in 86 countries around the world. Nearly 42% of these are in the developing countries (Diamond, 1989).

Figure 2.1 summarises the development and growth of FTZs since antiquity until 1989. The figure shows approximate numbers of FTZs in the particular era or period of time.

2.3 The Broad Concept of Free Trade

The formulation of the quantity theory of money and the criticisms and qualifications of the balance-of-trade doctrine, during the seventeenth century prepared the way for the emergence of a comprehensive free-trade doctrine. The first views of free trade were immediately related to Adam Smith (Viner, J., 1937). Adam Smith asserted that: A tailor does not make his own shoes; he exchanges a suit for shoes. Thereby both the shoemaker and the tailor gain. In the same manner, Smith argued, a whole country can gain by trading with countries. On this assumption Adam Smith rested his plea for non-interference for free trade as the best policy for trade among nations.

The doctrine of free trade was one of the cornerstones of economic liberalism, and towards the end of the eighteenth century, the free trade notion gained more and more ground and by the middle of the nineteenth century it had assumed a dominant position

Approximate Number of Free Trade Zones

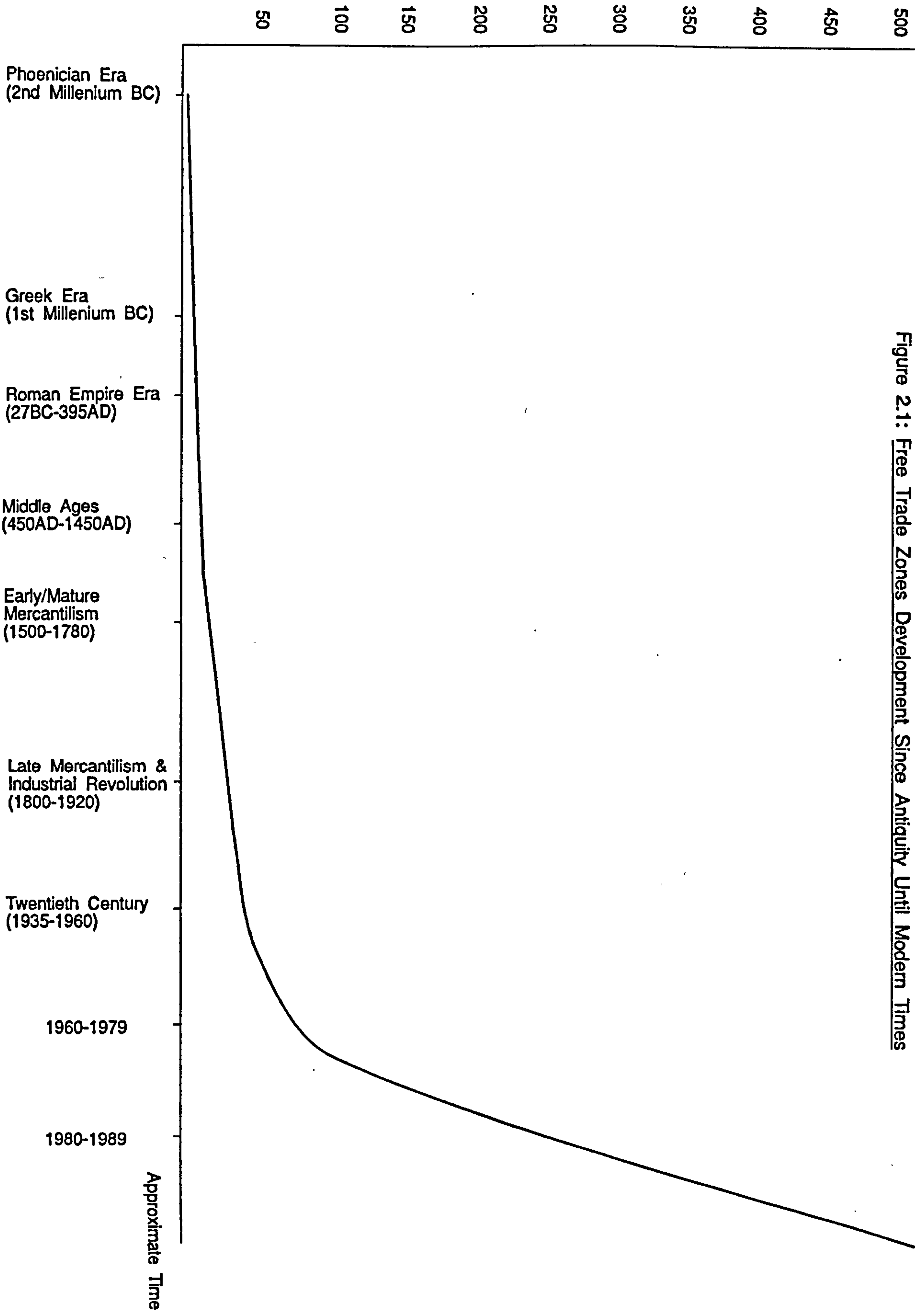


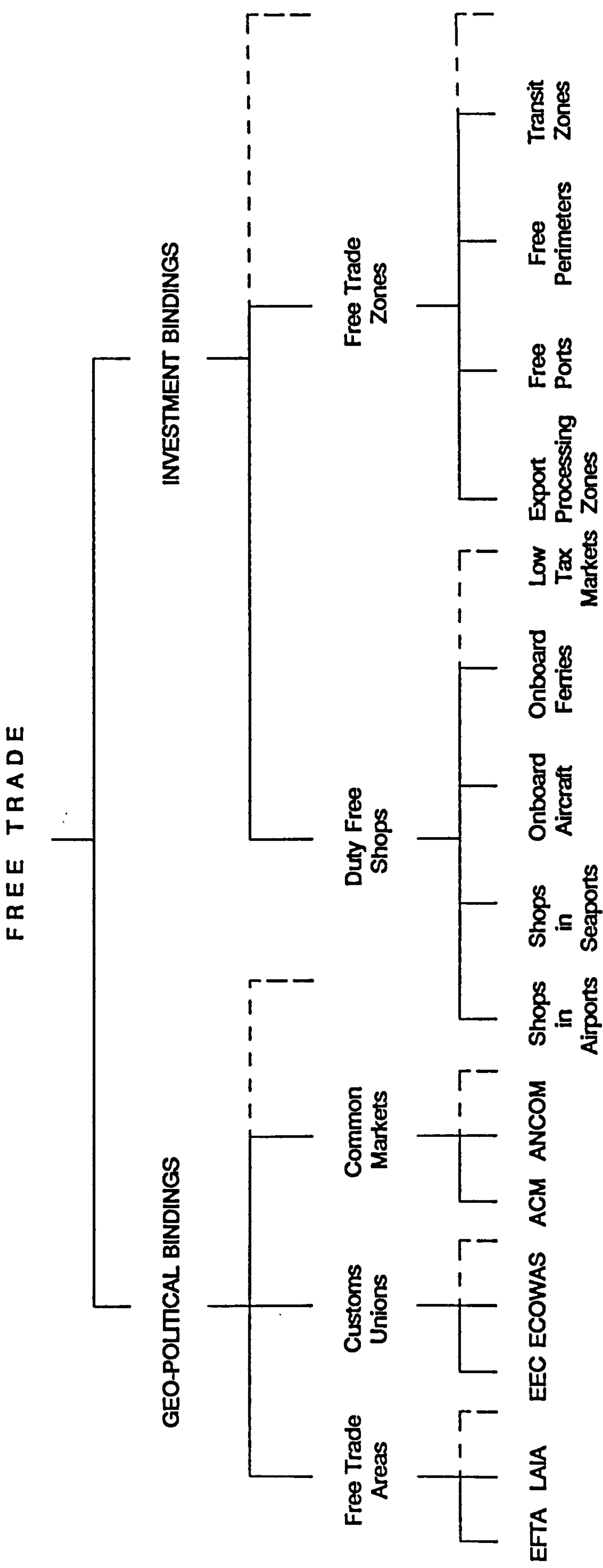
Figure 2.1: Free Trade Zones Development Since Antiquity Until Modern Times

In Europe. Even protectionist France signed a trade agreement with England in 1860. England continued its course toward free trade and was, from 1850 to the first world war, for all practical purposes, a free trade nation. Other European countries, especially Germany and France, followed England's path and lowered already low tariffs in the 1860's. The United States alone stood as a fairly protectionist nation, though a trend towards the liberalisation of trade was also prominent. World trade grew at an extremely fast rate during this period (Sodersten, B., 1981). From 1880 onwards, the liberal trend in most European countries' trade policy was again suppressed by a recrudescence of the protectionist spirit. This was due in particular to the 1873-9 depression and the fall in prices of agricultural products (Van Meerhaeghe, 1972).

The period between the two world wars witnessed a sharp increase in tariffs and other forms of trade impediments; the great depression in the thirties generated more fervour towards economic nationalism, and protectionism drastically increased.

Since the Second World War, however, there has been a reversal trend towards trade liberalisation especially among the industrial nations. The impact of the economic chaos of the 1930s had a salutary effect. It was quite obvious that when protective policies were applied by all countries, the outcome would be generally self-destructive. This realisation resulted in the negotiation of the General Agreement on Tariffs and Trade (GATT) in 1947 in Geneva. The aim of this agreement was to find ways to reduce tariffs and remove trade barriers among the twenty-three member countries (MacGovern, 1986). Thereafter, the phenomena of free trade grew on to encompass a larger dimension. The concept of free trade was envisioned and subsequently, employed through the use of a variety of economic ties. These ties can be grouped under two readily distinguishable free trade bindings (see model in Figure 2.2): I. GEO-POLITICAL BINDINGS, and II. INVESTMENT BINDINGS.

Figure 2.2: A Model for the Free Trade Phenomena



I. THE GEO-POLITICAL BINDINGS

The experiences of GATT gave rise to the spread of many geo-political economic ties. The three most known forms of these ties are: Free Trade Areas, Customs Unions, and Common Markets. These agreements are differentiated on several bases.

Free Trade Areas. A free trade area consists of a group of countries which have abolished all tariff barriers between themselves but maintain their individual tariffs vis-a-vis the outside world. A good example is the European Free Trade Zone Area (EFTA). EFTA was signed in Stockholm, in 1959, by the "outer seven" countries: Austria, Denmark, Norway, Portugal, Sweden, Switzerland and the United Kingdom. Another example of a free trade area is the Latin American Free Trade Area (LAFTA). LAFTA was originally formed in 1961 but failed to exist. LAFTA came into being when it was renamed via the Montevideo Treaty in 1980. The new name is the Latin American Integration Association (LAIA). Today LAIA members include eleven Latin American countries: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay and Venezuela.

Customs Unions. A customs union is similar to free trade area. In addition to abolishing all tariffs on trade among members; a customs union agreement obliges all members to conduct and pursue common external commercial relations, for instance they must adopt common external tariffs on imports from the non-participants. An example of a customs union is the European Community (EC). The EC was signed in Rome, in 1958, among six European countries: West Germany, France, Italy, the Netherlands, Belgium and Luxembourg. Today it is often referred to as the European Economic Community (EEC). Six more countries joined the EEC: Denmark, Ireland, United Kingdom, Greece, Spain and Portugal. Another example of a customs union is the Economic Community of West African States (ECOWAS). Fifteen West African countries signed, in 1973, in Romé, Togo. The ECOWAS members are: Benin, Cape Verde, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory

Coast, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo, and Upper Volta. The most recent of these unions is the Arab Maghreb Union (AMU) which was signed, in February 1989 in Tripoli, Libya, by the five Arab states of North Africa: Algeria, Libya, Mauritania, Morocco and Tunisia.

Common Markets. Members of a common market agreement not only remove internal tariffs among themselves and levy common external tariffs, but also they permit the free flow of all factors of production (capital, labour, technology) among themselves. A common market seeks to standardise or harmonise all government regulations affecting trade. An example of a common market is the Arab Common Market (ACM). The ACM was set up, in 1964, in Cairo to include five Arab states: Egypt, Iraq, Kuwait, Jordan, and Syria. Another example of a common market is the Andean Common Market (ANCOM). The ANCOM was set up via the Cartagena agreement in 1967. Today the ANCOM members include: Bolivia, Columbia, Ecuador, Panama, Peru, and Venezuela.

II. THE INVESTMENT BINDINGS

The spread of the various Geopolitical Bindings stimulated the emergence and growth of another form of free trade involving business investment among different nations around the world. The two most known types of investment bindings are: Duty Free Shops and Free Trade Zones.

Duty Free Shops (DFSs).

According to Yngve Bia (1989) in 1986 there were 1,200 DFSs operators/owners in 180 countries selling 25,000 products resulting in an estimated sales volume of 8 billion US dollars. By 1987 this sales figure increased by over 25% to reach ten billion US dollars.

Today, the DFSs are involved in the operations of many different forms of outlets including: Shops in airports (e.g., Heathrow, London); Onboard airlines (e.g., Swissair);

Onboard ferries (e.g., St. Columba, British Ferry); Shops in seaports (e.g., Bayeux, on the English Channel - Northern France).

Other DFSs outlets are grouped under the so-called low-tax markets. The statistics of 1987 also show that almost 42% (i.e., 4.2 billion dollars) of all the DFSs sales were generated from the sales of the low-tax markets. This category of the DFSs includes the sites for: military sales (e.g., West Germany, military points in the U.S.); diplomatic sales (e.g., major capital cities of the world, particularly in Europe); downtown shops (e.g., main cities in Australia); off-airport shops affiliated with airport operations (e.g., Hong Kong); other low-tax sites operating in the Isles of the Caribbean Basin.

However, the most important DFSs outlets are the shops in airports, onboard airlines, onboard ferries, and the shops in seaports. The sales volume of this DFSs category make up 58% (i.e., 5.8 billion US dollars) of all the 1987 DFSs sales.

The shops in airports: Shannon Airport, Ireland was the first with duty free sales in 1947 followed by Frankfurt, Amsterdam and London airports in 1959. Today almost every international airport, including those in Eastern Europe, have DFSs complex. The sales of the airport shops amounted to 37% (i.e., 3.7 billion US dollars) of all the DFSs 1987 sales. The most successful airport shops in the world are in: Honolulu; Heathrow, London; Hong Kong; Amsterdam; Singapore; and Dubai, United Arab Emirates.

The Onboard airlines: The first DFS onboard aircraft was across the Atlantic in the early 1950's and probably onboard the TWA. By the 1970's most flights of international connections offer their passengers a variety of duty free products. 1987 DFSs sales statistics show that the onboard airlines sales estimated to be 876.7 millions US dollars (i.e., 8.7% of all DFSs sales). The most successful DFSs onboard aircrafts are: Sterling Airways, Swissair, Britannia Airways, Dan-Air, Scandinavian Airlines, Lufthansa.

The Onboard ferries: The first duty free products were offered onboard a ferry was the Danske Statsbaner (DSB) of Denmark in 1963. Today there are 982 ferries belonging to fifty countries. The 1987 sales of the onboard ferries were estimated to be 989.7 millions

US Dollars (i.e., 9.9% of all DFSs sales). The most successful DFSs onboard the ferries are: Viking Line, Sweden; Sealink, British Ferries; Stena Line, Sweden; DSB Ferries, Denmark; P & O European Ferries, U.K.

The Seaport Shops: The first DFSs on seaports were established in Dover, England in 1970. Later on the seaports around the English Channel in England and France opened their DFSs. However, the most successful DFS seaport is in Cyprus. The 1987 sales of all seaports were estimated to be 240 million US Dollars (i.e., 2.4% of all DFSs sales).

Free Trade Zones (FTZs). In order to overcome import barriers, with the view of encouraging international business enterprises, many countries have resorted to the establishment of special compounds or zones where businesses can process, assemble, manufacture and display or re-export or simply store goods coming from abroad without having to pay customs duties or tariffs.

Today there are 506 FTZs located in 86 countries around the world. These FTZs are operating under diverse labelling and titles, for example, there are: Export Processing Zones (EPZs), Free Ports, Foreign Trade Zones. More discussion on these and other forms of FTZs is provided in Section 2.4.4 (Types of Free Trade Zones).

2.4 The Nature of Free Trade Zones

2.4.1 Definitions of Free Trade Zones

A single logical definition of FTZs either in statute or in practice, is almost difficult if not impossible. This difficulty stems from the sharply differing combinations of historical, political, economical, locational, and functional qualities. Therefore, the term "Free Trade Zone" tends to take slightly different meaning from country to country and thus can be better explained than defined. Richard S. Thoman on his book (1956) surveyed some of

these attempts made at explaining what a Free Port^{*} is; for example, in Germany a legal definition of a free port is briefly stated as: "Out-of-customs places (*Zollausschuesse*) are (in part) the portion of seaports excluded from customs territory; they carry the designation, free ports (*Freihaefen*)".

In France, a definition from a commercial viewpoint is explained as: "From the commercial viewpoint, a free port is a neutral, denationalised extraterritorialised plot of ground that is considered to be foreign territory, pushing back, in effect, the action of customs and placing it behind a given line, to which (place) may enter freely all vessels, whatever be their nationality, and all merchandise, whatever be their nation of origin, for purposes of warehousing, manipulation, and exportation without unnecessary formalities and restrictions and without customs requirements, as long as the goods do not move into the interior of the country".

In Sweden, however, the interpretation is more conservatively expressed: "By free port is understood such an establishment which, under the supervision of the customs, is intended for general use in connection with certain trade and industrial activities ... The free port will be considered as foreign territory so far as customs and other duties, as well as import duties, make an inspection of buildings, open spaces, transport equipment and goods in the free port, and also make a bodily search of persons leaving the free port in accordance with the regulations enacted in the law regarding penalty for the unlawful importation of goods ...".

A definition stressing the functions of a free port is articulated by Roy S. MacElwee, author of "Port Development" (1926): "The modern free port is an area of a port separated from the customs area of a nation by stockade. Ships may enter such a port, discharge, load, and depart without customs formalities. The goods may be stored, repacked, manufactured and re-exported without customs formalities. Only when the goods pass the barrier to reach the consuming public of the country do they undergo customs revision

* A Free Port is, as explained earlier, one of the oldest forms of a FTZ

and pay the necessary duty. A free port is a 'customs outland' within the political boundary of a country".

In America, Congressman Emmanuel Celler, who was responsible for the initial foreign-trade zone legislation in the United States in 1934 made this somewhat amusing description: "A trade zone is a neutral, stockaded area where a shipper can put down his load, catch his breath, and decide what to do next".

A definition contrasting the regulations for the exemption of the customs duties is provided by Walter H. Diamond, author of "Tax-Free Trade Zones of the World" (1989): "A free trade zone is always free from customs duties and import controls. Some zones guarantee the users complete income tax exemption. Others grant concessions only on goods processed or manipulated for export. Goods brought into these facilities need not be declared as customs entries into the host country. Bond or security is not normally required".

Professor Herbert Grubel, a Canadian economist at Simon Fraser University in Vancouver, Canada; emphasises the economic aspects of a free trade zone which he calls free economic zone, and he defines it as follows: "A geographically defined area within which certain types of economic activity take place without some of the government taxation and regulation that applies to them in the rest of the economy". (Grubel, 1984).

A definition with a rather authoritative tone is given by Encyclopedia Britannica: "A free port or free zone within a port is an area within which goods may be landed, handled, manufactured and reshipped without the intervention of the customs authorities. It follows that the normal facilities of a port will exist; for instance, for loading and unloading; supplying the water, fuel and other requirements of ships; for storage of goods; for providing transport within the port or zone; and allowing contact with inland areas. The defined area is subject to all the usual laws concerning health, labour conditions, inspections of vessels, immigration and postal service but entirely exempt from customs. It is only when the goods are moved to consumers within the country in which the free port zone is located that they become subject to the prevailing customs duties".

An informative definition, describing to the users what a free zone is and what its lawful mechanism is, is given by the British Customs and Excise: "A free zone or free port is an enclosed area into which you may move goods without payment of customs duties and similar charges, including valued added tax (VAT) charged at importation. You pay duty and the VAT charges on imports only if you bring goods out of the zone into the UK market or if you consume them within the zone. You pay duty, but not the VAT, if you process the goods other than for export outside the European Community. Any supplies of goods and services you make within the zone will be subject to normal VAT rules (cited from Her Majesty's Customs and Excise, R5-6, Feb. 1985).

An EEC legislation provides a definition of a free zone based on consensus of the 12 European member-states, as follows: "Free zones means parts of the customs territory of the community, separate from the rest of that territory, in which non-community goods placed in them are considered, for purposes of the application of import duties and commercial policy import measures, as not being within the customs territory of the community provided they are not released for circulation or entered under another customs procedure under the conditions laid down in this regulation" (Official Journal of the European Communities, July, 1988).

Two of the most thorough descriptions of a free trade zone come from North America, for example, the Canadian Customs defines a free trade zone as: "A free trade zone is an enclosed, policed area in a seaport, at an airport or at another inland point treated for customs purposes as lying outside the customs territory of the country. Goods of foreign origin may be brought in pending transshipment, re-exportation by land, water, or air, and in some cases, importation into the local market without the payment of customs duties. Domestic goods intended for export, or for admixture with foreign goods may also be brought into the free trade zone. Usually those zones allow foreign traders to assemble, exhibit, sample, blend, mix, sort, repack, store, refrigerate, and manufacture various commodities within the zone area" (Canadian Customs, 1977).

A more comprehensive description of a free trade zone is formulated by the U.S. Foreign-Trade Zones Board and reported to the U.S. Congress: "Foreign-trade zones are secure areas under U.S. Customs supervision that are considered outside the customs territory of the United States. Located in or near U.S. Customs ports of entry, they are the U.S. version of what are known internationally as free trade zones. Authorization for establishing these facilities is granted by the Foreign-Trade Board ... Foreign and domestic merchandise may be moved into the zones for operations not otherwise prohibited by law involving storage, exhibition, assembly, manufacture, or other processing. All zone activity, especially manufacturing, is subject to public interest review. Under zone procedures the usual formal customs entry procedure and payment of duties is not required on the foreign merchandise unless and until it enters customs territory for domestic consumption, in which case, the importer has a choice of paying duties either on the original foreign materials or the finished products. Domestic goods moved into a zone for export are considered exported upon entering the zone for excise tax rebates and drawback. Zones are sponsored by qualified public or public-type corporations, which may themselves operate the facilities or contract for their operations with Public or Private firms. The operations are conducted on a Public Utility basis, with published rates. Typically, a foreign trade zone provides a leasable storage/distribution space to users in general warehouse type buildings with access to all modes of transportation. Most zones are part of an industrial park with lots on which zone users can construct their own facilities. Subzones are sites authorized by the Board through zone grantees for operations by individual firms that cannot be accommodated within an existing zone (Spetrini, 1985).

2.4.2 Types of Free Trade Zones

It was emphasized, in subsection 2.4.1, that the principle which underlies FTZs is that of deregulation, i.e., the exemption of trade within an enclave from certain taxes, tariffs, and government regulation. However, there is some confusion over the types of zones

which operate under this principle of a FTZ. This in turn has caused further confusion over terminology among writers in the field of FTZs. Two developments might have led to this confusion. First, as state control and regulation has increased in modern times, the number of different regulation exemption arrangements has also increased. Second, since the early 1960's many zones have been established, around the world, to serve different goals. For example, transit zones are established to serve as storage and distribution centres; export processing zones are established to serve as manufacture centres for the purpose of exporting the finished products; and since the seventies, subzones are established, mainly in the U.S., to serve as extensions of, new or existing, zone facilities not physically located within the zone to provide extra space for specific zone operations.

In this subsection we shall attempt clearing up this confusion by examining few of the models, including our own, made in the efforts of categorizing/classifying FTZs.

Calkin, Dibblee, and Haites (1980) of the Stevenson & Kellogg, Ltd., and consultants to the Canadian government on FTZs, made their classification of FTZs on the basis of the orientation/final destination of the finished goods. According to their frame of reference there are many variations on the free trade zone concept. Most, though not necessarily all, free trade zones can be assigned to one of the following three categories:

- (i) **Import oriented zones** are those where most of the goods are subsequently imported into the host country. These zones generally exist to minimise the difficulties created by the customs regulations of the host country. Most zones in the U.S. are import oriented.
- (ii) **Re-export oriented zones** are those where most of the goods are subsequently exported to countries other than the host country. These zones are generally situated on major trade routes. These are the classic FTZs. Generally, there is little manufacturing activity carried out. Colon in Panama and Singapore are good examples of such zones.

- (iii) **Export Processing Zones** are those which combine manufacturing with re-export of the finished product. EPZs are specific examples of an economic trend, in the developing world, known as production sharing. Most of the zones in the rest of the world are, or are intended to be, export processing zones.

The Stevenson & Kellogg model of FTZs classification indeed provided one way of looking at how FTZs exist. Yet, this model fell short in accommodating other forms of FTZs, for example, free ports, bonded warehouses, free perimeters and similar zones. Stevenson & Kellogg view such zones as related concepts to, rather than different types of, free trade zones.

Hubert Grubel (1983), a Canadian economist and professor of economics at Fraser University made a further attempt at classifying free trade zones. According to his model all free economic zones may fall under the following seven categories:

- (i) **Free Trade Zones**, where firms can import free of duty goods for assembly, processing, manufacturing, and distribution for export or in some cases for sale in the local markets. There exist several other institutions like free trade zones which facilitate international trade by setting aside an area subject to special treatment under laws regulating international trade. These institutions are bonded warehouses, free retail zones, (i.e., duty-free shops), free ports, and export processing zones.
- (ii) **Free Enterprise Zones**, where some economically depressed areas in a country are designated as free enterprise zones. In these zones a number of burdensome types of regulation and taxation have been eliminated. Free enterprise zones are found in the United States and in the United Kingdom.

- (iii) **Free Banking Zones**, where banks can carry out business denominated in foreign currencies without the requirement to maintain minimum reserves and pay certain taxes levied on regular banking. A free banking zone started operation in 1981 in New York City.
- (iv) **Free Investment Zones**, where securities and other assets can be sold unrestricted by the existing government regulations governing such sales.
- (v) **Free Insurance Zones**, where companies can underwrite hazards normally afflicting customers that do not require paternalistic protection by the government. In 1980 New York opened a free insurance zone.
- (vi) **Free Gambling Zones**, where all forms of gambling are permitted without restrictions. The state of Nevada and Atlantic City, in the United States, are examples of free gambling zones.
- (vii) **Free Medical Zones**, where doctors and drug companies can make available drugs, surgical procedures and therapies exempted from government taxes.

Grubel's approach to FTZs is envisioned through economic perspectives. Thus his model of FTZs classification incorporates all tax-free zones that are involved in economic activities. Grubel's model is too broad. It includes one category for FTZs under which four other forms of FTZs are listed. The category of FTZs includes duty free shops (DFSs) which Grubel calls free retail zones. However, we do not consider DFSs as a form of FTZ but rather as a related concept to FTZs. Because DFSs simply are retail shops located inside airports and seaports, or aboard aircrafts and shops, to offer travellers duty-free consumer goods, these are unlike FTZs which are involved in tax-haven investment among nations entailing warehousing, assembling, processing and manufacturing activities. Another disadvantage in Grubel's model is that the other categories, which we consider as related concepts to, rather than forms of, FTZs, only few of them exist. A further drawback is that some of these related concepts (i.e., the different types of free economic zones), for

instance, the free medical zones do not even exist but the cost and benefit analysis of these zones, as to be established in Canada, was investigated by Professor Grubel.

Diamond (1989) in his model of FTZs classification considers all customs-privileged facilities to fall under five basic categories with which importers, manufacturers, processors and assembly operators should be familiar. These five FTZs categories are:

- (i) **Free Trade Zone (FTZ)** - a FTZ is the best known and the most frequently used. A FTZ is always free of customs duties and import controls. The Colon Free Zone of Panama and the Shannon Industrial Free Zone are two examples of FTZs. The former concentrates on warehousing, the latter on export processing.
- (ii) **Free Port** - usually encompasses an entire port and the surrounding area. Examples of free ports includes Hamburg, Hong Kong, Singapore.
- (iii) **Transit Zone** - sometimes called "free transit zone" is a port entry in a coastal country, which serves as a storage and distribution centre. The Buenos Aires Transit Zones and the Karachi Transit Zone are examples of transit zones.
- (iv) **Free Perimeter** - is similar to a free port but generally confined to a remote or underdeveloped region in a country. Baja California in Mexico and the Province of Arica in Chile are examples of free perimeter.
- (v) **Special Customs Privileges** - are available in certain industrial countries that do not operate bona fide free trade zones. Customs duty exemptions and minimal customs formalities are characteristics of these privileges. The special customs-privileged facility is usually designed to permit temporary entry of foreign goods for re-export or prior to despatch of goods into a local market. Examples of such privileged zones are found in Alicante, Bilbao,

Las Palmas in Spain; Bari, Naples, Palermo in Italy; and in major ports of Belgium and Japan.

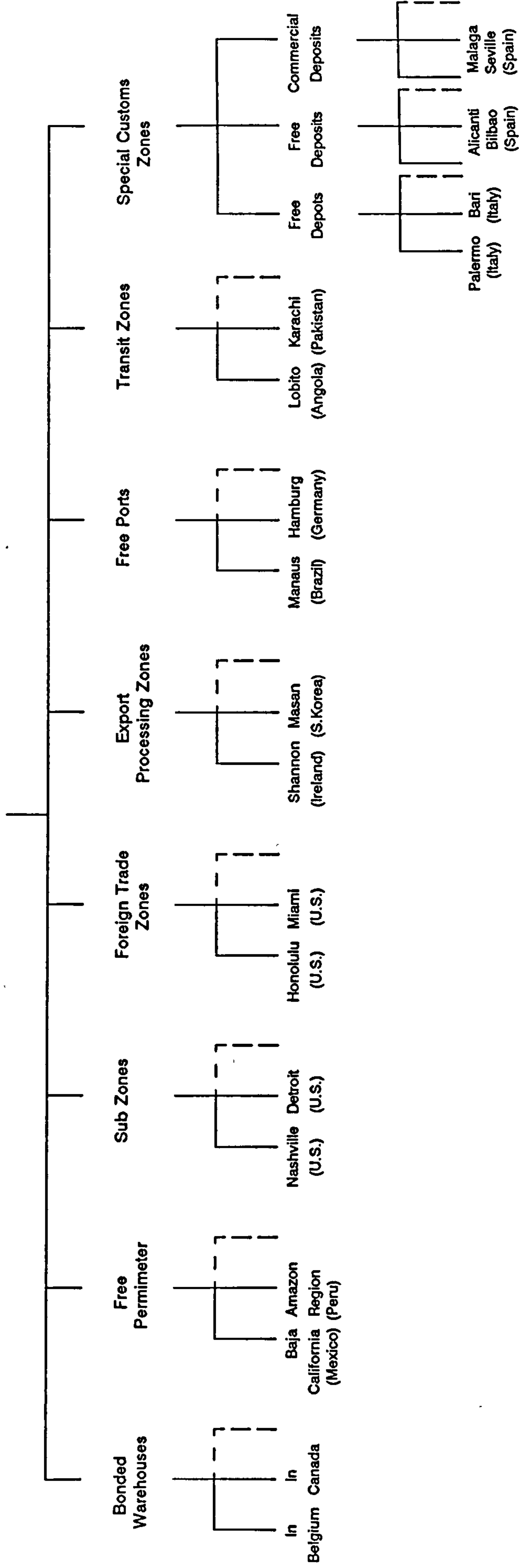
Diamond (1989) indeed provided an alternative model for classifying FTZs. It emphasises the basic functions of each type of FTZ. However, the generic term "Customs-privileged facilities" is too general that it would be possible to include, under its heading, other related concepts such as duty-free shops. Another weak point in Diamond's model is that although the export processing zones are the most widely used types of zones in the world, yet the Diamond model did not include them as a separate class but rather belonging, along with the bonded warehouses, to the class of free trade zones.

With respect to our model, a free trade zone (FTZ) simply means a part of a territory of a country where any goods, be it raw materials, semi-processed or wholly processed, brought inside the defined area are generally regarded, in so far as import duties and taxes are concerned, as being outside the customs territory and are not subject to the usual customs control. On the basis of this definition of a FTZ, an array of zones can be identified as follows (See Figure 2.3):

- (i) ***Export Processing Zone (EPZ)***, this is the form of a FTZ where the zone users can perform a host of activities for the purpose of exporting or re-exporting the finished products and in some cases (e.g. Egypt) local consumption is possible. Among the permissible activities in an EPZ include: sorting, mixing, blending, stripping, processing, assembling, manufacturing, sampling, packaging, repackaging, labelling, containerisation, exhibiting, storing, warehousing, refrigeration, loading, unloading, exporting, re-exporting. Shannon, Ireland; Masan, South Korea; Kaohsiung, Taiwan; and Batan, Philippines are examples of EPZs. Of all the forms of FTZs, EPZs are the most widespread, worldwide and they are sometimes called FTZs.

Figure 2.3: Types of Free Trade Zones (The Al-Sanie Model)

FREE TRADE ZONES



- (ii) **Foreign Trade Zone**, has the same basic functions of an EPZ but instead of exporting or re-exporting, the finished products are imported into the local market. As of December 1989 there were 147 foreign trade zones in the United States.
- (iii) **Free Port**, is an area generally encompassing an entire port and its surrounding locality, into which goods of foreign origin may enter duty-free or subject only to minimal revenue tariffs (with the exception, perhaps, of a limited number of items, for example, alcoholic beverages and tobacco) whether these are for re-export or local consumption. These facilities historically have served what used to be known as entrepôt trade. Most free ports allow light manufacturing or assembly operations. Rather, they concentrate on wholesale distribution and accompanying activities such as sorting, packaging, and the like. Free port privileges may either extend throughout an entire territory as in Hong Kong, or be confined to a limited but substantial portion in a country, as in the Brazilian free port of Manaus. Other examples of free ports include: Hamburg, Germany; Copenhagen, Denmark; Stockholm, Sweden; Bermuda and Grand Bahamas in the Caribbean.
- (iv) **Bonded Warehouse**, a place which is generally under the control of customs authorities where goods for re-export may be stored for an extended period of time (usually up to two years) without payment of duties or other taxes. In addition to storage, sampling, blending, mixing, exhibiting, transfer of ownership, etc. are generally permitted. Belgium, Holland, Japan, Canada and other industrial nations are countries where numerous bonded warehouses may be found.
- (v) **Free Perimeter**, is similar to a free port but is generally confined to a remote or underdeveloped region in a country. Free perimeters function primarily

serves local consumption. Tariffs are likely to be reduced, not exempted, and free perimeters often handle only specific imports, such as food stuffs, pharmaceuticals, capital goods and urgently required consumer items. Examples of free perimeters are: Tierra del Fuego, Argentina; Province of Arica, Chile; Baja California, Mexico; Amazon Region, Peru.

- (vi) **Transit Zone**, sometimes called "free zone" or "free transit zone", is a port of entry in a coastal country, which serves as a storage and distribution centre. Generally, it is established to facilitate free transit of goods to a neighbouring land-locked country. Goods in transit to and from the neighbouring country are not subject to customs duties, import controls and other entry and exit formalities of the host country. In general, transit zones do not permit processing operations. Most authorise only storage and necessary operations such as repacking or other steps to ensure that the goods reach their final destination in good condition. There are a large number of transit zones throughout the world, for example: Lobito, Angola; Mendoza, Argentina, Santos, Brazil, Calcutta, India; Abidjan, Ivory Coast; Karachi, Pakistan; Dar es Salaam, Tanzania.
- (vii) **Subzone**, serve as an extension of, new or existing, zone facilities not physically located within the zone to provide extra space for specific zone operations (often manufacturing or assembly or light industry). As of December 1989 there are 125 subzones in operation throughout the United States.
- (viii) **Special Customs Zones (SCZs)**, customs duty exemption and minimal customs formalities are characteristic of the SCZs. The purpose of establishing SCZs is to permit temporary entry of foreign goods for transshipment, or re-export, or prior to despatch of the goods into the local market. However, processing, assembly, or manufacturing operations may

be possible. Some industrial countries that do not operate bona fide EPZs permit private companies to operate their own SCZs under specific government laws. For instance, in Belgium and the Netherlands, it is a relatively simple matter to fence off a piece of property adjacent to its manufacturing, processing, or trading operations and to have it declared a SCZ. Customs agents generally inspect the enclosed area once a month or a quarter. Free depot, free deposit, and commercial deposit are among the most known forms of SCZ.

Free Depot, is an area where foreign goods may be stored, unpacked, repacked without payment of customs duties; but no processing is permitted. Bari and Palermo in Italy are examples of free depots.

Free Deposit, is a limited area in a major port. Goods may be held in free deposit without payment of customs duties or other taxes. General operations permitted in free deposits include storing, repacking, division of goods from bulk to commercial quantities, mixing, and all other operations which increase the value of goods deposited without changing the essential nature of the goods. Alicante and Bilbao in Spain are examples of free deposits.

Commercial Deposit, is similar to a free deposit but the privileges are more limited. Malaga and Seville in Spain are examples of commercial deposits.

Our model of FTZs classification uses the caption FTZs as a generic term, as such it focuses on the different types, rather than the related concepts, or a mixture of both the types and the related concepts of FTZs. Thus, our model provides a close-up picture of how the different types of FTZs exist by contrasting the basic function(s) of each type of FTZ. Table 2.1 shows a comparison among the four models of FTZs discussed. The comparison is presented in terms of the categories, distinctive feature(s) and drawback(s).

Table 2.1: A comparison of four FTZs classification models

Classification Model of FTZs	Distinctive Feature(s)	Main Drawback(s)
<p>I. <u>Stevenson & Kellog (1980):</u> Free trade zones consist of three basic categories:</p> <ol style="list-style-type: none"> 1. Import Oriented Zones 2. Re-export Oriented Zones 3. Export Oriented Zones <p>II. <u>Grubel (1983):</u> Free economic zones consist of seven basic categories:</p> <ol style="list-style-type: none"> 1. Free Trade Zones: <ol style="list-style-type: none"> a) Bonded Warehouses b) Retail Zones (Duty Free Shops) c) Free Ports d) Export Processing Zones 2. Free Enterprise Zones 3. Free Banking Zones 4. Free Investment Zones 5. Free Insurance Zones 6. Free Gambling Zones 7. Free Medical Zones <p>III. <u>Diamond (1989):</u> Customs-privileged facilities consist of five basic categories:</p> <ol style="list-style-type: none"> 1. Free Trade Zones: <ol style="list-style-type: none"> a) Export Processing Zones b) Bonded Warehouses 2. Free Ports 3. Transit Zones 4. Free Perimeters 5. Special Customs Privileges <p>IV. <u>Al-Sanie (1991):</u> Free trade zones consist of eight basic categories:</p> <ol style="list-style-type: none"> 1. Export Processing Zones 2. Foreign Trade Zones 3. Free Ports 4. Bonded Warehouses 5. Free Perimeters 6. Transit Zones 7. Sub Zones 8. Special Customs Zones: <ol style="list-style-type: none"> a) Free Depots b) Free Deposits c) Free Commercial Deposits 	<ol style="list-style-type: none"> 1. It provides one way of looking at how FTZs exist. 2. It emphasises the orientation/final destination of the finished goods. <ol style="list-style-type: none"> 1. Free trade zones are viewed through the economic perspectives. 2. As such, it includes a variety of FTZ related concepts. <ol style="list-style-type: none"> 1. It provides an alternative way of looking at how FTZs exist. 2. It emphasises the basic function(s) of each type of FTZ. <ol style="list-style-type: none"> 1. It uses the caption FTZ as a generic term. 2. It is an exhaustive model. As such, it includes all types of FTZs which are in use today throughout the world. And it excludes all those zones which are of limited use. 3. It focuses on the different types rather than the related concepts, or a mixture of both the types and the related concepts. 4. It provides a close-up picture of how different types of FTZs exist by contrasting the basic functions of each type of FTZ. 	<p>It fell short in accommodating other forms of FTZs, such as free ports, bonded warehouses, transit zones, free perimeters, etc.</p> <ol style="list-style-type: none"> 1. It is too broad. 2. It includes four different forms of FTZ under one category rather than each FTZ form occupies a separate distinct category. 3. The FTZ category includes free retail zones (i.e., duty-free shops) which are considered a related concept rather than a form of FTZ. 4. The Free (economic, investment, insurance, gambling, and medical) zones have not received world-wide acceptance as yet. These type of zones are available in the United States and are only of limited use. <ol style="list-style-type: none"> 1. The generic term "customs-privileged facilities" is too general that it would be possible to include other related concepts such as those mentioned in Grubel's model. 2. Although the EPZs are the most widely used in the world, they were not listed in one separate category.

Finally, we wish to clear up the confusion over the terminology. Writers and bodies of authority on FTZs have not yet reached a consensus on the one term that would best convey the concept of a FTZ. When they write on, or speak of a FTZ they use different terms. As a result, there are at least 19 different terms currently in use in the English Language to describe what is basically the same reality. Table 2.2 shows the evolution of the free trade zone terminology with respect to the term used, main users and date of first use.

2.4.3 Characteristics of Free Trade Zones

On the basis of the foregoing discussion on the definitions and the forms on which FTZs exist (in particular our model), the following two observations can be made: (a) FTZs tend to be distinguishable by the relative precision in legal definition and a high measure of diligence in the execution of existing laws; and (b) FTZs are contrasted in terms of the specific functions they are created for. Therefore, they are more or less differed in degree rather than in kind. Viewed more closely, the device of a FTZ may be said to possess the following characteristics:

1. It is a fenced, patrolled district. When found in a seaport, it does not necessarily include the entire port.
2. A free trade zone is "free" and a "foreign territory" only with respect to the application of customs duties, import taxes, and possibly import controls normally imposed by customs laws and formalities outside its boundaries. Directly or indirectly, it is still within the jurisdiction of the other penal and civil law applicable elsewhere in the country, for example, those concerning public safety, health, labour, business organisation, business and personal taxes, etc. are usually applicable within a free trade zone.
3. It usually offers its users, on the 'free' side of the customs fence, the accommodations of office, warehouse space, and other sites if required for

Table 2.2: The Evolution of Free Trade Zone Terminology

<u>Term</u>	<u>Main Users and Date of First Use</u>
Free trade zone	Traditions term since nineteenth century; ILO (1982)
Foreign trade zone	Individual authors (R.S. Toman, 1956; W. Dymsha, 1964), India (1983)
Industrial free zone	Ireland (pre-1970), UNIDO (1971), Liberia (1975)
Free zone	UNCTAD (1973), USAID (1982), United Arab Emirates (1983)
Maquiladors	Mexico (early 1970s)
Export free zone	Ireland (1975), UNIDO (1976)
Duty free export processing zone	Republic of Korea (1975)
Export processing free zone	UNIDO (1976), UNCTAD (1983)
Free production zone	Starnberg Institute (1977)
Export processing zone	Philippines (1977), Harvard University (1977), APO (1977), WEPZA (1978), UNIDO (1978), World Bank (1978), <u>The Economist</u> (1977), Malaysia (1980), Pakistan (1980), Singapore (1982), UNCTC (1982), ILO (1983)
Special economic zone	China (1979)
Tax free zone	Individual authors (W.H. and D.B. Diamond, 1980)
Tax free trade zone	Individual author (D.B. Diamond, 1980)
Investment promotion zone	Sri Lanka (1981)
Free economic zone	Individual author (H. Grubel, 1982)
Free export zone	Republic of Korea (1983)
Free export processing zone	OECD (1984)
Privileged export zone	Individual author (N.N. Sachitanand, 1984)
Industrial export processing zone	Individual author (P. Ryan, 1985)

APO	Asian Productivity Organisation
ILO	International Labour Office
OECD	Organisation for Economic Co-operation and Development
UNCTAD	United Nations Conference on Trade and Development
UNCTC	United Nations Centre on Transnational Corporations
UNIDO	United Nations Industrial Development Organisation
USAID	United States Agency for International Development
WEPZA	World Export Processing Zone Association

Source: Jequir, N. (1988)

other lawful operations. Some zones extend their infrastructural offerings to include aiding facilities such as transporting equipment, utilities and tools for assembly, processing, manufacturing and for other zone operations as demanded by the users.

4. Goods brought into a free trade zone from abroad are not 'declared' as customs entries into the sponsoring (host) country. Customs examination generally occurs at the surrounding fence and at shipside or in warehouse and other structures within a zone.
5. Bonds or other security is not normally required.
6. There are few restrictions as to the types of goods which may be brought into a free trade zone. In general, any goods from any country with which the sponsoring (host) country has normal trade relations can be accepted. However, goods which are prohibited entry or free circulation within the other areas of the sponsoring country such as narcotic drugs, firearms, ammunition, etc., are usually denied entry into its FTZs.
7. Goods brought into a FTZ are frequently subject to inspection or documentary controls, these formalities are usually held to the minimum necessary to prevent smuggling or other illegal activities.
8. Domestic goods and duty-paid foreign goods brought into a FTZ are usually considered exports from the customs territory of the host (sponsoring) country unless special steps are taken to retain their nationality. Upon introduction into a FTZ such goods can become eligible for any export incentive, tax refund or drawback payment.
9. Foreign goods brought into a FTZ for use or consumption within their confines are generally regarded as imports and subject to the payment of customs duties and import taxes in full. The customs treatment of capital goods and office supplies intended for operations within a FTZ, however, can vary widely. The FTZs of the developing countries frequently accord

them duty-free entry, but those of the industrialised nations usually require payment of duty.

10. Among the operations/activities permitted within a FTZ typically include: sorting, mixing, blending, stripping, processing, assembling, manufacturing, sampling, packaging, repackaging, labelling, containerisation, exhibiting, storing, warehousing, refrigeration, loading, unloading, exporting, re-exporting.
11. There is generally no limit on the length of time during which goods can be held in a FTZ, provided storage charges and other commercial fees are paid.
12. Goods removed from a FTZ for use or consumption in the host (sponsoring) country are, at the time of their removal, subject to the payment of customs duties and taxes at full rates applicable to similar goods imported directly from abroad.
13. Goods in a FTZ can usually be sold in the wholesale level through auction or other means.
14. With a few exceptions, retail trade in goods hold in a FTZ is prohibited or, if permitted, is subject to strict control. The most common exception to this rule is ship chandling (i.e., the sales of supplies to ships or aircraft).
15. A FTZ will usually have general or public warehousing facilities for short-term or occasional use on a storage charge basis.
16. Arrangements can usually be made to use a FTZ for foreign forwarding purposes.
17. Residence within a FTZ is usually prohibited, and access to its premises confined to persons who have business there.
18. Most of the FTZs in the developing countries are usually administered and managed by a branch of local government, while the FTZs in the developed countries are usually run by private companies.

2.4.4 Advantages of Free Trade Zones

The advantages of establishing a free trade zone (FTZ) are twofold: (I) advantages gained by the host country, and (II) advantages gained by the firms using the FTZ. Below we present a brief review of both advantages.

I. Advantages gained by the host country:

At the broadest level, the host country's objective for establishing a FTZ is to attract foreign and indigenous incremental investment mainly through promoting the development of export-oriented manufacturing industries. The universal expectation, of many host governments, is that this investment will achieve four main objectives:

- (A) generating foreign exchange earnings and rates of return;
- (B) creating employment;
- (C) acquiring and upgrading labour and management skills; and
- (D) transfer of technology.

Very few FTZs can accomplish all the four objectives to their respective host countries. As for why the case is so, deserves further researching efforts. However, here we discuss each of these goals and some of the problems facing the host countries in achieving these goals.

(A) Generating foreign exchange earnings and rates of return

Payments for wages, salaries, rental/lease expenditures, privileges, facilities, services, minimum taxes, and the purchase of domestic raw materials are then to be considered foreign exchange earnings. However, against these payments, capital transferred abroad for repayment of foreign loans used to finance construction of buildings and infrastructure

and administrative costs must be accounted for. The FTZs in the semi-industrial countries of South East Asia have been successful for earning foreign exchange. For example, according to Frazier and Erony (1983) the total exports of the Masan EPZ, in South Korea, in 1979 represents 4.5% of the total national exports of manufactured goods. This figure of Masan EPZ compares favourably with FTZs in other host countries. For example, the respective shares for the Philippines (six FTZs) and Malaysia (ten FTZs) in 1978 were 7.8% and 3.7% of the national exports of manufacturers. But many FTZs generate negligible annual net foreign exchange earnings.

As for the rates of return, the performance depends largely on whether the FTZ is operated by the host government or by a private company. Frazier and Erony in their study (1983) found evidence that the privately run FTZs have conducted operations at a net profit and have generated lease revenues and income payments for the host government. In contrast, the financial return on investment in government-run FTZs appeared recurrently to be either nominal or negative.

(B) Creating Employment

One of the main motivations underlying the creation of FTZs in the 1960's and the 1970s was to increase the manufacturing employment and provide jobs for the large number of new entrants into the labour force. According to Kreye, et al (1987) in the mid-1970's, a total of 825,000 employees were employed in FTZs world-wide. By the mid-1980's, this figure had more than doubled to 1.9 million. However, against this positive aspect of FTZ employment, less favourable characteristics have also been noted. Firms operating in FTZs tend to hire young women for the vast majority of routine jobs, often pay them far less than men, although usually more than offered to women by employers outside the zone (UNCTAD, 1985).

(C) Acquiring and Upgrading Labour and Management Skills

FTZs have played an important role in acquainting large numbers of people who have previously lacked industrial habits with assembly and light manufacturing procedures. There is evidence to suggest that firms operating in FTZs can be a useful source of basic industrial training for host countries with high unemployment. The firms operating in the FTZs in the People's Republic of China illustrate the importance of this industrial training (Frazier and Erony, 1983). However, with the exception of few FTZs*, the amount of training which can be imparted to workers, or the amount of investment firms operating in FTZs are prepared to devote to training, is closely linked to the composition of its labour force. Given the fact that the great majority of FTZs workers are women, and that most of them will spend only a few years in this activity, it is obvious that the firms will not spend more on training than is strictly necessary, or even to take a long-term view of things (Jequier, 1988).

(D) Transfer of Technology

Technology transfer from the operations of FTZs has not been very impressive. Two general observations are common to most FTZs operations. First, the nature of the products manufactured in the zones require low level skills. The major industries located in most FTZs of the developing countries, are electronics, apparel, footwear, leather products, car parts, and minor transport equipment (Kreye, 1987). Second, and as a result, the workers employed in FTZs perform routine operations which may require manual dexterity or mechanically aided assembly work of the simplest kind which usually can be learned in a relatively short time of two to three months (UNCTAD, 1985). Therefore, technically sophisticated production processes are not normally found in most FTZs. However, there is evidence that the type of industries located in FTZs changes as the project matures. The transition from simple-assembly operations to manufacturing has

* Mainly those zones in the semi-industrial countries of the Far East including South Korea, Taiwan, Singapore and Malaysia.

occurred in Shannon (Ireland), South Korea, Taiwan, and Malaysia. Shannon, Ireland, the pioneer in zone development, has moved from assembly type operations to more vertically-integrated high technology industries (Frazier and Erony, 1983).

II. Advantages Gained by the Firms Using the FTZs:

In return, and for the hope to accomplish as much as possible of the above objectives, FTZs authorities around the world compete with each other in offering the most lucrative advantages to attract potential enterprises. On the basis of reviewing the writings in the FTZs literature*, the most important advantages gained by the firms using the FTZs, could be grouped under five distinct headings:

(A) Access to Low-cost Labour

The main reason why foreign investors locate or relocate particular production activities in developing countries is the availability of low-cost, hard-working easily trained manpower. It is evident that wages in developing countries are low compared to those paid in the developed countries. In many developing countries such as India, Sri Lanka, and the Philippines, an unskilled or semi-skilled worker may be paid less than two dollars for an eight hour working day (the rate is based on 1979 U.S. dollar).

(B) Tax Incentives

The exemption from tax of profits, made by enterprises in FTZs, is usually granted for a period of 7 years and often for 5 years, and in a few cases for an indefinite period such as Egypt, or up to 1999 such as Senegal. The following tax incentives are usually offered by FTZs:

* In particular: Canadian Customs, 1977; Calkin, Dibblee, and Haites, 1978; WEPZA, 1979; Basile and Germidis, 1984; UNCTAD, 1985; Diamond, 1989.

- Exemption from export duties and other taxes such as professional tax, property tax, city and regional taxes.
- Exemption from income tax for foreign personnel employed in FTZs.
- Partial or total exemption from the tax on profits for varying periods and under diverse conditions. For example, total exemption in Malaysia for two to five years for enterprises with "Pioneer Status". Total exemption in South Korea for the first five years and then a tax rate of 50% for the next three years. Whereas in Sri Lanka total exemption is granted for a period of two to ten years as determined by the number of jobs created, inflows of foreign currency.

(C) Financial Benefits

There are numerous financial benefits which can be gained when a business enterprise establishes in a FTZ. Among these financial gains include, but not limited to, the following:

- Funds are not tied up in the payment of customs duties, import taxes or the posting of bonds or other security while goods are held inside a zone.
- Customs duties are not payable while goods are in the zone or when they are exported. Only (in many cases) when the merchandise is brought into the host country is it necessary to pay the import duties.
- Loans to finance local operations are generally obtainable because goods held in a FTZ can be used as collateral. The administering authority of a zone will usually issue warehouse receipt or other certification concerning the goods.
- Other financial incentive measures are also used and differ widely from one zone to another. These involve capital grants whereby the host country covers part of the cost of the fixed assets in a project or the cost of

manpower training in one way or another. Grants may also be made in the form of interest or rent subsidies or for specific marketing services, product development, or any activities which are considered to be of value in the national interest.

(D) Increased convenience and flexibility

There are a variety of advantages that FTZs authorities proffer to their prospects which can not be found elsewhere. The purpose of these advantages is to facilitate and ease the burden of the activities and undertaking of the enterprises operating inside the zones. This type of advantages could be grouped under the advantages of increased convenience and flexibility, among which these include:

- Goods enter the zone off transport facilities promptly and without customs delay. This generates efficiencies in shipping, docking, loading, unloading.
- For industrial operations, raw materials, components, and semi-processed goods from both foreign and domestic origin can be combined to achieve a marketing advantage over either foreign or wholly domestic produced goods.
- A FTZ may be a better place for the packaging, marking and labelling of goods in accordance with local consumer preference than the factory production line in the country of origin.
- The use of a FTZ at or near a final market as a distribution and storage point can reduce the time-lag between order and delivery and thereby strengthen a foreign supplier competitive position in the local market. New inventory and spare parts can be released from storage in accordance with local market demand.
- Since there is no limit on the amount of time during which goods may be held in a zone, it is useful as a storage place in which to hold foreign goods

which are not affected by lengthy storage or for which a rise in price is anticipated.

- Duties and taxes on foreign goods intended for domestic consumption are levied only at the time of the actual transfer from the zone and on the quantities actually transferred. Funds for customs duty and tax payment need not be disbursed therefore until the goods have been sold or local market conditions appear conducive to their sale. Thus, customs duty and tax payment can be adjusted to the market activity of the goods.
- The products of industrial type operations (assembly, manufacturing, etc.) undertaken in a FTZ frequently enjoy considerable duty and tax savings over comparable wholly foreign made products when introduced for use or consumption in the customs territory. Sometimes duties and taxes are calculated by deducting the amount of value added through the use of local labour and components from the duty normally assessed. Sometimes duties and taxes are assessed on only the actual foreign components contained in the final product. In a few cases customs duties may be entirely waived.
- Goods can be sorted and defective units can be destroyed before becoming subject to tariffs or quotas. Often the sorting can be undertaken more reliably and at lower cost than abroad and through a firm other than the importer.
- Transportation costs can frequently be lowered by shipping goods in bulk quantities to a FTZ for repacking. Unassembled furniture, machinery, etc., are also cheaper to ship than complete items; they can usually be assembled in a zone at or near their market.
- The use of local materials in either manufacturing or processing operations can sometimes result in cost savings and give the product a price advantage over wholly foreign produced items. Where such goods are

intended for sale in the local market the nationality of the local components can usually be retained and customs duty payment on them avoided.

- Goods in the zone are insured at their value excluding tariffs and excise taxes. Insurance costs are lower than if goods were insured at values including these tariffs and duties.
- Goods can be stockpiled in a FTZ pending an anticipated increase in price level or quota changes and released when advantageous.
- The owner of the goods or his agent usually has free access to them in a FTZ. Neither his time nor his funds are consumed in waiting and paying for the presence of a customs official when he desires to see the goods, perform operations on them, or enter or remove them from their storage place.
- A FTZ permits prospective buyers actually to see and take samples of goods stored there. It permits the seller to display and actually sell his goods rather than merely take orders.
- Merchandise can be released into national territory or re-exported in quantities or lots that are larger or smaller than the original shipments. It can be repacked into larger or smaller containers in accordance with market conditions. Large lots can be broken down into smaller packages and removed from the zone as sales are completed.
- The choice of destination for foreign goods is less limited in a FTZ than would be the case in other areas of a national territory or be transshipped to another country. Destination need not be decided until delivery contracts are concluded. When goods cannot be profitably sold into national territory or other nearby markets they may be despatched elsewhere.

(E) A Package of Privileges, Facilities and Services

In addition to the above advantages, free trade zones authorities compete with each other through the offering of a package of privilege, facilities and services; as part of their marketing efforts; to satisfy the needs of their customers (i.e., users of their zones).

- The privileges include: allowing the zone users to perform a range of operations such as warehousing, processing, assembly, manufacturing, etc.
- The facilities include: providing the zone users with infrastructural facilities such as land, manpower, cables and lines for telecommunication systems, transporting equipment, utilities for manufacturing activities, etc.
- The services include: assuring the zone users of the obligation of the zone authority to ensure the safety and well-being of the workforce inside the zone, the security of the zone premises, the cleanliness and the sanitation of the zone area, etc.

Table 2.3 shows a summary of the advantages of FTZs in terms of those gained by the host country, and those gained by the firms using the zones.

Table 2.3: A Summary of the Advantages of FTZs

Advantages gained by the host country	Advantages gained by the firms using the zones
<p>(A) Generating foreign exchange earnings and rates of return.</p> <p>(B) Creating employment.</p> <p>(C) Acquiring and upgrading labour and management skills.</p> <p>(D) Transfer of technology.</p>	<p>(A) Access to low-cost labour.</p> <p>(B) Tax incentives.</p> <p>(C) Financial benefits.</p> <p>(D) Increased convenience and flexibility.</p> <p>(E) A package of privileges, facilities and services.</p>

It is worth mentioning here that since the focus of this research is on studying the adoption of the marketing concept by FTZs authorities around the world, therefore, in this study we include only the advantage of the package of privileges, facilities and services. Because this package of advantages represents the marketing efforts of a zone's authority in satisfying the industrial buyers needs. Satisfying the industrial buyers needs is considered as one of three components comprising the marketing concept. The other two elements of the marketing concept, which are also included in this study, are: achieving organisational goals and integrating the marketing functions.

However, as for the advantage of *access to low-cost labour*, this advantage received the attention of many researchers and has been treated as a separate study (e.g., Maex, 1985; Long, 1986; Kreye et al., 1987; Jequier, 1988). As for the advantage of *Tax incentives and the financial advantage*, they are wholly pecuniary and investment matters and thus deserve special and separate treatments, besides, there are already several reports and analysis made on the tax and financial aspects of FTZs (e.g., Frazier and Erony, 1983; Currie, 1984; UNCTAD, 1985; Jequier, 1988). Finally, as for the advantage of *increased convenience and flexibility*, the list of advantages under this category is considered as the basis for the establishment of a FTZ, accordingly they represent common grounds among all FTZs. Therefore, it would be futile to conduct a research involving comparing responses, on such a list of advantages.

2.5 The FTZs Development, Spread and Status in Modern Times

Now we provide an overview of the development, spread, and status of FTZs in the world in modern times. As we noted earlier in this chapter, in its early development, FTZs were established as entrepôt to facilitate international trade. In the course of history this basic objective has been extended to provide such privileges as storage, packing, labelling, processing, assembly, refrigeration, manufacturing and other similar activities.

Since the late 1960's, a growing tendency to set up a variety of FTZs can be observed in the developing countries and territories. Governments increasingly view, particularly, EPZs as an effective means of attracting foreign export-oriented industries which are expected to provide investible resources, technology, employment, and foreign exchange and thus, contribute to industrial and export development (UNCTAD, 1985). EPZs are being organised by many developing countries partly because there is an increasing global demand for lower cost labour, mainly from small and medium sized manufacturers whose products are highly competitive, and partly because manufacturers wish increasingly to distribute their plants geographically (UNIDO, 1978).

During the 1970's, United Nations agencies like United Nations Conference on Trade and Development (UNCTAD) and United Nations Industrial Development Organisation (UNIDO) warmly have encouraged developing countries to set up EPZs on their territory. In 1970 UNIDO began to provide technical assistance to developing countries wishing to establish EPZs. The UNIDO help include (Basile and Germidis, 1984): (1) identifying and selecting individual export-oriented project; (2) preparing economic and technical feasibility studies for the creation of EPZs; (3) providing advice on their implementation and management; (4) organising an investment promotion system for the zone; (5) setting up the infrastructure; (6) training zone administration; and (7) evaluating industrial projects.

In 1978, authorities of EPZs of 29 countries endorsed the creation of the World Export Processing Zones Association (WEPZA) in their first conference held in Manila, the Philippines, under the auspices of UNIDO.

WEPZA was established for the following purposes (Pena, 1986):

- (a) establishing and maintaining regular contact between members in order to improve their mutual understanding and their appreciation of each others problems and requirements;
- (b) fostering harmonious relationships and encouraging common action and mutual assistance among the members;

- (c) co-operating with international agencies having similar aims and interests;
- (d) producing and circulating relevant information among the members;
- (e) exchanging methods of evaluating industrial investment proposals and information on investors and marketing;
- (f) arranging training courses in EPZ management techniques and also appropriate exchange visits of EPZ staff or potential staff;
- (g) encouraging the transfer of technology.
- (h) taking all the necessary and appropriate action to further the objectives of the association.

It has become obvious that EPZs have emerged as the most successful and dynamic form of free trade zones. In 1986, EPZs were in operation in 47 developing countries in Africa, Asia, Middle East, Latin America, and the Caribbean. The number of developing countries which have established and operated EPZs and the number of zones themselves, have doubled over the last decade. In 1975, 25 developing countries operated 79 zones; by 1986 this had risen to 47 countries with 176 zones (Kreye et al., 1987).

In some developed countries, and especially in the USA, FTZs, which have traditionally played a commercial role, are increasingly being used for the manufacture and assembly of goods most of which are ultimately imported into the domestic markets (UNCTAD, 1985). This important orientation is in distinct contrast to the export-oriented nature of the EPZs operated in the developing countries. Most of the FTZs in Europe still function as free ports, i.e., maintaining their conventional form. Few of these free ports allow industrial activities (e.g. Hamburg); some are engaged in light industry (e.g., the zones in Sweden), and many are concentrating on a variety of zone activities other than manufacturing (e.g., most of the zones in Italy, France, and Switzerland) (Diamond, 1989).

The phenomenon of FTZs is part of the much broader context of structural changes in global economic development in the 1970's and 1980's. Despite marked national differences, as well as variations in the pace of changes, these last two decades have

seen a truly remarkable expansion in both manufacturing production and even more in manufactured exports by the developing countries. (Kreye et al, 1987).

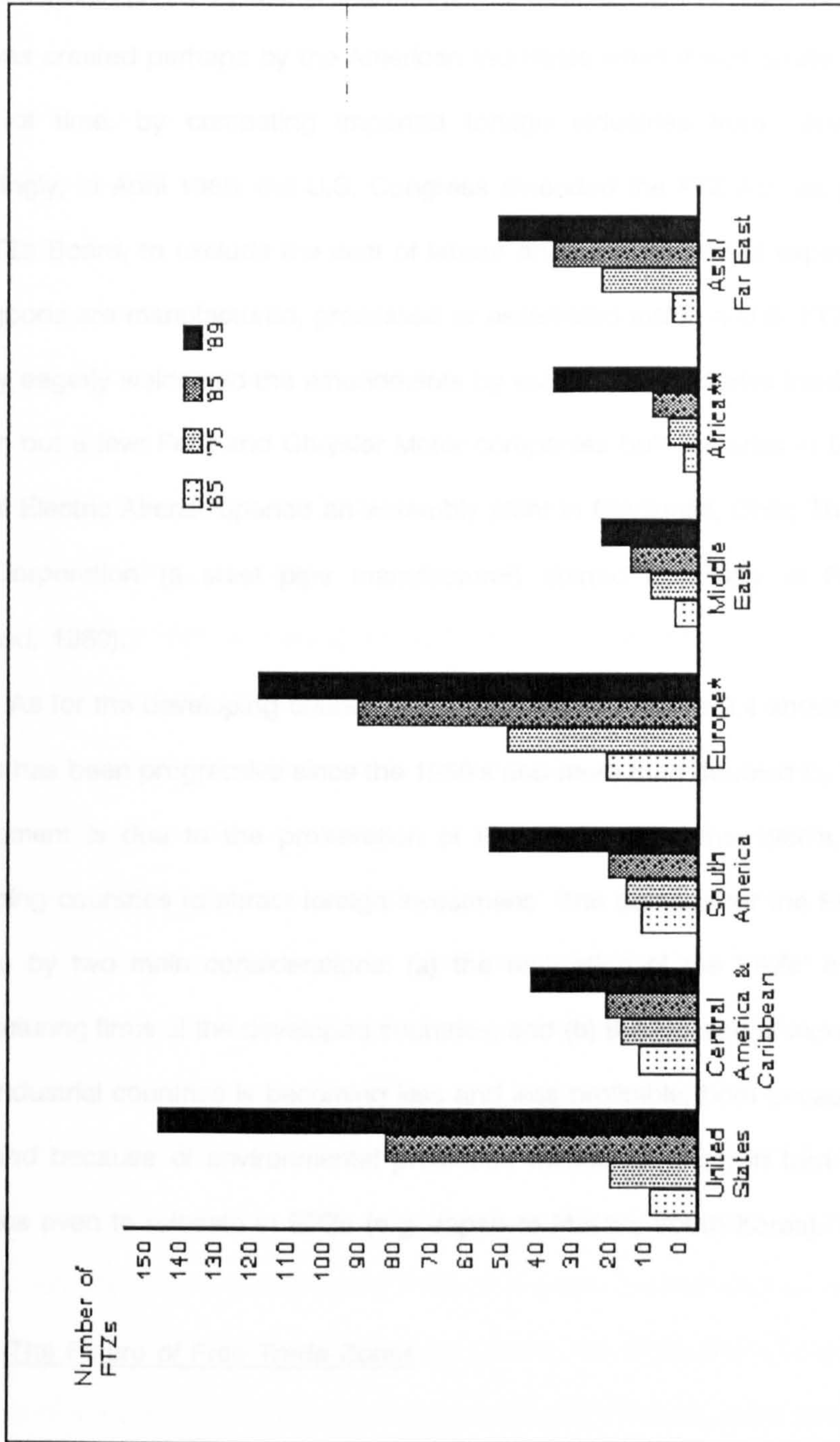
Between 1973 and 1981, the developing countries' share of global value - added in the manufacturing industry rose from 8.8 percent to 10.6 percent compared with a fall from 72.2 percent to 65.2 percent over the same period for the Western industrialised countries (Kreye et al, 1987). Some individual developing countries now account for a larger share of global value-added in manufacturing than many traditional industrial countries. This applies, for example, to India, the Republic of Korea, Brazil and Mexico. Brazil's manufacturing output, during the time of this report, exceeds that of the UK. Whilst Brazil's share of global value-added in manufacturing rose from 2 percent to slightly over 2.4 percent between 1973 and 1981, the UK share shrank from 4.2 percent to slightly below 2.4 percent (Kreye et al, 1987).

In this investigation, we surveyed the FTZs in both developed and developing countries over the last three decades (1965-1989) in order to portray an updated picture of their main stages of development. Figure 2.4 provides a bar graph depicting the development of FTZs throughout the world (i.e., United States, Central America and the Caribbean, South America, Europe, Middle East, Africa, and Asia/Far East) in four periods: 1965, 1975, 1985 and 1989. The most conspicuous fact in the bar graph is that the spread of FTZs, in all the seven regions of the world, has been progressive since 1965.

As shown in Figure 2.4, the spread of FTZs, in 1989, in the developed countries (i.e., in the U.S. and Europe = 261 zones) is more than in the developing countries (combined total is 187 zones). However, unlike most of the FTZs of the developing countries, some FTZs in the U.S. and many in Europe are generally used for warehousing, labelling, assembling, exhibiting, or distributing operations instead of Export Processing Zones (EPZs) (Diamond, 1989).

It can be observed in Figure 2.4 that during the mid and late sixties, the number of FTZs in Europe was almost twice as much as in any other part of the world. This is due

Figure 2.4: FTZs Development throughout the World (1965-1989)†



* Most zones in Europe are free ports

** All zones in Tunisia except two are free ports

† All the data presented in this graph are obtained from: Kelleher (1976); Candian Customs (1977); Calkin, et al., (1978); Basile and Germidis (1984); Currie (1985); and Diamond (1989)

*

**

†

to the fact that the idea of typical modern day FTZ started in Europe and dates back to the Roman Empire (as mentioned earlier in this chapter).

With respect to the U.S., the graph illustrates that the number of FTZs has increased four times within just ten years (1975-1985). We believe that this high demand for the U.S. FTZs was created perhaps by the American Industries when it was challenged, during this period of time, by competing imported foreign industries from Japan and Europe. Accordingly, in April 1980, the U.S. Congress amended the FTZ Act, as proposed by the U.S. FTZs Board, to exclude the cost of labour and other overhead expenses from duties when goods are manufactured, processed or assembled inside a U.S. FTZ. The American industry eagerly welcomed the amendments by establishing factories inside the zones. To mention but a few; Ford and Chrysler Motor companies built factories in Detroit, Michigan; General Electric Aircraft opened an assembly plant in Cincinnati, Ohio; The Beall Pipe and Tank Corporation (a steel pipe manufacturer) started a factory in Portland, Oregon (Diamond, 1989).

As for the developing countries, the bar graph of Figure 2.4 shows that the growth of FTZs has been progressive since the 1960's and more than doubled by the 1980's. This development is due to the proliferation of the EPZs, since the 1960's, throughout the developing countries to attract foreign investment. The demand for the EPZs was created perhaps by two main considerations: (a) the realisation of the EPZs' benefits by many manufacturing firms of the developed countries; and (b) the location of industrial enterprises in the industrial countries is becoming less and less profitable, both because of high wage costs and because of environmental protection measures which in turn prompted some industries even to relocate in EPZs (e.g. Japan to Masan, South Korea).

2.6 The Future of Free Trade Zones

As for the future of FTZs, we shall look at two aspects. First, we shall discuss the likelihood of the spread and decline of FTZs in certain parts of the world and examine the

implications behind these trends. Next, we shall analyse the future of the FTZ concept and to what other concept it may evolve.

2.6.1 The Future of FTZs Development: Spread and Decline

Robert Haywood (1990) remarked that the future of export processing zones (which is one form of FTZ) is very bright; extraordinarily bright. The reason is EPZs are very flexible public policy tools that will need to be used in the future, because making public policy in all countries is going to become increasingly difficult. There is a need to experiment with economic policy, with social policy, and that is what zones have been used for in the past and will continue to be in the future.

However, as with any experiment some of the zones will fail because in many cases they have been poorly conceived in the first place. Many governments create zones from theories that are not accurate, or with political purposes, and without economic understanding, and these zones fail, most of the time they are structured to fail. A zone needs to be created with a purpose in such a manner that its purpose can be achieved. And it must then be evaluated as to whether it has achieved that purpose (Haywood, 1990).

The 1990's shall witness extreme developments of FTZs from fast growth in Eastern Europe; steady but slow growth in the developing countries, to the closure of many zones in Western Europe (particularly those which are involved in manufacturing and industrial activities). On one extreme, the collapse of communism and the emergence of free economy in Eastern Europe sow the seeds of new opportunities for FTZs development and growth. For example, two FTZs are already under construction in the Soviet Union. However, on the other extreme, many FTZs in Western Europe shall be forced to close in compliance with 1992 EEC regulations to protect the industries of the twelve member countries of the European Economic Community. For example, there are already plans to shut down the industrial and manufacturing facilities of the Spanish FTZs by 1992.

Eventually, these extreme FTZs developments shall result in fierce competition among FTZs throughout the world. On one side of the competition is the FTZs of Eastern Europe who shall exploit their educated labour force and the proximity to Western Europe to attract the Western industrial firms. And on the other side is the competition among FTZs of the developing countries in exploiting their cheap labour, strategic geographical locations, and lucrative package of incentives.

In order for a FTZ to gain the winning edge over its competitors, it should adopt the marketing concept and develop a marketing strategy to that effect. A marketing strategy forms the core of a successful marketing plan. It articulates a plan for the best use of the organisation's resources and advantages to meet its objectives. A marketing strategy encompasses selecting and analysing a target market (i.e., industrial firms) and creating and maintaining an appropriate marketing mix (product, distribution, promotion and price) that will satisfy the target market (Pride and Ferrell, 1985).

The focus of this research is to study the marketing orientation of FTZs by analysing the attitudes of FTZs authorities towards the employment of some forty marketing variables in the operations of their zones.

2.6.2 The Future of the FTZ Concept

As for the future prospects of the FTZ concept, several countries recently have come to realise, implicitly or explicitly, that the original concept of the export processing zone, with its emphasis on exports and with its limited territorial extension would, if implemented successfully, rapidly reach its natural limit. This should inevitably lead - and has indeed already led in some countries (e.g. Mexico, Singapore, Mauritius, to name a few) - to a transition from a territorial concept of the FTZ to the concept of the FTZ as a special regime, or legal status, attached to specific enterprises, whatever their location in the country, and whatever their ownership structure might be. This is what is viewed as the

transition from "first-generation" FTZs to "second generation" FTZs (Basile and Germidis, 1984).

This development is of major importance, in that it represents perhaps the most efficient way to correct or alleviate one of the basic weaknesses of the traditional FTZ, namely its physical location close to the main centres of economic activity in the host country, and its consequent inability to foster industrial development in the less populated or poorer regions of a country.

This evolution from first to second generation, or from a territorial conception of the FTZ to a statutory conception, quite logically paves the way to the transformation of the whole country into one vast FTZ, or rather free trade country. This in fact is what has practically happened in smaller FTZ countries such as Hong Kong or Singapore, and seems to be in the process of happening in countries such as Mauritius or Sri Lanka (Jequier, 1988).

In parallel to this evolution, one can observe that the early emphasis of FTZs on exports (i.e., as export processing zones) is gradually leading to a more liberal attitude towards imports. Free trade zones are no longer viewed primarily as an export machine, but as a producer of goods or even services for the domestic market or, in other terms as an importer into the host country. This in effect is what has already happened in the case of the Manaus Free Zone in Brazil, which rapidly abandoned its vocation as an export processing zone to become the world's first import processing zone.

What is perhaps not sufficiently realised is that this parallel evolution - from export processing "zone" to export processing "country", and from "export" processing to "import" processing - gives an entirely new meaning to the industrial development function of the FTZ: it is not simply a means of producing goods for the export market or for generating new employment opportunities, but rather it is becoming the key instrument for facilitating a country's transition from import-substituting industrialisation (or even no industrialisation at all) to an open market competitive type of industrial development. In this respect, the

"evolutionary" FTZ represents an important innovation in terms of industrial policy, or indeed development policy (Jequier, 1988).

2.7 Summary

In this chapter, we explored many important aspects of FTZs including: the roots and development of FTZs; the broad concept of free trade; the nature of FTZs in terms of definitions, characteristics; advantages and types; the development, spread, and status of FTZs in modern times; and finally the future of FTZs.

It was emphasised that free trade zones, with all the different forms as they exist today, have a long history. Its antecedents were free ports, quasi-free ports, free cities, and special trade privileges. In antiquity the Phoenicians, Greeks and Romans encouraged the development of international trade by offering guarantees of free passage and safety to merchants from all parts of the world using their ports in Tyre, Carthage, Utica, Piraeus, and Rome. The expansion of trade during the growth of the Roman Empire resulted in the spread of transshipment points along the long sea routes of trade through the known world. In 1189 Frederick I, the Roman Emperor declared Hamburg as a free port.

The 14th Century witnessed the growing power of cities, particularly those with strategic locations. These cities were preserved and witnessed more development during the Middle Ages, particularly in the granting of relinquishment from entry tolls to or from the hub of the cities. At the beginning of the 17th century the forerunner of the modern free zone was established in Genoa where an area of the port, on the Mediterranean, was fenced and declared as a free zone. During the 17th and 18th centuries, major cities of Western Europe formed the Hanseatic League of Cities, declared themselves as Free Merchant Cities, and lobbied for the freedom of trade all over Europe.

In 1705 Britain converted Gibraltar to a free city. During the late 18th and the early 19th centuries Britain also created a number of free ports in the West Indies, and later on, established other free ports in a number of its colonies: Singapore (1819), Hong Kong

(1842), Colombo (1845), Aden (1853), and other outlets. Since then, the concept of free port spread all over the world, particularly in Europe.

In 1934, the U.S. Congress passed a resolution legalising free trade zone operations. And in 1937 the New York Foreign Trade Zone started its operations. Then, other U.S. cities such as San Francisco, New Orleans, and Mobile opened FTZs. In 1959, Ireland started the first export processing zone at Shannon. Since the mid 1960's, the developing countries started to adopt the Shannon example, and as of December 1989 there were 506 free trade zones (including all the different forms) in operation around the world.

Next, it was explained that the concept of Free Trade has many related concepts which could be grouped under two main distinct headings. One category is the geo-political bindings, which includes free trade areas, customs unions, and common markets. The second category is the investment bindings, which includes duty free shops and free trade zones. A model was developed to show how different concepts of free trade are related and how they are distinct. The model also shows where the concept of free trade zone stands in terms of the broader concept of free trade.

Then, the nature of FTZs was discussed in terms of its definitions, characteristics, advantages, and types. It was made clear that a plenary definition of a FTZ is next to impossible. This is due to the sharply differing combinations of the historical, political, economical, locational, and functional characteristics. Therefore, a plethora of the definitions, attempted at explaining a free trade zone, were surveyed.

With respect to the FTZ characteristics, it was stressed that among the characteristics that the device of a FTZ typically possesses include: (a) it is a fenced, patrolled district; (b) A FTZ is 'free' only with respect to the application of customs duties, import taxes, however; it is still within the jurisdiction of the penal and civil laws applicable elsewhere in the country; (c) it usually offers its users the accommodation of office, warehouse space and aiding facilities such as transporting equipment, utilities and tools; (d) Among the operations/activities permitted within a FTZ typically include: sorting, mixing, blending, stripping, processing, assembling, manufacturing, sampling, packaging,

repackaging, labelling, containerisation, exhibiting, storing, warehousing, refrigeration, loading, unloading, exporting, and re-exporting.

With regard to the advantages of FTZs, it was pointed out that the advantages of FTZs are twofold: (i) advantages gained by the host country, which includes: generating foreign exchange earnings and rates of return; creating employment; acquiring and updating labour and management skills; and transfer of technology, and (ii) advantages gained by the firms using the zones, which includes: access to low-cost labour; tax incentives; financial benefits; increased convenience and flexibility; and a package of privileges, facilities and services.

As for the types of FTZs, four different FTZs classification models, including our own, were presented. These models were contrasted in terms of: types of FTZs, distinctive features of the model, and main drawbacks of the model. In our model, free trade zones consist of eight basic categories: export processing zone, foreign trade zone, free port, bonded warehouse, free perimeter, transit zone, sub zone, and special customs zones (free depots, free deposits and free commercial zones). The distinctive features of our model of FTZs classification are: It uses the caption FTZ as a generic term; as such it is an exhaustive model which includes all types of FTZs that are in use today throughout the world, and it excludes those zones which are of limited use; it focuses on the different types rather than the related concepts; and it provides a close-up picture of how different types of FTZ exist by contrasting the basic functions of each type of FTZ.

In modern times, the most important development was the spread of export processing zones (EPZs), particularly since the late 1960's, throughout the developing world. Specialised agencies of the United Nations (i.e., UNCTAD and UNIDO) encouraged the developing countries to establish EPZs by offering assistance in the feasibility studies and organisation of the EPZ project. This development, in turn, resulted in the establishment of the World Export Processing Zones Association (WEPZA). On February 4th, 1978; the Charter of WEPZA was endorsed in Malilla by EPZs of 29 countries. Among the main objectives of WEPZA, include: (a) fostering harmonious relationships and encouraging

common action and mutual assistance among the members; (b) producing and circulating relevant information among the members; and (c) arranging training courses in EPZ management techniques. The data on the FTZs development and spread, throughout the world, since the 1960's was collected from different sources. These statistics were portrayed on a bar graph to depict the development of FTZs in seven regions of the world (i.e., the United States, Central America and the Caribbean, South America, Europe, Middle East, Africa, and Asia/Far East) in four periods (i.e., 1965, 1975, 1985, 1989). The main observations of the bar graph are: (a) a steady growth of FTZs since 1965 throughout the world; (b) in 1989 the number of FTZs in the developed countries (i.e., the U.S. and Europe = 261 zones) is more than in the developing countries, combined - 187 zones, (c) the number of FTZs in the U.S. has increased four times within just a period of ten years (1975 - 1985); and (d) the growth of FTZs in the developing countries has been progressive since the 1960's and more than doubled by the 1980's.

The chapter was concluded with some views on the future of two aspects of FTZs, the development and the concept of a FTZ. First, it was speculated that the 1990's shall witness extreme developments of FTZs from fast growth in Eastern Europe; steady but slow growth in the developing countries; to the closure of many zones in Western Europe. It was stressed that these extreme FTZs development shall result in fierce competition among FTZs authorities throughout the world. Next, the future of the FTZ concept was considered. It was indicated that the concept of FTZ is undergoing parallel evolution: (a) from export processing "zone" to export processing "country", and (b) from "export" processing to "import" processing. Here, it was emphasised that this evolution of FTZ gives an entirely new meaning to the industrial development function of the FTZ. And in this respect, the "evolutionary" FTZ represents an important innovation in terms of industrial policy and industrial development.

CHAPTER THREE
THE MARKETING CONCEPT

	Page No	
3.1	Introduction	77
3.2	Evolution of The Marketing Concept	77
3.2.1	The Production-Oriented Philosophy	78
3.2.2	The Product-Oriented Philosophy	79
3.2.3	The Selling-Oriented Philosophy	79
3.2.4	Emphasis on the Marketing Concept	80
3.2.5	The Societal Marketing Philosophy	83
3.3	The Marketing Concept: Definition and Elements	85
3.4	Criticism of the Marketing Concept	89
3.5	Applying the Marketing Concept to the study of FTZs Operations	95
3.6	Summary	99

3.1 Introduction

The 1950's witnessed the development of a marketing orientation, which is popularly called "the marketing concept". The concept was widely discussed particularly in the marketing literature. It was viewed by some critics as a panacea for corporate illness, while others saw it as nothing more than a restatement of historical truths hardly deserving the substantial attention given in business and marketing papers.

Robert L. King (1965) remarked that the significance of the marketing concept development at this time, however, is not necessarily related to its recency or to its "all-curing powers". Rather, the concept is important because it offers evidence of business management's sensitivity to market conditions and its continuing search for better ways of approaching its marketing opportunities.

In this chapter we discuss the marketing concept. First, we review briefly the evolution of the marketing concept, followed by its definition and its key elements. Next, we deal with the various points of view criticising the marketing concept. At the end of this chapter we attempt to apply the marketing concept to the FTZs operations which is of interest to this study.

3.2 Evolution of the Marketing Concept

The marketing concept may seem like an obviously sensible approach to running a business; but in fact, businesses have not always believed that the best way to make sale, and profits, is to satisfy customers or users. In other words, many businesses still have not adopted the marketing concept.

Based upon a review of selected business and marketing books and periodicals, five different types of managerial philosophies emerged in the twentieth century of American and European business. The marketing concept was one of these managerial philosophies that came into effect in the early 1950's. These philosophies reflect various interests:

organisation, customers, and society. Very often interests conflict. The marketing concept and the societal marketing concept should be viewed as the most recent of a series of managerial orientations which have evolved during the present century as a result of changing conditions of the consumer habits, society expectation, and business environment.

3.2.1 The Production-Oriented Philosophy (1896-1930)

The production-oriented philosophy is one of the oldest concepts guiding businesses. The period of production orientation (1896-1930) may be summarised as an era of managerial concern with problems of capacity creation, work methods, and volume production (King, 1965). Names of men associated with "Scientific management", such as Taylor, Emerson, and Gilbert, are closely identified with this period.

The production concept holds that consumers will favour those products that are widely available and low in cost. Management in production-oriented organisations concentrate on achieving high production efficiency and wide distribution coverage (Kotler, 1984). Although, it is not suggested that corporate management gave no consideration during this period (production orientation) to the markets for which they produced, it appears that, generally, problems related to manufacturing assumed greater significance than did those related to identification and development of markets (King, 1965).

According to Kotler (1984), "the assumption that consumers are primarily interested in product availability and low price holds in at least two types of situations. The first is where the demand for a product exceeds supply and therefore customers are more interested in obtaining the product than its fine points. The suppliers will concentrate on finding ways to increase production. The second situation is where the product's cost is high and has to be brought down through increased productivity to expand the market".

3.2.2 The Product-Oriented Philosophy (1900-1930)

Another managerial philosophy, was nearly in the same period (1900-1930) of production orientation. The product philosophy holds that consumers will favour those products that offer the most quality, performance, and features. Management in such product-oriented organisations focus their energy on making good products and improving them over time.

The product-oriented businesses assume that buyers admire well-made products, can appraise product quality, performance and features; and are willing to pay more for product "extras" (Kotler, 1984). More often than not, product-oriented businesses fall in love with their products.

The product-oriented philosophy leads to "marketing myopia", an undue concentration on the product rather than the needs of the consumers (Levitt, 1960).

3.2.3 The Selling-oriented Philosophy (1930-1950)

From the late 1920's to the early 1950's, businesses looked on sales as the major means of increasing profits. As a result, this period came to have a sales orientation. Business people believed that the most important marketing activities were personal selling and advertising.

The period of sales management emphasis may be summarised as an era during which problems of distribution assumed special significance in the industrial society. The position of the sales manager was strengthened, although during this period the definition of his task was subject to considerable revision, generally resulting in the assignment of broader responsibilities. The measure of sales manager's effectiveness, and the basis of his own remuneration, most frequently appears to have been the level of sales volume which his actions generated. Although profit was not ignored, the sales manager had little,

if any, direct profit responsibility (King, 1965). The assumption that higher sales volumes lead to higher profits was widely accepted. Also, there is evidence that conflict and lack of co-ordination existed among the several operation division, and also among the marketing areas. The former may be explained in part on the basis of the supposed threat presented by the sales department. The latter is due in part to the emphasis placed on the sales force's role in the absence of an appreciation of the other areas' contributions to the overall marketing efforts (King, 1965).

The selling philosophy holds that consumers will not buy enough of the organisation's products unless the organisation undertakes a large selling and promotion effort (Kotler, 1984).

The most significant developments of the selling-oriented period probably were recognition of the importance of marketing problems and the initiation of widespread use of marketing research to aid the sales department in its efforts (King, 1965).

3.2.4 Emphasis on the Marketing Concept (1950-Present)

The period of marketing concept orientation was ushered in amidst considerable publicity in business publications in the early 1950's. Most of these articles, however, appeared in publications which had readership primarily among marketing management, and the concept generally was described in terms of its implications for marketing personnel.

"The marketing concept holds that achieving organisational goals depends on determining the needs and wants of target markets and delivering satisfactions more effectively and efficiently than competitors" (Kotler and Armstrong, 1987).

By the early 1950's, some business people began to recognise that although they could produce products efficiently and promote them extensively through personal selling and advertising, this did not guarantee that consumers would buy them. These businesses, and many others, since then, found that they must first determine what customers want and then produce it, rather than simply make products and try to change customers' needs to

fit what is produced. As more and more business organisations have realised that the measurement of customers' needs is where everything begins, we have moved into the marketing era, the era of consumer orientation (Pride and Ferrell, 1985).

By the mid-1950's, management members of numerous organisations made public statements, in articles and in addresses, regarding their organisations' "acceptance" and "implementation" of the marketing concept. It appears that implementation, in the majority of cases, refers to recognition of the several marketing activities resulting in the establishment of formal marketing departments, consisting of centralised marketing staffs, and headed by a vice-president in charge of marketing or a marketing director. Consequently, the chief marketing officer became a "planner" and the sales manager became a "doer" (King, 1965).

The marketing concept is a business philosophy that arose to challenge the previous concepts (Kotler, 1984). The marketing concept is frequently confused with the selling concept. Levitt (1960), delineated a sharp contrast between the two philosophies (marketing and selling) when he states: "selling focuses on the needs of the seller; marketing on the needs of the buyer. Selling is preoccupied with the seller's need to convert his product into cash; marketing with the idea of satisfying the needs of the customer by means of the product and the whole cluster of things associated with creating, delivering and finally consuming".

One of the first corporations to adopt the marketing concept was General Electric. Its 1952 Annual Report stated:

"It (the marketing concept) introduces the marketing person at the beginning rather than at the end of the production cycle and integrates marketing into each phase of the business. Thus, marketing, through its studies and research, will establish for the engineer, the design and manufacturing person, what the customer wants in a given product, what price he or she is willing to pay, and where and when it will be wanted. Marketing will have authority in product planning, production scheduling, and inventory control, as well as sales, distribution, and servicing of the product".

Many successful companies have adopted the marketing concept, and are referred to as *marketing-oriented companies*. To them, the marketing concept involves:

- focusing on consumer needs;
- integrating all activities of the organisation, including production, to satisfy these needs;
- achieving long-run profits through satisfaction of consumer needs.

The failure (or lack of great success) of many other companies has at least partially been attributed to their failure to adopt this concept.

In the 1970's and 1980's the marketing concept has been increasingly adopted by not-for-profit organisations. Here the same focus on consumer needs and integrated effort exists, but the objective is to attain some success measure other than profits (Kinnear and Bernhardt, 1986).

Perhaps the expanded definition of marketing which had developed by the 1950's is best summarised by King (1965), who suggested that marketing is:

- a philosophy of consumer orientation.
- a method of managing by objectives.
- a system of commercial intelligence.
- a road to dynamic business strategy.
- an orderly process of business planning.
- an emphasis on innovation.
- a modern form of organisation, and
- an approaching profession.

Assael (1985) reported that the development of the marketing concept changed the nature of marketing activities by:

- ***spurring new product development.*** A greater diversity of products were required to meet customer needs.
- ***emphasising market segmentation.*** Consumers with similar needs were identified (e.g., separate taste, convenience, and decaffeinated segments in the coffee market), and strategies were directed to these segments.
- ***focusing on marketing communications.*** Product benefits now had to be communicated to consumer segments. Whereas in a sales orientation advertising tended to be repetitive and simple, under the marketing concept advertising was more diverse and more likely to inform consumers about product benefits.
- ***creating greater selectivity in personal selling.*** Sales personnel first had to determine customer needs and develop their sales approach accordingly. Standardised sales approaches were no longer as effective.
- ***creating more selective media and distributive outlets.*** There are now more specialised magazines, greater uses of direct mail, and more specialty wholesalers and retailers.
- ***encouraging marketing research.*** Information on consumer needs was required. Consumer surveys were used more frequently to identify opportunity, and new products underwent more rigorous consumer testing.

3.2.5 The Societal Marketing Philosophy (1969 - Present)

Recently some people, specially those who are concerned about the environment raised the question of whether the marketing concept is a suitable approach to business in an age of environmental deterioration, resource shortages, worldwide inflation, and explosive population growth. Such a critical question led to a call for a new concept to revise the marketing concept, that is, the societal marketing concept (Kotler, 1984).

The societal marketing concept holds that the organisation's task is to determine the needs, wants, and interests of target markets and to deliver the desired satisfactions more effectively and efficiently than competitors in a way that preserves or enhances the consumer's and the society's well-being (Kotler, 1984). Thus, the societal marketing calls upon marketers to balance three considerations in setting their marketing policies: Company profits, customer wants satisfaction, and society's interests.

Table 3.1 compares briefly the five concepts of the marketing philosophies. The production concept (1869-1930) applies principles of scientific management and concentrates on low-cost high volume production in order to generate profits. For making profits using the product concept (1900-1930), the focus is placed on producing quality products by improving the features and the benefits of products. As for the selling concept (1930-1950), in order to increase profits, the company efforts are directed to increase selling of products and launching selling and promotion tactics. With the marketing concept (1950-present), the company achieves its profits through integrating its marketing functions in order to create and maintain a customer satisfaction. Finally, the societal concept (1969-present) stresses that a company achieves its goal of profit-making through satisfying consumer needs and catering for the society interest by improving measures and standards of the products.

Table 3.1: Comparison among the five Concepts of the Marketing Philosophies

Concept	Era	Focus	Means	Ends
The Production Concept	1886-1930	Volume Production & Low Cost	Scientific Management	Profits through Production Volume
The Product Concept	1900-1930	Product Features	Improving Products	Profits through Product Efficiency
The Selling Concept	1930-1950	Increased Product Selling	Selling and Promotion	Profits through Sales Volume
The Marketing Concept	1950-Present	Customer Needs	Integrated Marketing Activities	Profits through Customer Satisfaction
The Societal Concept	1969-Present	Well-being of Consumer & Society	Improving Measures & Standards of Products	Profits through Satisfying Consumer Wants and Preserving & Enhancing the Environment

Source: Information on each concept are collected from different sources.

3.3 The Marketing Concept: Definition and Elements

Four decades ago, the marketing concept was advanced as a guide to corporate strategy. What is this 'marketing concept' that has had so much impact on business direction? Simply stated, it is a business philosophy that places the customer at the top

of the corporate organisational chart. It states that the firm should be 'market-oriented' and the satisfaction of customer needs is the key to corporate profits.

The most effective way to create a customer is to market products aimed directly at his needs and wants. An integrated programme of product, price, promotion and distribution is considered to be essential to this approach (Bennett and Cooper, 1981).

The marketing concept is not another definition of marketing. It is a way of thinking - a management philosophy about an organisation's entire activities. This philosophy affects all efforts of the organisation, not just the marketing activities. An organisation, profit or non-profit, that adopts and properly implements the marketing concept should be successful (Pride and Ferrell, 1985).

According to the marketing concept, an organisation should try to satisfy the needs and wants of customers or clients through a co-ordinated set of activities that, at the same time, allows the organisation to achieve its goals. Customer satisfaction is the major aim of the marketing concept (Kotler, 1984).

First, the organisation must find out what will satisfy customers. With this information, the organisation can create satisfying products. But that is not enough, the organisation then must get these products into the hands of customers. Nor does the process end there. The organisation must continue to alter, adapt and develop products to keep pace with customers' changing desires and preferences (Pride and Ferrell, 1985).

The contemporary marketing concept was originally articulated by the General Electric Company back in 1946 and has since been adopted by a large number of successful organisations.

King (1963) offers a comprehensive definition of the marketing concept based upon a review of marketing literature, a series of interviews with members of corporate management, and his own interpretations. He states that "the marketing concept is a managerial philosophy concerned with the mobilization, utilization and control of total corporate efforts for the purpose of helping consumers solve selected problems in ways

compatible with planned enhancement of the profit position of the firm". According to King (1963), the marketing concept involves:

- (A) Company-wide managerial awareness and appreciation of the consumer's role as it is related to the firm's existence, growth and stability.
- (B) Active company-wide managerial awareness of, and concern with interdepartmental implications of decisions and actions of an individual department. That is, the firm is viewed as a network of forces focused on meeting defined consumer needs, and comprising a system within which actions taken in one department or area frequently result in significant repercussions in other areas of the firm.
- (C) Active company-wide managerial concern with innovation of products and services designed to solve selected consumer problems. General managerial concern with the effect of new-product and service introduction on the firm's profit position, both present and future, and recognition of the potential rewards which may accrue from new product planning, included profits and profit stability.
- (D) General managerial appreciation of the role of marketing intelligence and other fact-finding and reporting units within, and adjacent to the firm, in translating the general statement presented above into detailed statements of profitable market potentials, targets and action.
- (E) Company-wide managerial effort, based upon participation and interaction of company officers, in establishing corporate and departmental objectives, which are understood by, and acceptable to these officers, and which are consistent with enhancement of the firm's profit position.
- (F) Formal short- and long-range planning of corporate goals, strategies, and tactics, resulting in defined and co-ordinated effort of the firm's functional areas.

- (G) Creation, expansion, termination or restriction of any corporate functions as deemed necessary in mobilizing, utilizing and controlling total corporate effort towards the solution of selected consumer problems in ways compatible with enhancement of the firm's profit position.

There is a wide agreement in the marketing literature (e.g., Felton, 1959; Bell and Emory, 1971; Kellat, et al., 1972; Kotler, 1984; Assael, 1985; Kinner and Benhardt, 1986) that the marketing concept has three major elements:

- I Satisfying customers' needs. The purpose of an organisation is to satisfy the needs of customers. Products and services are important only to the extent that they satisfy these needs - they are means rather than ends.
- II Achieving organisational goals. By satisfying customers' needs, an organisation seeks to achieve its own goals. Different organisations pursue different goals of importance to their purpose of existing as a transacting entity. However, among the most common goals organisations usually strive to achieve are the maximization of profits, market share and sales meanwhile minimising operational costs, and other goals as deemed significant to their success.
- III Integrating the marketing functions. All activities of an organisation should be integrated and co-ordinated so as to satisfy customers' needs at a satisfactory rate of success (usually measured in profitability). All activities of the marketing mix; including product development, pricing, promotion (advertising) and place (distribution); must be effectively integrated and co-ordinated in order to achieve market impact.

Successful organisations not only focus on the customer but are organised to respond effectively to changing customer needs. Not only do they have well-staffed marketing departments, but their other departments all accept that the customer is king. These organisations have a marketing culture that has deep roots in all of their departments and divisions (Kotler, 1984).

3.4 Criticism of the Marketing Concept

The marketing concept was advanced as a guide to corporate strategy. It states that the firm should be "market-oriented" and "the satisfaction of customer needs is the key to corporate profits". The philosophy begins with the argument that corporate fortunes are decided largely by the customer because customers, through their purchase "votes", decide the fate of the firm. Further, the most effective way to create a customer is to market products aimed directly at his needs and wants (Bennett and Cooper, 1981). An integrated program of product, price, promotion and distribution is considered to be essential to this approach.

Since 1950's the marketing concept has been widely accepted as an adequate statement of the function and role of marketing in today's society as well as the business corporation. However, many businesses encountered difficulties in adopting the marketing concept either because they misinterpreted and did not understand its implications or because when they embrace the marketing concept they do not take into consideration important issues of concern to both consumer and society (e.g., product features, nutrition, pricing, pollution, harmful particles). This in turn led some people, such as academics and consumer advocates, to criticise and attack the rationale of the marketing concept.

For example, Felton (1959) discussed some of the mistakes which companies of 1950's have made when attempting to employ "integrated marketing", and outlined the necessary steps to avoid those mistakes. Felton indicated that unless companies realise

the implications of the marketing concept, the outcome will inevitably be drastically reduced profits and dividends, or continued losses.

Felton (1959) attempted to outline the pitfalls that face a firm embracing the marketing concept. Among the pitfalls are:

- First, inexperienced executives. The point is merely that situations do exist in which top executives and boards of directors do not fully understand the tremendous complexity of modern marketing, and hence are unable to give proper guidance and direction to the operation.
- Second, errors in promotion. Many companies slavishly follow the policy of "promotion from within" which may result in unqualified men filling newly created positions. This is particularly dangerous if a corporation is attempting to stay in or enter the more fiercely competitive fields.
- Third, demands for the job. In many cases, sales management is a very obvious source of manpower for the new co-ordinating position. However, a successful sales manager does not always make a good marketing director. A basic qualification for good sales management is the ability to plan, to organise, and to select and lead other salesmen. The duties of a modern and advanced director of marketing require that he be much broader than the successful sales manager.
- Fourth, incomplete integration. There are some companies organised in the approved marketing concept manner, properly departmentalised, staffed by individually competent people, and perhaps even with soundly conceived integrated marketing plans - which still fail to attain maximum profits. Failure in these circumstances stems from a lack of complete integration and co-ordination between executives, as well as an absence of clear-cut channels of communication.
- Fifth, one-man domination. There are also those companies which are dominated by autocratic, "one-man" operators. Although these men, by and

large, have been outmoded by fully and professionally developed techniques of integrated marketing, they still exist.

From Felton's point of view, the question is not whether companies can, but whether they are willing to take the necessary steps to break through the roadblocks. Those who have been successful and those who wish to integrate their marketing effort profitably must effect the following: (a) a proper corporate state of mind, (b) a proper organisational structure, (c) a proper balance of professional talent, and (d) adequate direct and indirect controls.

A decade later, Bell and Emory (1971) indicated that there has been a growing concern that the marketing concept has faltered to the point where it is no longer an adequate statement. The literature reveals evidence which supports the questioning of the marketing concept.

Bell and Emory (1971) noted that the marketing concept has been attacked by consumerism. They argue that additional evidence of a breakdown in the marketing concept is found in the deterioration of relations between business on the one hand and the public and government on the other. These developments include events which are now widely called "consumerism". In a broadest sense, consumerism can be defined as the bankruptcy of what the business schools have been calling the "marketing concept".

Bell and Emory emphasised that for decades there have been outcries that the consumer has been mistreated. As a result, several self-appointed consumer spokesmen emerged to organise and lead the attack upon alleged marketing abuses and the companies responsible for them. The challenges by the consumerists are not restricted to a single product, industry, or practice. Many of the leading corporations are under the strongest attacks. Automobile manufacturers, publishers, and especially food and oil companies. For example, gasoline marketers have periodically been accused of pricing irregularities. Their products have been severely criticised as pollutants and the slowness of the industry to develop ways of lessening the harmful waste has also come under attack.

Another example is that major food companies have been accused of feeding "empty calories" to both adults and children. One nutritionist claimed that the consumer typically received fewer vitamins and minerals today than he did ten years ago. Consumerists would probably agree that these businesses have provided society with many benefits. However, the message is clear - society expects more. Businessmen cannot look back at their achievements; rather, they are exhorted to accept new standards by which to judge their role in society. The focus of the consumerist message is that the existing marketing concept is an inadequate standard.

Bell and Emory (1971) believe that the reason behind the clash between the consumer advocates and business companies is because the marketing concept as it is practised today, by many businesses, does not imply a commitment to the kind of consumer satisfaction that is now being demanded. Customer orientation turned the manager away from the factory to the market place. Decisions were based on what could be sold at a profit instead of on what could be manufactured to satisfy the needs and wants of consumer and society. The marketing concept was thus an operational concept, not a philosophical one.

In resolving the conflict between consumer orientation and profits, Bell and Emory (1971) maintain that the marketing concept should be revised on a more equitable basis for the buyer-seller relationship. They suggested the following assumptions as the most acceptable basis for a revised marketing concept:

1. The consumer comes first. If there is a conflict between the consumer and the firm's objectives, then the consumer must have priority.
2. The typical consumer is at such a disadvantage that he cannot assure his own effectiveness. Business has the responsibility to help him, and if business fails then the government or other parties must act on the consumer's behalf.

3. Offering products and/or services that "will sell" is not an adequate measure that the seller is fulfilling his responsibility. It is the duty of business to promote proper consumption values.
4. The assumption of the long-run congruence between buyer and seller interests is neither quick enough nor certain enough. The interests of buyer and seller must be reconciled in the short run.

Based on these assumptions, the marketing concept would have three key elements:

1. *Consumer Concern.* A positive effort by the marketer to make the consumer the focus of all marketing decisions through a product/or service that delivers a high level of satisfaction per consumer money value spent.
2. *Integrated Operations.* A view that the entire business is a total operational system with consumer and social problems taking precedence over operational consideration in all functional areas.
3. *Profit Reward.* Profit must be viewed as the residual that results from efficiently supplying consumer satisfactions in the marketplace.

Bennett and Cooper (1981) indicated that strict adherence to the marketing concept has damaged the American business. It has led to a dearth of true innovation and it has shifted the strategic focus of the firm away from the product to other elements of the marketing mix, elements that can be manipulated very successfully in the short run but which leave the business vulnerable in the longer term. Therefore, managers learn only about the familiar needs of consumers, expressed in the consumer's own term, for a particular point in time. As a source of innovation and significant new-product ideas, the consumer is limited in three ways: (a) consumers' perceptions of their needs are restricted

to the familiar, to items consumers can relate to, (b) consumers' ability to express these needs, to verbalise what they want, particularly when they do not know what is technologically feasible, is limited, and (c) because of the dynamic nature of these expressed needs, they may well have changed by the time the new product is designed, tested, and manufactured.

Bennett and Cooper (1981) suggested that business firms must go beyond the marketing concept. In an attempt to answer the key question of how can American business recapture its former powers?, the researchers reported that the appropriate answer is to go beyond the marketing concept. They believe that the point is not just satisfying customer needs but also providing a product of superior value to the marketplace. As they stated, we must adopt a product value concept (which is, of course, very different from a production concept).

According to Bennett and Cooper, the product value concept is a business orientation that recognises that product value is the key to profits. It stresses competing on the basis of customer need satisfaction with superior, higher value products. Value depends on the customer's perception of the product attributes, which are largely a function of the firm's technological design and manufacturing strengths and skills.

Market-oriented philosophy urges businesses to look outward - to the marketplace - for new products and new opportunities. This may result in a product that meets a market need, but meeting a market need is a necessary but not sufficient condition for success. Being able to "do it better" is key- and here is where a focus on the firm's distinctive competencies and internal resources is required (Bennett and Cooper, 1981).

The focus of a firm's competitive strategy should be on product and product value. The proponent of the marketing concept is right when he says the product must meet a market need. Otherwise it would have no value. But product value implies a comparison. And so it must do more than merely satisfy a need; the product must meet the needs better than the competitors' products. It is this focus on "being better" that is missing in the marketing concept (Bennett and Cooper, 1981).

Pride and Ferrell (1985) mentioned that among the key problems facing firms to implement the marketing concept are as follows: First, there is a limit on a firm's ability to satisfy customers' needs for a particular product. Each person has a unique idea of what a specific product should be. In a mass production economy, however, most business organisations cannot tailor product to fit the needs of each customer. Second, although a firm may try to learn what customers want, it may be unable to do so; and even when a firm correctly identifies customers' needs, the firm's personnel often have a hard time actually developing a product to satisfy those needs. Many companies spend considerable time and money to research customers' needs yet still create some products that do not sell well. Third, by satisfying one segment of society, a firm sometimes contributes to the dissatisfaction of other segments.

To handle these problems, Pride and Ferrell (1985) suggested that developing a marketing strategy forms the core of a successful marketing plan. It articulates a plan for the best use of the organisation's resources and advantages to meet its objectives. Specifically, marketing strategy encompasses: (a) selecting and analysing a target market (the group of people whom the organisation wants to reach and sell the products), and (b) creating and maintaining an appropriate marketing mix (product, price, promotion and distribution) that will satisfy those people.

3.5 Applying the Marketing Concept to the Study of FTZs' Operations

Today it is impossible to name any profit or non-profit successful enterprise that does not employ the tenet of the marketing concept. Implementing the marketing concept should benefit the organisation as well as its customers. Eventually, the intuitive logic of the marketing concept is difficult to refute. Accordingly, it is the purpose of this research to study the FTZ from the marketing perspectives by designing a framework constituting, as its sole components, the three key elements (and sub-elements) of the marketing concept as they relate to FTZs operations. In a sense, we attempt, in this research, to

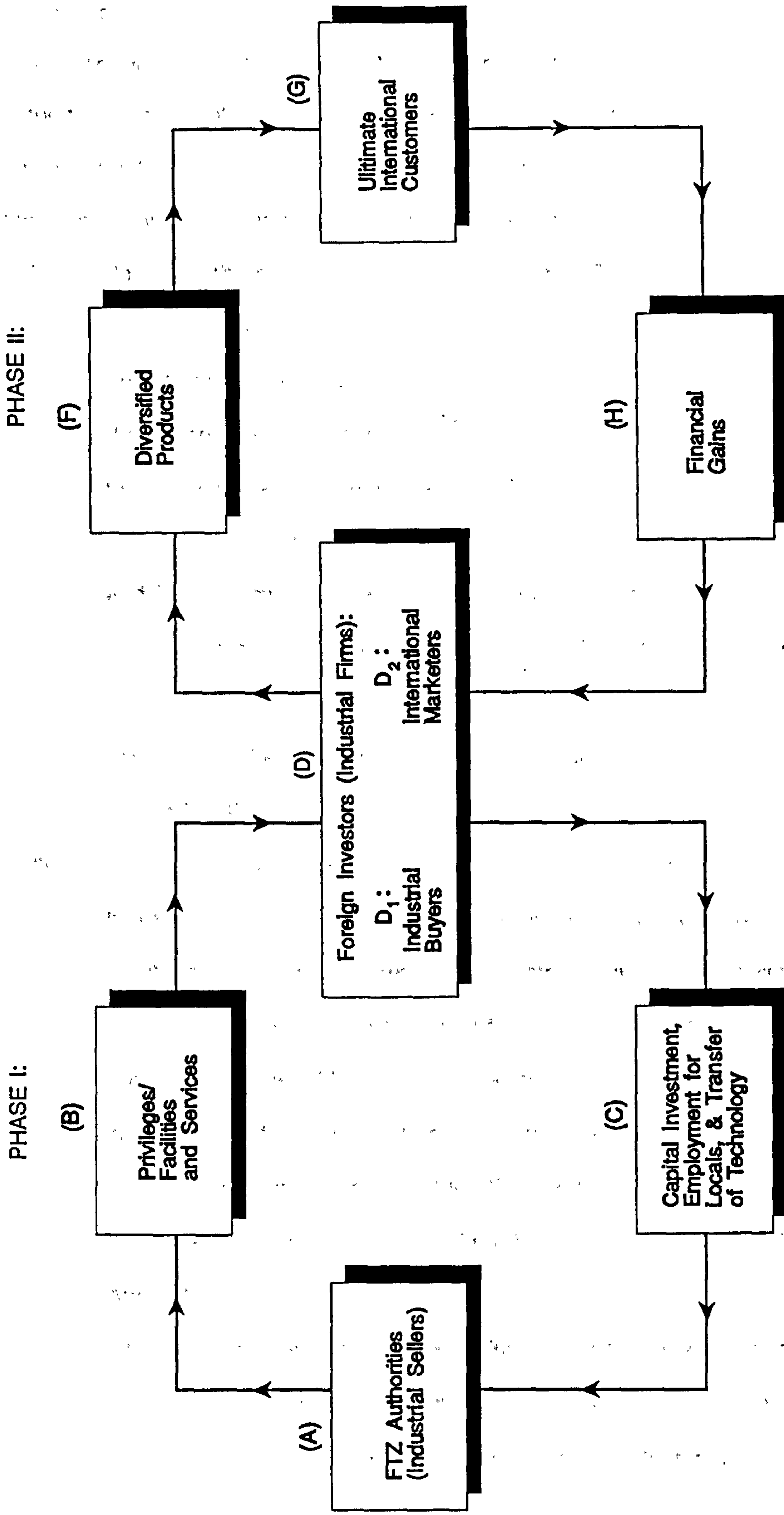
apply the marketing concept to explore whether there exist any differences in the level of importance every FTZ authority attaches in the employment of some forty marketing variables in their operations. In designing this framework, we first develop a conceptual model to depict the flow of the main transactions involved in a FTZ enterprise. Then, we illustrate how the three key elements of the marketing concept would be implemented in the FTZ operations, thus highlighting the framework which is used in designing the questionnaire of our empirical study.

In this section we offer a descriptive model in an attempt to depict the flow of the operations of the FTZ enterprise. The whole picture of the FTZ enterprise can be illustrated in two cyclical phases as shown in the model of Figure 3.1:

- Phase I. The FTZ authorities function as the industrial sellers (A) because they are engaged in the offering of infrastructural facilities [material and human (skills)] and the offerings of other privileges, facilities, and services of importance (B) to the foreign investors [(usually industrial firms), (D)] who in this case represent the industrial buyers [(i.e., consumers), (D1)]. In return, the foreign investors provide the FTZ with capital investment, employment for the locals, and in some cases transfer of technology (C).
- Phase II. The foreign investors, utilising the FTZ facilities, in addition to being industrial buyers, function as international marketers (D2) produce diversified products (F) to the ultimate international consumers (G). In return, the industrial firms make financial gains (H).

Typically, at the end of a financial year, the firm, using the zone, ploughs back a portion of the profits into the enterprise. These two cyclical phases continue until the contract of using the zone is terminated.

Figure 3.1: A Model Depicting the Flow of Transactions involved in a FTZ Enterprise Operation



It should be noted that our concern in this study is only with the first phase of the above illustrated model, particularly Part (B). In other words, in order for a FTZ to keep the cycle of the first phase continuously running and survive in its competitive environment, the FTZs should adopt the marketing concept. Accordingly, the three key elements of the marketing concept would be applied to this part of the model as follows:

- (I) Satisfying the needs of the industrial buyers. This is usually met through
 - (a) granting privileges (e.g., allowing the zone users to perform a range of operations such as warehousing, processing, assembly, manufacturing, etc.);
 - (b) offering facilities (e.g., providing the zone users with infra-structural facilities such as land, manpower, cables and lines for telecommunication systems; transporting equipment, utilities for manufacturing activities, etc.);
 - and (c) performing services (e.g., assuring the zone users of the obligation of the zone authority to ensure the safety and well-being of the work force inside the zone, the security of the zone premises, the cleanliness and sanitation of the zone area, etc.). See the questionnaire items (1 - 20) in Appendix [4].
- (II) Achieving organisational goals. This is typically accomplished by attaining two types of goals: (a) quantitative goals such as maximisation of sales, profits, market share and return on investment meanwhile minimising cost of the zone operations; and (b) qualitative goals such as sustaining steady growth rate of the FTZ, keeping a good and friendly public relations with the zone users and other interest group, maintaining strong government liaison, building a reputable image for their FTZ, and integrating the departmental functions of the zone authority. See the questionnaire items (21 - 30) in Appendix [4].
- (III) Integrating the marketing functions. This is usually carried out by organising and combining the marketing mix and the activities of the zone operations in order to accomplish both objectives (I) and (II). Such marketing mix and

activities include: Product development (e.g., expanding, improving, updating and extending the zone privileges, facilities and services, V31-34). Pricing the zone privileges, facilities and services. Promotion, for example, using advertising channels and personal selling in promoting the zone privileges, facilities and services. Finally, conducting marketing research activities and designing policies for implementing plans for marketing the zone privileges, facilities and services. See the questionnaire items (31-40) in Appendix [4].

3.6 Summary

Chapter three was devoted to the discussion of the marketing concept. A literature review on the marketing concept and its criticism was provided, followed by a presentation of a model depicting the flow of transactions involved in a FTZ project.

The chapter began with an overview of the evolution of the marketing concept. By the 1950's some businesses began to recognise the marketing concept. The new philosophy was preceded by various other managerial approaches, including the production, product, and selling concepts. The production concept (1886-1930) concentrates on high volume production with low cost. The product concept (1900-1930) focuses on the product features. The selling concept (1930-1950) is concerned with mass sales and promotion to make high profits. The marketing concept (1950-Present) turned the focus of a firm to its customers' needs and wants to satisfy them more efficiently than competitors. Later on, the marketing concept was revised to accommodate society's interest. This amended philosophy is always referred to as the societal concept (1969-Present).

Next, the definition of the marketing concept and its key elements were presented. The marketing concept is defined as a managerial philosophy concerned with the mobilisation, utilisation, and control of total corporate efforts for the purpose of helping consumers solve selected problems in ways compatible with planned enhancement of the profit position of the firm. Based on this definition, the marketing concept can be viewed

as being built upon three main elements: satisfying consumer needs (by producing satisfactory products), achieving organisational goals (usually measured in profits), and integrating the marketing functions (by planning and organising effective marketing mix).

Then, the main criticisms on the marketing concept were discussed. First, when the marketing concept became a reality and was recognised by many successful businesses of the 1950's, some firms embracing the marketing concept faced pitfalls, among their mistakes were: (a) inexperienced executives, (b) errors in promotion, (c) always appointing sales managers as marketing directors, (d) lack of integration and co-ordination between executives, and poor channels of communication, and (e) autocratic leadership of the firms' operations. To remedy these problems, it had been recommended that in embracing the marketing concept, the firm should effect the following: (a) proper corporate state of mind, (b) proper organisation of the firm, (c) proper balance of professional talent and (d) adequate direct and indirect controls.

Another attack on the marketing concept was launched by consumer advocates (i.e., consumerism) who complain that the consumer and the society have been mistreated for decades. It has been claimed, for example, that consumers have been badly fed (e.g., low nutrition and high cholesterol) and manufacturing firms are polluting the air, depleting the natural resources, and disturbing the wild life. To settle these issues, it had been suggested that consumer and social problems should take precedence over operational considerations in all functional areas, and profit must be viewed as the residual that results from efficiently supplying consumer satisfactions in the marketplace.

A further attack was directed at the firm's overconcern with the consumer needs which usually result in lack of innovation and less competitive product value. To overcome this awkwardness, it has been suggested that the firm should go beyond the marketing concept and concentrate on the product attributes in order to produce superior value to the market place.

Recent criticisms on the marketing concept include: (a) the limitation of the firm's ability to satisfy customer needs for a particular product, (b) although companies spend

time and money to research customers' needs, yet create some products that do not sell well, and (c) sometimes when a company satisfies one segment of a society, it contributes to the dissatisfaction of other segments. It has been suggested, in order to resolve these problems, the firm should develop a marketing strategy to select and analyse proper market targets (customers) and creating and maintaining an appropriate marketing mix (product, price, promotion and distribution).

The chapter was concluded with a presentation of a model depicting the flow of transactions involved in a FTZ enterprise. Then the three main elements of the marketing concept (i.e., satisfying the customers needs, achieving organisational goals, and integrating the marketing functions) were implemented in the part of the model where the FTZ is involved. Thus, constituting the framework for constructing the questionnaire of this study.

CHAPTER FOUR
THE LITERATURE REVIEW

	Page No
4.1 Introduction	103
4.2 Theoretical Studies	103
4.3 Empirical Studies	107
4.4 Articles	108
4.5 Published Reports	112
4.6 Books	122
4.7 Criticising the Literature	125
4.8 Summary	131

4.1 Introduction

While it may seem as if FTZs have an extensive history, it is only within the last two decades they have begun to play a prominent role in international trade. This reality drew the attention of few researchers in economics, and research organisations affiliated with various United Nations agencies, and other interested FTZ enthusiasts to explore a variety of issues related to FTZs.

In this chapter we present a literature review of the main published works investigating the domain of FTZs. First, we review a few theoretical researches followed by one empirical study, next two articles, then a number of published reports and finally five books. At the end of the chapter all the literature on FTZs reviewed and summarised in a table form highlighting: the author(s) and date of publication, the key issue(s), and the main conclusion(s).

4.2 Theoretical Studies

The first theoretical works on FTZs were done by Johnson (1967) and Bhagwati (1973). However, there is a substantial agreement in the literature that the first serious theoretical study was done by Hamada (1974) followed by Rodriguez (1976), Grubel (1982), Hamilton and Svensson (1982), Chen (1983), and Miyagiwa (1985).

Hamada in his article (1974) defines a FTZ, which he calls a duty-free zone (DFZ), as an area where tariff protection is absent. When the government establishes a DFZ, firms, labour and capital are free to relocate in a DFZ and produce at world prices. Consumption, however, continues to be permitted only in the domestic zone subject to an import tariff. Using his model, Hamada, examines basically two main issues: the effect of the location choice of domestic industries, and the effect of foreign investment on national welfare. His conclusions are: (i) a DFZ does not relocate domestic industries to the zone,

and hence foreign capital is indispensable for the success of a DFZ, and (ii) foreign capital is immiserising if the tariff - protected sector in the domestic zone is capital - intensive relative to the exportable sector.

Hamada has found no support for the developing countries' belief that the benefits brought about a FTZ will justify the tax concession and other incentives. Instead he found that foreign investment will decrease the host country's welfare, and the production outside a FTZ remains incompletely specialised while the tariff is imposed on the importables. What is interesting in Hamada's work is his comparison of the host country's welfare level between the foreign capital in a FTZ and in domestic areas outside the FTZ. It is apparent that the host country will be better off if foreign firms are producing in the FTZs since the foreign firms are denied the higher price created by the tariff wall.

Johnson, (1967), however, has shown earlier that the accumulation of the factor which is used intensively in the tariff-protected industry may reduce a country's real income, even if all factors were domestically owned.

Bhagwati, (1973), has suggested that if a tax is imposed on foreign profit, the immiserisation effect might be avoided. This point is substantiated by Yabunchi (1982). He shows that a large enough ad valorem tax, on return to tariff-induced foreign capital, can actually upgrade a host country's welfare from its free-trade level.

Rodriguez (1976) applied Mundell's approach to the analysis of FTZs. He concluded that the establishment of a FTZ is a perfect substitute for free trade for the tariff-imposing country, provided that domestic factors, both capital and labour, are allowed to move to FTZs and to consume in the place where they earn their incomes. That is, domestic factors will be reallocated in such a manner that production and consumption in the domestic zone are self-sufficient. Trade with the rest of the world will take place solely in the FTZ, with the trade pattern exactly the same as if the whole country is engaged in free trade. This implies that the establishment of a FTZ will not necessarily attract foreign capital if purely domestically-owned firms are also allowed to operate in the zone.

Hamilton and Svensson (1982) challenged the conclusions reached by Hamada (1974). They argue that Hamada's results rely on the assumption that firms in the DFZs will be specialised in producing the tariff-protected goods (importables), which are assumed to be capital-intensive. Examining the non-protected goods rather than the protected goods, they reason that a tariff on capital-intensive goods (i.e., the protected goods) makes a domestic wage rate artificially lower than the world equilibrium wage. However, Hamilton and Svensson did not elaborate to study the amount of foreign investment that is attracted to the host country and the implications involved on the national welfare.

A further approach to analyse a FTZ is provided by Grubel in his article (1982). He views the establishment of a FTZ as a partial deregulation in a generally regulated environment. As far as the trade is concerned, a partial deregulation will reduce the degree of overall protection and, hence, improve the national welfare. However, costs may rise due to locational diversions when resources move into the deregulated area, which is an inefficient production site. Whether a FTZ is beneficial, he argues, must be resolved in empirical studies.

According to Chen (1983), most conclusions drawn from the literature on FTZs seem distance away from reality. Those countries who successfully operate FTZs, such as Taiwan and South Korea, have expanded the volume of trade dramatically even when exports from FTZs are excluded. It is not clear, however, where FTZs have contributed to these expansions. Chen, in his Ph.D. Thesis (1983) argued that if all the foreign firms were placed and operated inside a FTZ, and if these firms were denied the tariff protection and their products were banned from entering the domestic market, then foreign investment will definitely improve the host country's welfare. Chen also remarked that the country's welfare will improve if the labour in the FTZ is paid largely in the non-protected goods, regardless of the initial condition. This result also independent of the goods being introduced inside the FTZ. Chen contends that the key to the change in the national welfare, is what bundle (i.e., pay) is received rather than what is produced.

Miyagiwa, in his Ph.D. Thesis (1985) also criticised Hamada's model. First, Hamada's assertion concerning indispensability of foreign-capital for a successful FTZ is somewhat misleading. What is really indispensability is the presence of any factor willing to receive a lower return than the domestic rate. Second, the Hamada's model must contain an implicit assumption that foreign investment is prohibited by the government. Third, Hamada's model fails to provide a rationale for the establishment of a FTZ by the government.

Miyagiwa (1985) provided an alternative model for a FTZ. His framework allows for the examination of an industry which does not exist without a government subsidy. He believes that his work is a more realistic model of a FTZ than the Hamada model since it incorporates a number of essential features of a typical FTZ; namely an Export Processing Zone (EPZ) comprised of industries non-existent in the domestic economy and is a recipient of benefits and privileges from the government. Miyagiwa also examined the role of the factor intensity, income distribution and economic growth. He paid particular attention to the welfare impact of foreign capital, following the tradition set by Hamada.

The main conclusions reached by Miyagiwa (1985) are: (i) The establishment of a FTZ in a tariff-ridden economy increases national welfare regardless of the factor intensity of the industry introduced to the zone. (ii) If the attraction of foreign capital into the economy is the primary objective of the government, then it should select a capital-intensive industry for the FTZ. This is in contrast to the practice of many FTZs in developing countries. (iii) Although the factor intensity of the zone-based industry is not important from the welfare point of view when the FTZ is established, the factor intensity of the zone-based industry plays a crucial role in determining the effects of economic growth on national welfare.

Miyagiwa made few suggestions regarding future research in this area. First, many FTZs import intermediate goods simply for the purpose of repackaging or assembling for re-exports. Such imports are usually subject to much lower tariffs applicable to imports into the domestic economy. This important aspect needs to be studied. Second, an

examination should be made on the effect of other alternative forms of incentives to attract firms to the zones such as government subsidies. Third, his new model does not assume land as a factor in the FTZ. He suggests that any future study on FTZ should consider the land because the availability of suitable sites sometimes plays a crucial role in determining the success of FTZs. A question related to this is a concern as to how much land to be made available for the FTZ.

4.3 Empirical Studies

The literature review indicated that the empirical studies on FTZs were scarce. According to Chen, (1983), "No empirical study has singled out FTZs as a subject of investigation". However, in our survey of the literature, we found only one empirical study on FTZs. This study is a PH.D. Thesis titled "Explaining Adoption of Foreign-Trade Zones Among Sunbelt Cities", and submitted by Christina Kelly Price (1984) to the University of Alabama. The thesis addressed a key question to be answered: Why have some cities adopted FTZs while others have not. Price employed both economic and socio-political variables, as independent variables, to determine which are most useful in predicting the dependent variable (i.e., the incidence of the particular cities as being either an adopting or non-adopting FTZ).

To conduct the analysis, Price generated ten independent variables and classified them under three categories: (a) prosperity variables including four measures: rate of unemployment, total bank deposits, percent of average annual growth of personal income, and percent poor; (b) international trade including four measures: export potential, exports as a percent of total manufactures, import intensity, and export employment; and (c) leadership including two measures: party dominance and Chamber of Commerce support. The dependent variable was defined as the FTZ adoption and was measured as a dichotomous variable: [1] indicates FTZ adoption and [0] indicates no FTZ adoption. the statistical method employed was probit analysis (the Crawtran Programme). This probit

model, which is typically used in problems related to dichotomous relation, produces coefficients or maximum likelihood estimates which, when divided by standard errors, allow the comparison of the relative importance of the independent variables and whether they are related to the binary dependent variable (i.e., the adoption or non-adoption).

The main conclusion reached by Price is that: (i) FTZ adopting cities were wealthier than non-FTZ cities in terms of bank deposits and had higher population of poor people, and they were more democratic in party preference and more likely to manufacture for exports. (ii) Although FTZ cities employed fewer people in manufacturing for exports, they were more likely to export manufactured products than non FTZs cities. This is so because most of the manufactured goods exported are not labour intensive. (iii) The ranking of the relative importance of the predictor variables were: the first was the total banking deposits; in the second position were the party dominance and the percent poor; and in third position was the export as a percent of manufactures. (iv) According to this model, FTZs are most likely to be located not necessarily where there is the greatest need for them in terms of international trade, but where business and financial activity, generally, is strongest and where the democratic party dominate the urban area.

4.4 Articles

Our survey of the literature revealed that there were 25 articles written on FTZs. Five of these articles are considered of scholarly work, these are: *Johnson (1967); Hamada (1974), Rodriguez (1976); Grubel (1982); and Hamilton and Svensson (1982)*. The main points of these five articles were presented earlier in section 4.2. The rest of the articles reflect different personal views on FTZs. However, two of these articles stand out as being relatively more related to the scope of the study. In this section we survey these two articles, as follows:

Turnbull, N. M. Jr. (1981), "Marketing Opportunities Abound for Foreign Trade Zones" -

In his article Turnbull remarked that although FTZs have been in use in the U.S. since 1934, it is only within the last few years that the manufacturing industries and the American communities have become aware of the unique properties which FTZs offer in today's complex business environment. He also made the observations that interest by foreign industrial companies in U.S. FTZs is expanding as the laws of operating FTZs become more flexible. This industrial investment by foreign companies is revitalising certain sections of the country where skilled labour is in abundant supply. For example; today Volkswagen manufactures cars in a zone near Pittsburgh; Olivetti Corporation of Italy assembles typewriters in a zone near Harrisburgh, Pennsylvania; Kawasaki Motors Corporation of Japan operates an assembly plant in a zone in Lincoln, Nebraska; The American Motors Corporation is applying for expansion of its Milwaukee zone so that it can build a plant to assemble the French Renault automobiles. The impact of FTZ only recently has begun to be felt in the national economy with over four billion dollars in goods passing through FTZs in the 1980 fiscal year and the expansion is expected to grow through to the future.

Turnbull, then, summarised four steps for establishing a FTZ in the U.S. These steps were: (i) A preliminary feasibility and development plan - when the FTZ application is presented for approval to the federal authorities it should contain key ingredients that will satisfy the requirements of the federal law and also insure upon implementation that the new FTZ will be able to meet its required goals. (ii) Early business involvement - Involvement in the early stages by business and industry leaders is essential for a realistically organised FTZ. (iii) Writing of the FTZ application - special care should be taken when writing a FTZ application to ensure that demographic and other unique ingredients within this market area are clearly delineated and incorporated into the overall economic development plan of the area. (iv) The FTZ hearing - A public community hearing must be held prior to the approval of any application and this meeting should be carefully planned to present the best efforts of the entire business community. The presentation should contain those factors directly

affecting the zone and also should emphasise the entire international business disposition of the community.

Turnbull concluded the article by highlighting the importance of marketing the FTZs, as in the following key points:

- The increased number of FTZ makes market evaluation and planning for future FTZs even more critical than in previous times.
- If the preliminary feasibility study proves positive, the marketing for the FTZ should begin immediately.
- An advertising programme at an early stage is often necessary to stimulate business enquiries and to shorten the time interval between the initial awareness of the potential zone users and the actual industry move into a zone.
- Because the FTZ concept is relatively new to industrial and development personnel, an effective information programme should be established. For example, Audio-Visual and collateral materials in combination with briefings will help promote the premise that the use of a FTZ can be very profitable. If business and community leaders understand the FTZ concept, they can be supporters of this type of project thereby increasing and expanding the community's economic well-being.
- Another essential ingredient of a successful FTZ is its inclusion into the area or regional overall economic development programme. As a result, the zone becomes a tie-in with the local county or state industrial development programmes and accordingly new interested prospects are then referred to the zone.

Feldmann, E. G. (1983), "The Marketing Concept and its Role in Successful Foreign Trade Zone Development" - The purpose of this article is to emphasise the importance of the role that marketing plays in creating an economically viable FTZ. Feldmann remarked that an analysis of FTZs currently in operation, in the U.S. shows only about 40 percent operating profitably, many with losses running into hundreds of thousands of dollars. He

contends by saying that the poor performance of many FTZs in existence today can be traced to a fundamental misunderstanding or ignorance of the marketing concept. Feldmann, in his article, made some recommendations, stressing that, if implemented will put each FTZ in a better position to achieve success. Among his recommendations are the following:

- Once the grant to establish a FTZ is issued, the first step then is to put the marketing concept to work.
- It is the job of the zone developer to keep his community competitive by developing every available tool to promote economic development of the zone. The zone developer should, for example, create a favourable zone image so that the Public at large will perceive their local FTZ as being a desirable idea and can serve as a key for unlocking new jobs and investment.
- Determining the needs of potential zone users, or demand for a zone, is the overriding element in any decision to operate a zone and to proceed with the long commitment to finance, manage and promote such an endeavour. Determining this need is at the heart of the marketing concept.
- Creating an accurate commercial intelligence system is essential to support an effective market segmentation process. There are five key elements of this system:
(1) Zone Proficiency - Becoming totally involved in understanding of the zone concept, both its advantages and disadvantages, and instituting a mechanism of keeping up-to-date on the most recent developments. (2) Community Inventory - Instituting a thorough assessment or reassessment of locational advantages and disadvantages of the zone's surrounding community. (3) Local Industry - Analysing and maintaining contact with the local or regional industrial base to identify potential zone users and their needs. (4) Competition - Understanding the composition of and services offered by other zones, their successes and failures, and keeping up-to-date on new developments and trends, and (5) General Environment - Keeping

a constant watch for general economic conditions or trends which could have impact on the zone development.

- It is clear now that the marketing concept should permeate all facets of FTZ evaluation, development, operation and promotion.

Although the views presented in the last two articles were not based on empirical findings, yet they provided a launching pad for the approach of our research. In addition, some of the remarks expressed in these two articles were of much help in giving emphasis to the statement of the problem of this research - See Section 1.2 in Chapter One.

4.5 Published Reports

In addition to the theoretical studies, the empirical Ph.D. Thesis, and the articles, interest in the phenomena of FTZs stimulated several research organisations and agencies to conduct investigations to explore a variety of aspects pertinent to FTZs. These investigations were published as reports and small monographs. In this section we survey a number of these reports and publications.

- I In early 1978, Calkin and associates of Stevenson and Kellogg organisation in Canada conducted an investigation on Free Trade Zone concept. Their study was carried out in two phases: (1) Background analysis and rationale leading to conclusions regarding the advisability of establishing a free trade zone in the province of Nova Scotia, and (2) if the results of phase (1) are positive, an implementation plan for establishing an effective free trade zone.

With regard to phase (1) of their study, the findings revealed that there are many variations on the FTZ concept. Different categories of FTZs were found according to the above mentioned study, including Import Oriented, Re-export Oriented and Export Processing. The study reported that most, though not

necessarily all, FTZs can be assigned to one of these categories. Most new zones in the U.S. are import-oriented. However, most new zones in the rest of the world are, or are intended to be, export processing zones. Canada has no specific areas designated as FTZs*. As for phase (2) of the study, they recommended to not to be carried out. The main reasons behind calling off phase (2) were on the one hand the wide variations on the FTZ concept, and on the other hand, the Canadian customs laws and regulations were, at the time of the study, provided only for: (a) bonded warehouses, and (b) export drawbacks.

Calkin and his associates (1978) went on to argue that Nova Scotia offers a range of incentives to new industries that in some respects are better than incentives available in most FTZs elsewhere in the world. This means, in effect, that Nova Scotia, and indeed all of Canada, is a FTZ. They also argued that Nova Scotia does not have incentives exclusive to export-oriented manufacturers (e.g., the low labour costs and the income and other tax concessions). In this sense, Nova Scotia is not an export processing zone (EPZ); and the prospect of becoming an EPZ, at this time, does not appear to be great.

II Based upon the information contained in a recent report on FTZs in developing countries conducted by Frazier and Erony (1983) and published by the Sabre Foundation, FTZs appear capable of making a substantial contribution to the emergence of modern, export-oriented industrial sectors in a number of countries. Singapore, Korea, Taiwan, Ireland, Malaysia, Mexico, Sri Lanka and Hong Kong are among the most notable examples of successful FTZ implementation. Beyond the direct economic benefits, FTZs in several countries have served as useful tools in providing grounds for economic reforms. For instance, the success of the Shannon

* According to the updated releases of Diamond (1989) the Sydport International Trade Zone in Nova Scotia started operation on March 1984.

free zone proved instrumental in Ireland's 1969 decision to slash income taxes on export-oriented manufacturers through the country.

Also according to the Frazier and Erony report, many zones have also manifestly failed to stimulate economic activity. Although a number of common factors were found in relatively unsuccessful zones, three factors appeared to be especially destructive. The first, and apparently most important, was the absence of a stable investment climate resulting from violent political or military upheavals. A second major factor impeding zone performance was inadequate or unreliable general infrastructure and service delivery. A third factor was a lack of user-sensitive zone management behaviour, as evident in the politicisation of zone administrative and marketing procedures. The performance of even relatively successful free zones, moreover, has also been lacking in certain respects. Most free zones operate, at least in their initial years, as 'enclaves' with few linkages to the surrounding economy. With the exception of Hong Kong, Singapore, Korea and Taiwan, zone-based industries appear to rely mainly upon imported capital goods and raw materials.

Of particular importance to the Sabre Foundation report is the identification of the fundamental factors which influence the performance of FTZs. These factors involved four main groups:

- (a) Factors influencing production. Classical economic factors of production - such as labour, land and building - are a primary consideration for FTZ investors. In export processing zones, labour costs especially are important to investment decisions. Labour is not a homogeneous factor of production, and not all forms of labour are easily available at low costs in developing countries. Highly skilled labour - and more importantly, supervisory personnel - is scarce and generally expensive. In other types of FTZs, including warehousing/trans-shipment zones and free banking facilities labour

costs tend to be less important determinants of zone success. For export processing zones and for traditional storage/distribution free trade zones, transportation costs are a further critical consideration.

- (b) Stability of the investment climate appears to be the paramount concern of investors in virtually all types of FTZs. Additionally, physical infrastructure/basic service delivery can play a decisive role in attracting private investment to a zone. Finally, direct subsidies and assistance programmes are found in many FTZs. Export processing zones such as Shannon, Ireland and Masan, South Korea have used these policies to attract foreign investors.
- (c) In creating an attractive environment for investors, the presence of a business-oriented zone management appears to be among the most important factors of establishing a successful zone.
- (d) A final key influence upon zone development is the quality and breadth of zone marketing efforts. In the broadest sense, the marketing/promotion effort can be broken down into provision of information to suitable clients in a way that will stimulate their interests, and the effort to convince interested clients to invest in the zone.

III The International Labour Office (ILO), an agency affiliated with the United Nations (UN), has published a study on employment and multi-nationals in Asian FTZs, conducted by Maex (1983). According to this study, the objectives assigned to the Asian FTZs were varied and included the promotion of foreign exchange earnings and, of course, exports. But they were also designed for, and have succeeded in, attracting a particular type of foreign direct investment, namely investment in labour-intensive manufacturing processes for exports. The principal sources of these investments are the industrialised market economy countries.

Maex (1983) also reported that zone employment has not yet had any substantial effect on unemployment in the Asian region as the zone enterprises normally draw new workers into the labour market. This new segment is composed mainly of young, unmarried female workers who had not been gainfully employed before. FTZs employment constitutes a substantial part of employment in the manufacturing industry in some of the more advanced countries of developing Asia. Since their establishment, FTZs have thus accounted for at least 60 percent of the manufacturing employment expansion in Malaysia and Singapore and for some 10 percent in the area of Hong Kong, the Phillipines and the Republic of Korea. In Sri Lanka, between 1978 and 1981, some 15,000 new jobs have been created in the FTZs. Most of this employment, as could be expected, generated by foreign multinational enterprises.

In addition, a number of issues have been raised regarding the quality of FTZs employment both in respect to national employment policy perspectives and the situation of the zone workers themselves. While the zones provide appreciable industrial employment opportunities for a new segment of the population, the enclave character of the zone production poses questions for the total labour market. One major consideration is that the future of the zones is largely determined by external factors and some of them may affect developments adversely. In particular, export possibilities to the industrialised countries appear to be increasingly affected by the present world-wide recession, restrictive trade policies and related quota systems for the most sensitive zone products, which create problems for the expansion of both old and newly-created zones. FTZ employment is largely affected, like all trade-related employment (whether positively or negatively) by the fluctuations in global economic activity. Another factor is the global strategies of multinational enterprises from the industrialised as well as from the Asian developing countries themselves and related government policies.

Maex (1983) also observed that recently, most Asian developing countries seem to have opted for a maximum of short-term employment in the zones for a new and rotating segment of workers (i.e., young-female workers, without work experience) who have few other employment opportunities. However, in the longer term perspectives alternative development and policies seem possible along the lines of a greater integration of the zones and their labour force in the national economies, thus opening up possibilities for higher skill and higher wage jobs, also bearing in mind the often fairly high general educational qualification of the zone workers. Both market and technological developments, eroding some of the low labour cost differentials, as well as the limits to the growth of the present type of zones, could support such policies in the long run. Some of the observed problems for the workers' quality of employment, such as long working hours and other forms of work intensity, low career and income prospects and connected low occupational mobility of the work force, seem very much associated with the specific characteristics of the zone labour force, while also raising questions of supervision of labour standards, malpractices and effective union representation. Although many of the problems for women workers would, therefore, seem to be associated with the type of zone employment, it has been stressed that they also have general social and cultural origins in the countries in question, such as the traditional sex-related division of labour inside and outside work.

IV Another study published by the International Labour Office (ILO) and conducted by Kreye et al (1987) on the Export Processing Zones (EPZs) in developing countries. The study includes recent information from a 1986 survey-questionnaire addressed to more than 300 institutions in 114 countries involved in EPZs and other offshore manufacturing facilities and carried out as part of the Staynberg Institute's ongoing programme in this field. The summary results of this study are as follows:

- (1) Employment in export-oriented industrial production in the developing countries increased markedly between 1975 and 1986.**
- (2) More than half of all employment in export-oriented production in the developing countries is concentrated in four South East Asian economies, including the area of Hong Kong, Taiwan, Singapore, and the Republic of Korea. However, massive relocations of export-oriented industrial production, have also taken place to other developing countries, including eight additional countries in South East Asia, seven in Latin America and the Caribbean, and five countries in Africa. World market-oriented production is not, as if often supposed, confined to the four South East Asian newly-industrialising countries (NICs).**
- (3) Employment in EPZs, and off-shore plants has grown relatively rapidly in a number of countries which are new recipients of export-oriented industrial production, such as Egypt, Bangladesh and Sri Lanka.**
- (4) Relocations of production have taken place especially to those developing countries and to those locations in developing countries offering advantages in addition to low-cost labour. These include not simply infrastructure and industrial inputs but also factors such as political 'stability' and the guarantee for unhindered remittance of profits.**
- (5) Although the relocation of world market-oriented production from industrialised to developing countries is of considerable importance, for the divergent movement in employment in each group of countries with a few notable exceptions, the process of export-oriented industrialisation in the developing countries continues to be of rather minor significance in the industrial development of the developing countries, despite the fact that a substantial share of available infrastructure and investible funds have been swallowed up by export-oriented production.**

V Finally, in 1988, a comprehensive study was drafted by Nicolas Jequier (1988) of the Institute of Advanced Studies at the University of Lausanne. The study was sponsored jointly by the Bureau of Multinational Enterprises of the International Labour Office (ILO) and by the United Nations Centre on Transnational Corporations (UNCTC). The study was co-ordinated throughout by both Paul Bailey of the ILO and by Manuel Agosin of the UNCTC. The primary purpose of the study was to provide a better understanding of the economic and social role played by multinational enterprises (MNEs) in the export processing zones (EPZs) of developing countries, and confront a number of widely held assumptions about the role of such enterprises with the available facts and figures. The second purpose was to shed some light on the more general economic phenomenon of FTZs and to provide some elements of an answer to a central question facing policy-makers throughout the developing world, namely, are such industrial enclaves an effective and efficient instrument for promoting employment, fostering industrial development and building up a national technological capability? The investigation was based to a large extent on a number of original case studies, commissioned by the ILO and the UNCTC, and carried out by researchers from the countries concerned.

The main conclusions of the above-mentioned investigations can be classified into two distinct dimensions, as follows:

(A) The economic and social role played by the MNEs in the FTZs:

1. Some FTZs have been much more successful than others. In most cases success cannot be attributed to a single cause (wage levels, political stability of host country, quality of work force, etc.).
2. One of the keys to success for a FTZ is its exclusive pre-occupation with exports and employment promotion.

3. Evaluating the social performance of enterprises in FTZs is particularly difficult because of lack of data, the absence of mutually acceptable points of comparison and the sensitive nature of such issues as union rights, length of working time or quality of labour relations.
4. FTZs industries created around 750,000 jobs in 1975-86 and the total FTZ employment in 1986 stood at around 1.3 million of which 850,000 can be attributed to the MNEs.
5. Most FTZs jobs are primarily unskilled jobs in highly labour-intensive industries, occupied for the most part by young women. This high proportion of women, in the FTZ labour force, is most probably due to the nature of FTZs industries, and not to social value of culture.
6. Workers in FTZs usually work much longer hours than in the highly industrialised countries. The evidence on this point is, however, very sketchy and there is a clear need for much better internationally comparable data on working hours in FTZs.
7. The data on wage levels in FTZs are rather sketchy and unreliable, but the evidence points to the fact that in many countries, these wages are extraordinarily low by international standards.
8. There is clear evidence suggesting that unionisation rates are very high in some countries and very low in others, but generally much higher than conventionally assumed.

(B) The industrial and technological role played by the MNEs in the FTZs of the host countries:

1. The total number of enterprises in the FTZs of the developing countries stood at around 2,000 in the mid-1980s. Of these, around 555 are fully

- owned by foreign subsidiaries, nearly one-quarter of all firms in FTZs are domestically owned enterprises, and the remaining 50% are joint ventures.
2. The two most important FTZs industries are electronics, and textiles and garments.
 3. As a physical, economic and even social enclave in the host country, the FTZ is perhaps the most achieved mechanism for preventing the development of technological linkages between the foreign firms in the FTZ and the other enterprises in the host country. This point of observation is contrary to the commonly held views that a FTZ can be thought of as an effective means for the transfer of technology and know-how.
 4. This is first of all because of the FTZs' export orientation; since FTZ firms are legally bound to export all their output (with few exceptions), they do not compete with local enterprises, and therefore cannot have the technologically stimulating effects usually associated with MNEs' subsidiaries.
 5. Since FTZ firms tend to import all their inputs, and they are encouraged to do so by the FTZs' regulatory system, they do not have the motivation to build up relations with local suppliers of raw materials, machinery, components, or semi-finished goods.
 6. These backward linkages with local suppliers are known to be a potentially very important channel of technology transfer from foreign to domestic firms, as well as a major instrument for building up and developing the technological competence of domestic enterprise.
 7. Most FTZ industries, furthermore, have nothing to do with the host country's market requirements, its industrial and technological traditions or its pre-existing technological competence.
 8. Very substantial amounts of technology are transferred internationally from parent companies to their subsidiaries located in FTZs.

4.6 Books

There were only five books published on topics generally related to FTZs. Below we briefly survey each of these books. They are surveyed in a sequential order of their importance to this research.

Diamond, W. H. (1989), Tax-Free Trade Zones of the World - This encyclopedic work consists of three volumes aimed mainly at business executives interested in FTZs enterprises. The three volumes contain such vital information as, geographically listed, descriptions of the different forms of FTZs available in the host country; the types of privileges, facilities and services offered by the particular zone; and other information of interest to the businessman. Furthermore, the first edition appeared in 1977 and the information contained in this work are periodically corrected and modified through disseminating updated releases to the buyers of the three volumes. These new releases are to be attached to the binders replacing those pages containing obsolete or outdated information.

Currie, J. (1985), Export Processing Zones in the 1980's - This book discusses the geographical distribution of the zones, the aims underlying their establishment, the present status, and the experience, including the performance of the individual zones since 1980. The book also provides detailed information on the individual zones, the incentives they offer, the firms which are established there, the most important factors the investing firms are looking for in choosing an EPZ, and statistics on employment and foreign exchange earnings.

Kelleher, T. (1976), Handbook on Export Free Zones - This book is designed to provide the reader with some guidelines of value in planning and managing FTZs. The book explains the basic concept behind the planning of a FTZ in terms of the costs and benefits, the location requirement, the size of the site, and the employment density. The

book discusses the physical planning of a FTZ including the general layout, the phases of a FTZ development, the infrastructures, warehouses and factory buildings, the support services, and the environmental aspects. A consideration was also given to the promotion and the incentive package, and the management and administration of a FTZ.

Grubel, H. G. (1983), Free Market Zones: Deregulating Canadian Enterprise - The study in this book represents a substantial revision of a draft that Grubel circulated early in 1980. He remarks that because free economic zones have great economic and social merit and political acceptance, they have grown rapidly in many industrial and developing countries, but not yet in Canada. Grubel in his study analyses the economic and social implications of three important recent developments: the increased public awareness of the hidden costs of government regulation of economic activities, the strengthening of opposition to deregulation by powerful vested interest groups, and the rapid expansion in many countries of the world of the so-called free-economic zones. In his study, Grubel analyses how Canada loses from these developments and recommends the establishment of free economic zones throughout Canada. He shows how the free zone concept can benefit the poorest people in the society and can help Canada back onto the path of economic health. He argues his way through, attempting to convince the Canadian leaders and the vested interest groups opposing the concept of free economic zones to support the idea which he believes would help to re-establish growth and development in communities hardest hit by the current recession, and would provide firm footing for future prosperity in Canada.

Basile, A. and Germidis, D. (1984), Investing in Free Export Processing Zones - This book is the final product of a research project titled "Policies to Attract Export Oriented Investment" which is in turn a part of a broader research programme on "Foreign Investment and International Banking Activities in Developing Countries". Thus, the study reported in this book was set in an international context, where conflicting interest amongst the parties concerned were reconciled. The book presents an elaborate study. The study investigates

problems related to the industrial economic interdependence between the developing and the developed countries; thus it may be seen as a contribution to the North-South dialogue.

The main conclusions reached by Basile and Germidis (1984) were: (a) During the 1980's there were a number of factors which helped to shape the international economic activity and which have combined to make industrial export objectives of high priority and hence prompted the proliferation of free export processing zones (FEPZs). Among these factors are the slowdown of international trade as a result of the recession in most of the economies concerned, the surge of protectionist measures, and the critical rate of indebtedness of many developing countries. (b) Whatever instruments used to attract export-oriented foreign investment, including FEPZs, are entirely governed by circumstances of time and place, and above all by the current economic phase. (c) Since a FEPZ is to be created for the purpose of bringing to the domestic economy the benefit of foreign contributions, its conception must obey the economic exigencies that remain closely related to the changing economy of the host country and are themselves therefore subject to change. (d) There is no FEPZ model which is ideal and might be generalised. In practice there are only ad hoc formulae adapted to each circumstances of time and place, which reconcile the perceived interests of the different partners. (e) Nevertheless, it is possible to discern, from the experiences of other FEPZs cases, policy lines which can be followed to good effect in any circumstances and by any host country, in order to establish satisfactory basic conditions.

Basile and Germidis (1984) ended their study with recommendations, among these are the following: (a) The FEPZ formulae should be encouraged with full consideration of the host country's package of constraints and incentives, and allowing joint use by the domestic enterprises of the infrastructures provided, as well as facilitating the establishment of various relationships between the firms in the zone and those in the domestic economy besides affording greater mobility of workers. (b) Joint ventures including local interests should be encouraged to set up in FEPZs. (c) There should be some relaxation of the restrictions on exports by FEPZ enterprises to the domestic market. (d) It is also of prime

importance to monitor the experiences of competing host countries particularly with regard to their FEPZs. The institutional and economic components of such countries' experiences must be carefully analysed in a dynamic perspective so that the real causes of their success or failure may be recognised, the lessons to be learnt from them identified and the necessary measures taken.

All the books were very useful in generating the marketing variables related to the operations of a FTZ. Some of the information contained in these books was of help in developing few of the ideas used in Chapter Two. In addition, each of the first three books includes a list of the names, addresses, telex and telephone numbers of FTZs around the world. However unmatching were these three lists, they still were of much help in locating and contacting the FTZs, and accordingly compiling a new modified and updated list of the names and addresses of FTZs around the world - See Appendix [3].

4.7 Criticising the Literature

With the exception of two articles, (Turnbull, 1981; and Feldmann, 1983), none of the published work, that we surveyed, deals with FTZs from the marketing perspectives. Since none of the literature is directly related to the scope of our study, here, we provide an overall assessment on each body of the literature, and where possible we shall comment on specific studies, as follows:

I **The Theoretical Studies.** All these studies follow methodologies based on pure economic theories. The investigators are trying to develop economic theories (principles) that would best explain certain phenomena of FTZs. This can be seen as some authors claim that their model is better than other models in explaining a particular FTZ phenomena. However, as with any theoretical work in other disciplines, all these studies deal with the principles rather than with the practice underlying the particular FTZs issues being investigated.

II **The Empirical Studies.** There is only one empirical study conducted in FTZs. Price (1984), in a Ph.D. thesis submitted to the University of Alabama, addressed a key question: Why have some U.S. cities adopted FTZs while others have not? Price generated a combination of primary economic variables and primary socio-political variables in assessing the incidence of FTZ adoption by the U.S. 'Sunbelt cities' of the southern states. However, Price's decision is not justifiable to include only the sunbelt cities of the south and exclude the northern industrialised cities. The agricultural south was equally hit as the industrial north by the 1970's recession. The author could have employed an area sampling plan and use two sampling frames: the 97 U.S. FTZs which were in operation during the conduct of the research, and the U.S. Bureau of the Census of cities of a desired population. This approach should provide more depth to the analysis and consequently more reliable results can be reached for the generalisation to the true population characteristics.

III **The Articles.** After an extensive search in the literature, we could find twenty five articles published on FTZs. Five of these articles are of a scholarly nature. Each of these five articles deals with certain economic aspect(s) of FTZs. The main points of each of the five articles are presented in Section 4.2. Each of the remaining twenty articles reflects the personal opinion of its author regarding the particular issue(s) being raised. Most of these articles exemplify views of U.S. FTZs enthusiasts. Therefore, the themes of these articles are set in such a way as to portray the existing conditions of the U.S. FTZs.

 However, two of these twenty articles (Turnbull, 1981; and Feldmann, 1983) are considered as relatively related to the scope of this study. The discourse in both articles lays emphasis to the importance of marketing in the operations of FTZs. The main points of these two articles are presented in Section 4.4. Although the views expressed in these two articles, like the rest of the eighteen articles, were not based on empirical findings, the remarks made in both articles, on the importance of marketing in FTZs operations, provided the initial insight needed for getting off to a good start in this study.

IV The Published Reports. Five reports were published on FTZs. One of these reports (Calkin, et al. 1978), investigated the advisability of establishing a FTZ in Nova Scotia, Canada. The study concluded with a recommendation not to establish a FTZ in Nova Scotia. Calkin and his associates (1978) argue that Nova Scotia, and indeed all of Canada, can be considered a FTZ. The reason is that, at the time of the study, the Canadian customs laws and regulations offer a range of incentives to new industries that are better than incentives offered by other FTZs elsewhere in the world. They also argue that Nova Scotia is not an export processing zone (EPZ) because it does not offer incentives exclusive to export-oriented manufacturers. And the prospect of becoming an EPZ, at this time, does not appear to be great.

Calkin and his associates reached their conclusions through two main steps: (a) studying the existing Canadian customs law and regulations, and (b) collecting and compiling information of relevance to the understanding of the FTZ concept. Although it can be said that the objectives of both steps are well accomplished, the approach followed in the second step is less convincing. To collect the information on the FTZ concept, Calkin and his colleagues visited five sites, these are: Vienna, the headquarters of the United Nations Industrial Development Organisation (UNIDO); and the location of four FTZs, representing Europe and the Western Hemisphere. These FTZs are: the Shannon FTZ, Ireland; the Miami FTZ, Florida; the Colon FTZ, Panama; and the Barranquilla FTZ, Columbia.

However, there was no need for the site visits because the same information could have been collected through two methods which are much less expensive: (a) primary, by contacting, via air mail, telex, or fax, a representative sample of FTZs authorities around the world; and (b) secondary, by examining the available literature on FTZs which was given in the list of references they provided in the appendix of their study. And even if the investigators insisted that the site visits were more efficient, the selection of these particular four FTZs, although were well justified, do not constitute a representative sample for collecting the needed information. To

develop a more comprehensive understanding of the FTZ concept, they could have visited few additional FTZs sites around the world.

As for the remaining four reports (Frazier and Erony, 1983; Maex, 1983; Kreye, et al. 1987; and Jequier, 1988) none claims to be empirical because the objective of each report is to obtain some formative (rudimentary) ideas and knowledge about certain issues involved in the operations of FTZs around the world. As such each report can be considered as an exploratory research. And indeed each report contributed its share to the understanding of FTZs.

V **The Books.** Five books were surveyed on FTZs (Kelleher, 1976; Diamond, 1989; Currie, 1985; Grubel, 1983; and Basile and Germidis, 1984).

Kelleher (1976) in his book draws from his own experience, as an expert in FTZ development, and the experiences of the Shannon FTZ, to present a discussion of the basic concepts behind the planning and management of a FTZ in terms of: the costs and benefits, the location requirement, the size of the site, the employment density, the physical planning of a FTZ, the promotion and the incentive package, and the management and administration of a FTZ. This handbook can be thought of as a how-to-manual for individuals interested in the development of a FTZ because it provides insightful background for the different phases involved in developing a FTZ. However, the contents of the book need to be updated. In revising the book, the author may wish to examine the experiences of different FTZs in the 1980's in light of the challenges to come in the 1990's.

The work by **Diamond (1989)** consists of three big volumes aimed mainly at business executives interested in FTZs enterprises. These three volumes can be thought of as an encyclopedia on FTZs because they contain a variety of essential information on every existing FTZ in the world. The first edition appeared in 1977 and since then it has been updated quarterly through the distribution of releases to be attached to the binders replacing those pages containing obsolete or outdated information. Diamond's work is indeed a remarkable contribution to the body of knowledge on FTZs.

Currie's book (1985) deals with the export processing zones (EPZs) of the developing countries. The author tried to cover many FTZs' aspects in a single volume. As such the presentation of the book lacks focus, and the discussion lacks depth, for example, 16 cases were briefly presented in 6 pages without analytical discussion. In addition, the criteria used in evaluating the performance of FTZs was vague and inconsistent. It was vague because Currie did not provide a prior discussion on how the performance of FTZs to be assessed. And when the author used three main indicators (the value of exports, the number of firms using the zone, and the employment figure) did not specify what figure, number, or percentage of national would constitute a minimum progress or success of a FTZ performance. The criteria was also inconsistent. For example, the employment figure and the value of exports were two indicators used in assessing the FTZs in Taiwan as growing extremely rapidly. While, in South Korea, the value of exports, the number of firms, and the employment figure, were used as three indicators to evaluate the Masan FTZ as successful and the Iri FTZ as less successful. And the Jakarta FTZ, in Indonesia, was assessed, as progressing slowly, using employment figure and the value of exports. The performance of Mauritius FTZ is evaluated as a success story using value of exports as a percentage of GNP, number of firms, and employment figure. While the performance of the FTZs in Egypt was evaluated as slowly growing relying on the value of the total investment and the number of firms using the four FTZs. The book, however, provides an introductory account on EPZs in terms of their geographical distribution, purposes, growth, types of industries involved, addresses, and statistics on such indices as the value of exports, the number of firms, and the employment figures.

Grubel, in his book (1983) presents a profound study proposing that the federal and provincial governments in Canada permit or actively encourage the establishment of free economic zones (i.e., FTZs) through the selective reduction or elimination of regulations, controls and taxes. He suggests that six different types of FTZs should be established in Canada through the setting aside of geographically

defined areas of operation. These FTZs are: free trade zones, free retail zones, free enterprise zones, free medical zones, free gambling zones, free investment zones. In addition, the Canadian governments should free the banking and insurance activities selectively through the elimination of controls and taxes on specific types of business and customers. Relying on his own experience as a renowned Canadian economist and drawing on other economists' recent writings on the benefits and costs of regulation, Professor Grubel provides intellectual arguments (jargon-free) on the benefits and costs of regulation, on the economic analysis of the welfare effects of FTZs, and on the description of purposes and costs of existing regulation and specific deregulation proposals for the establishment of the suggested six different FTZs. This book reflects a scholarly work on FTZs and particularly the Canadian FTZs and should be of substantial benefit to the people of concern in the Canadian government.

The book by Basile and Gemidis (1984) presents an elaborate study on FTZs in light of the industrial and economic interdependence between the developing and the developed countries. As such, the study reported in the book was set in an international context, where the authors, in their discourse, tried to reconcile the conflicting interests among the parties concerned. As for the data used in the research, the authors relied heavily on a team of experts; four from France and nine from eight developing countries, and also relied on three research institutions in Hawaii, USAID (Egypt), and Paris. Since the study was not concerned with the association of specific variables, the approach followed can be thought of as an exploratory research. In fact, to arrive at their conclusions (See Section 4.6), the authors explored three dimensions: (a) the direct foreign investment and development policy; (b) the interface between the enterprise strategies and the host country strategies; and (c) the reconciliation of objectives and arrangements. This book represents a contribution not only to FTZs but to the continuing North-South dialogue as well.

4.8 Summary

In conclusion, we can see that the theoretical studies focused on the principles (economic) rather than on the practice of FTZs operations. The empirical study (Price, 1984) investigated economic variables and socio-political variables to predict the incidence of a FTZ adoption by the U.S. sunbelt cities. Most of the articles expressed the personal opinions of the writers on certain FTZs issues. And two of these articles (Turnbull, 1981; and Feldmann, 1983) emphasised the importance of marketing in the operations of FTZs. The objective of each published report was to extract some formative ideas and knowledge about certain aspects involved in FTZs activities around the world. As for the six books, three books (Kelleher, 1976; Currie, 1985; and Diamond, 1989) could be considered as guide or reference books on FTZs. Grubel (1983) produced a scholarly work to advance his call for the establishment of a variety of FTZs throughout Canada. And Basile and Germidis in their book (1984) investigated FTZs in light of the industrial and economic interdependence between the developing and developed countries.

Most of these studies contributed their share to the understanding of the phenomena of FTZs. However, none has tried to construct a marketing framework to investigate the operations of FTZs. It is now evident that the present research is different from other studies on FTZs as being the first in three main aspects: (a) marketing oriented investigation of FTZs operations; (b) empirical study using global survey on both FTZs' authorities and FTZs' experts; and (c) application of multivariate data analysis techniques within the context of marketing research.

Table 4.1, in the following pages, provides a summary of all the literature on FTZs that has been reviewed in this Chapter. The first column lists the name of the author(s) and the date of publication. The second column lists the key issue(s) discussed, and the third column highlights the main conclusion(s) reached.

Table 4.1: Summary of Previous Studies and Publications on Free Trade Zones

Author(s)	Key Issue(s)	Main Conclusion(s)
<p><u>The Theoretical Studies:</u></p> <p>Johnson, H. (1967)</p> <p>Bhagwati, J. N. (1973)</p> <p>Hamada, K. (1974)</p> <p>Rodriguez, D. (1976)</p> <p>Grubel, H. (1982)</p> <p>Hamilton, C. and Svensson, L. E. Q. (1982)</p>	<p>Accumulation of any factor-intensive, and the real income of the host country.</p> <p>Tax on foreign profit, and the immiserisation of host country.</p> <p>The effect of the FTZ on the location choice of domestic industry, and the effect of foreign investment on national welfare.</p> <p>FTZ establishment, and the attraction of foreign capital.</p> <p>The FTZ establishment as a partial deregulation of the economic environment, and the effect of the national welfare.</p> <p>The production of non-protected goods in the FTZ, and the host country's welfare.</p>	<p>The accumulation of the factor which is used intensively in the tariff-protected industry may reduce the country's real income, even if all factors were domestically owned.</p> <p>If a tax is imposed on foreign profit, the effect of immiserisation might be avoided.</p> <p>(1) A FTZ does not relocate domestic industries to the zone, and hence foreign capital is indispensable for the success of a FTZ, and (2) foreign capital is immiserising if the tariff-protected sector in the domestic zone is capital-intensive relative to the exportable sector.</p> <p>The establishment of a FTZ will not necessarily attract foreign capital if purely domestically-owned firms are also allowed to operate in the zone.</p> <p>The establishment of a FTZ is regarded as a partial deregulation in a generally regulated environment. With respect to trade, a partial deregulation will reduce the degree of overall protection and, hence, improve the national welfare.</p> <p>If firms in FTZs produce the non-protected goods, the welfare loss is larger than if they were in the domestic zones.</p>

Table 4.1 (Continued)

Author(s)	Key Issue(s)	Main Conclusion(s)
Chen, T. Jy. (1983)	The role of foreign firms, operating inside a FTZ, in the welfare of the host country.	If all foreign firms were placed and operated inside a FTZ, and if these firms were denied the tariff protection and their products were banned from entering the domestic market, then foreign investment will definitely improve the host country's welfare.
Miyagiwa, K. (1985)	The establishment of FTZ, the factor intensity, and the national welfare.	(1) The establishment of a FTZ in a tariff-ridden country should increase the national welfare regardless of the factor intensity introduced to the zone. (2) If the attraction of foreign investment into the economy is the primary objective of the government, then it should select a capital intensive industry for the FTZ. (3) Although the factor intensity of the zone-based industry is not important from the welfare point of view when a FTZ is established yet it plays a crucial role in determining the effects of the economic growth on the national welfare.
<u>The Empirical Studies:</u>		
Price, C. K. (1984)	The FTZs in the U.S. sunbelt cities, and their socio-economic and socio-political characteristics.	The FTZ adopting cities were wealthier than non-FTZ cities in terms of bank deposits and had higher population of poor people, and they were more democratic in party preference.
<u>Articles on FTZs:</u>		
Turnbull, N. M. Jr. (1981)	FTZs operations and the importance of marketing.	If the preliminary feasibility study proves positive, the marketing for the FTZ should begin immediately.

Table 4.1 (Continued)

Author(s)	Key Issue(s)	Main Conclusion(s)
<p>Feldmann, E. G. (1983)</p>	<p>The importance of the marketing concept in creating an economically viable FTZ.</p>	<p>An advertising campaign at an early stage is often necessary to stimulate business enquiries and shorten the time interval between the initial awareness of the potential zone users and the actual industry move into the zone.</p> <p>Once the grant to establish a FTZ is issued, the first step then is to put the marketing concept to work.</p> <p>The zone developer should create a favourable zone image so that the public at large can perceive the zone as being a desirable idea.</p> <p>Determining the needs of potential zone users, or demand for a zone, is at the heart of the marketing concept.</p> <p>Creating an accurate commercial intelligence system is essential to support an effective market segmentation process.</p>
<p><u>Reports and other Publications on FTZs:</u></p> <p>Calkin, G. T.; et al (1978)</p>	<p>The advisability of establishing a FTZ in Nova Scotia, Canada.</p>	<p>Not to establish a FTZ because the Canadian customs laws and regulations were, at the time of study, provided only for bonded warehouses and export drawbacks.</p>
<p>Frazier, M. and Erony, J. (1983)</p>	<p>Factors influencing FTZs Performance.</p>	<p>The classical economic factors of production such as labour, land and building, are a primary consideration for a FTZs' investors.</p>

Table 4.1 (Continued)

Author(s)	Key Issue(s)	Main Conclusion(s)
<p>Maex, R. (1983)</p>	<p>Multinational companies and employment in Asian FTZs.</p>	<p>For example, labour costs are especially important to investment decisions.</p> <p>Stability of the investment climate appears to be the paramount concern of investors in virtually all types of FTZs. Additionally, the physical infrastructure and basic service delivery can play a decisive role in attracting private investment to a zone.</p> <p>The presence of a business-oriented zone management appears to be among the most important factors in creating an attractive environment for investors.</p> <p>A final key influence upon the zone development is the quality and breadth of the marketing and promotion efforts in convincing interested clients to invest in the zone.</p> <p>The main objectives of most Asian FTZs are to promote foreign exchange earnings, and to attract investment in labour-intensive manufacturing process for exports.</p> <p>The Asian FTZs enterprises draw certain segment of workers; namely, the young unmarried female workers with no working experience.</p> <p>FTZs employment constitutes a substantial part of employment in the manufacturing industry in some of the more advanced countries of developing Asia.</p>

Table 4.1 (Continued)

Author(s)	Key Issue(s)	Main Conclusion(s)
Kreye, O.; et al (1987)	Employment distribution in export-oriented industrial production in the developing countries.	<p>Most of this employment, as could be expected generated by foreign multinational enterprises.</p> <p>The Asian FTZs employment is largely affected by the fluctuations in global economic activity and the global strategies of the multinational enterprises.</p> <p>More than half of all the employment in the export-oriented production in the developing countries is concentrated in four South East Asian economies including Hong Kong, Taiwan, Singapore, and South Korea.</p> <p>Although the relocation of export-oriented industrial production from the industrialised to the developing countries is of considerable importance yet the process of export-oriented industrialisation in the developing countries continues to be of rather minor significance in the industrial development of the developing countries.</p>
Jequier, N. (1988)	The economic and social role played by the multinational enterprises (MNEs) in the export processing zones (EPZs) of the developing countries.	Evaluating the social performance of the MNEs in the EPZs of the developing countries is difficult because lack of data and the absence of mutually acceptable points of comparison and the sensitive nature of certain issues such as Union rights and length of working hours.

Table 4.1 (Continued)

Author(s)	Key Issue(s)	Main Conclusion(s)
<p><u>Books on FTZs</u></p> <p>Kelleher, T. (1976)</p>	<p>The planning and management of a FTZ.</p>	<p>The total EPZs employment in 1986 stood at 1.3 million, 2/3 of which can be attributed to the MNEs. Most of these jobs are primarily unskilled jobs in highly labour-intensive industries, occupied for the most part by young women.</p> <p>The total number of enterprises in the EPZs stood around two thousand. Nearly 25% are fully owned by foreign subsidiaries, another 25% are fully owned by domestic firms, and the remaining 50% are joint ventures.</p> <p>The two most important EPZs industries are electronics, and textiles and garments.</p> <p>The EPZ is perhaps a mechanism that is preventing the development of technological linkages between the foreign firms inside the FTZ and the other enterprises in the host country, which is contrary to popular beliefs.</p> <p>Discussions of the basic concept behind the planning and management of a FTZ in terms of the costs and benefits, the location requirement, the size of the site, and the employment density.</p>

Table 4.1 (Continued)

Author(s)	Key Issue(s)	Main Conclusion(s)
Grubel, H. (1983)	The establishment of FTZs in Canada.	<p>Guidelines for the physical planning and management of a FTZ including the general layout, the phases of a FTZ development, the infrastructures, warehouses and factory buildings, the support services, and the environmental aspects.</p> <p>Recommendation for the establishment of FTZs throughout Canada.</p> <p>The FTZ concept can benefit the poorest people and can help Canada back onto the path of economic health.</p>
Basile, A. and Germidis, D. (1984)	FTZs and the industrial and economic interdependence between the developing and the developed countries.	<p>The slowdown of international trade, the surge of protectionist measures, and the critical rate of indebtedness of many developing countries prompted the proliferation of FTZs.</p> <p>There is no FTZ model which is ideal and might be generalised and copied.</p> <p>However, it is possible to discern, from the experiences of other FTZs cases, policy lines which can be followed to good effect in any circumstances and by any host country in order to establish satisfactory basic conditions.</p> <p>The FTZ formulae should be encouraged with full consideration of the host country's package of constraints and incentives.</p>

Table 4.1 (Continued)

Author(s)	Key Issue(s)	Main Conclusion(s)
Currie, J. (1985)	The geographical distribution of FTZs in the developing countries	<p>Joint venture including local interests should be encourage to set up in FTZs.</p> <p>There should be some relaxation of the restrictions on exports by FTZ enterprises to the domestic economy.</p> <p>Presentation of the FTZs geographical distribution throughout the developing countries.</p> <p>Detailed discussion of the aims, present status, the experiences, including the performance of individual FTZs since 1980. The information also includes the package of incentives and on the types of firms using the zones.</p>
Diamond, W. H. (1989)	Comparison of FTZs around the world.	<p>Geographical listing description of 510 FTZs around the world in terms of the different forms of FTZs, types of privileges, facilities and services offered by each FTZ. And other relevant information, on each FTZ, of importance to interested investors.</p>

CHAPTER FIVE

RESEARCH DESIGN AND DATA COLLECTION

	Page No
5.1 Introduction	141
5.2 Research Design : Definition and Concept	141
5.3 Research Design Approaches	142
5.4 The Process of Research Design	145
5.4.1 Data Types and Sources	147
5.4.2 Deciding on the Appropriate Data Collection Methods	150
5.4.3 Questionnaire Development	154
5.4.4 Generating and Selecting the Marketing Concept Variables	157
5.4.5 Scale of Measurement	162
5.4.6 Specifying the Domains of Study	165
5.5 Data Collection	167
5.5.1 Stage 1: Collecting Data from the FTZ's Panel of Experts	168
5.5.2 Stage 2: Data Collection for the Main Survey	173
5.6 Preparing for Data Analysis	174
5.7 Summary	175

5.1 Introduction

Once the initial phase of the research process has been adequately performed, the researcher can turn to designing the formal research project and identifying the appropriate sources of data for the study.

A research design is the basic plan which guides the data collection and analysis phases of the research project (Kinnear and Taylor, 1987). It is the framework which specifies the types of information to be collected, the sources of data, and the data collection procedure. In addition, research designs are invented to enable researchers to answer research questions as validly, accurately, and economically as possible (Kerlinger, 1986).

In this chapter, we first discuss the research design in terms of its definition and concept, followed by its different approaches. Next we turn to a more detailed discussion of the research design process in relation to our research project. Special emphasis is placed upon the data types and sources, data collection method, questionnaire design, scale of measurement and the domains of the study. The chapter also includes the data collection procedure followed in this investigation. We conclude the chapter with the steps followed to prepare the collected data for the purpose of analysis.

5.2 Research Design : Definition and Concept

After the researcher has formulated the research problem and objectives, the research design must be developed. The noun "design" has various meanings, but the one suitable here is a pattern or an outline of a research project's workings. "It is a statement of only the essentials of a study, those that provide the basic guidelines for the details of the project. It comprises a series of prior decisions that, taken together, provide a master plan for executing a research project" (Luck and Rubin, 1987).

A research design is seen by Green and his associates (1988) as the specification of methods and procedures for acquiring the information needed to structure or to solve problems. It is the overall operational pattern or framework of the project that stipulates what information is to be collected, from which sources, and by what procedures. If it is a good design, it will ensure that the information obtained is relevant to the research problem and that it was collected by objective and economical procedures.

Zikmund (1988) emphasises that a research design is a master plan specifying the methods and procedures for collecting and analysing the needed information. It is a framework of the research plan of action. According to Zikmund, the objectives of the study determined during the early stages of the research should be included in the design to ensure that the information collected is appropriate for solving the problem. The research investigator must also determine the sources of information, the design techniques (survey or experiments, for example), the sampling plan, and the schedule and cost of the research.

In conclusion, a research design is viewed as a bridge between what has been established (the research problem and objectives) and what is to be done in the conduct of the study. If there were no explicit design, the researcher would have only foggy notions about what to do.

5.3 Research Design Approaches

Although, research designs may be classified by many criteria, the most useful one concerns the major purpose of the investigation. On this basis there is a wide consensus among the researchers that the main approaches of designs include: exploratory, descriptive and causal.

Briefly, exploratory research is used when one is seeking insights into the general nature of a problem, the possible decision alternatives, and relevant variables that need to be considered (Aaker and Day, 1990). There is typically little prior knowledge upon which to build. Exploratory research designs are for the purpose of helping us obtain, relatively quickly, ideas and knowledge in a situation where we may be a little short on both.

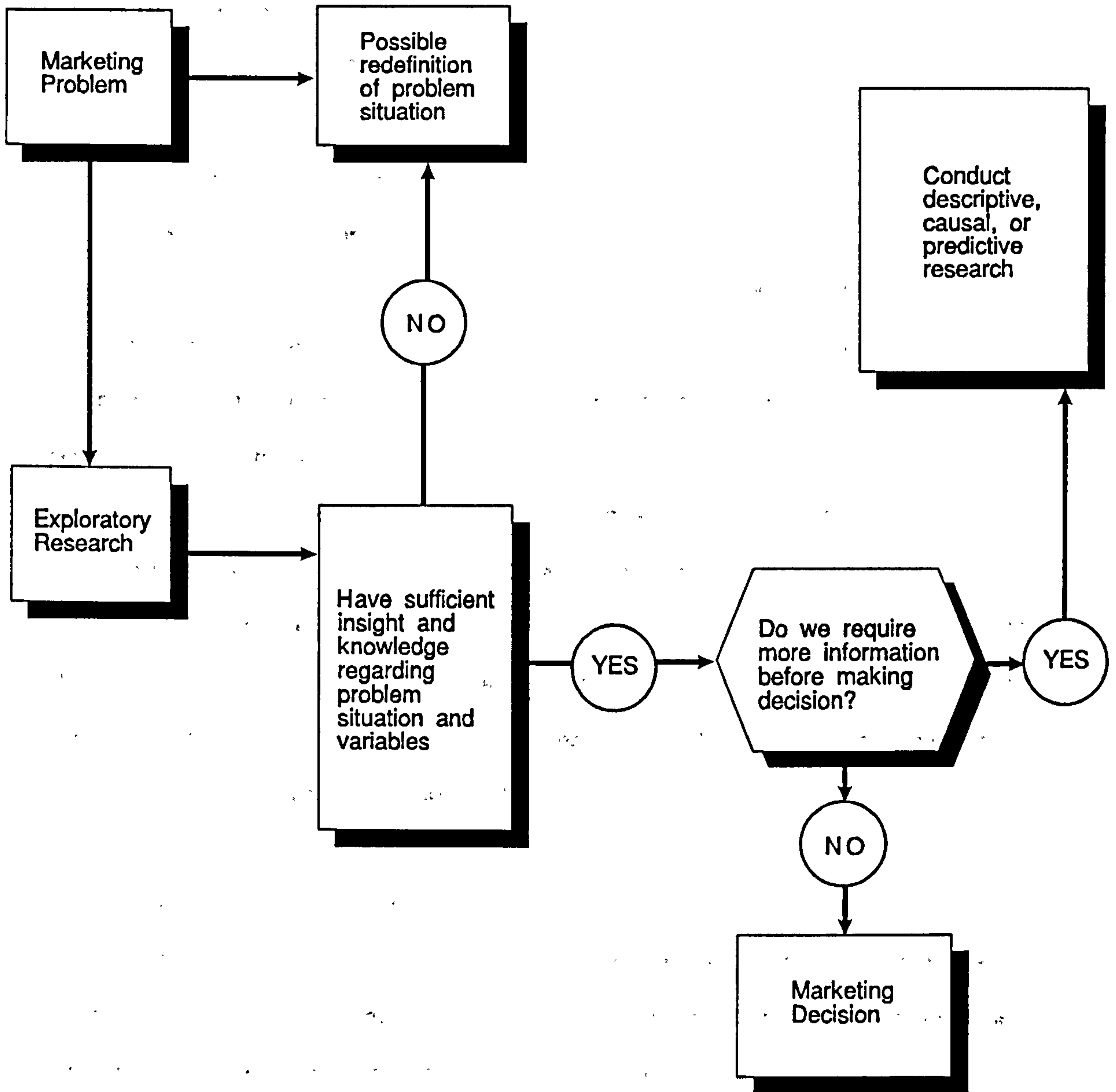
Procedurally, the exploratory design is highly flexible, intuitive, and informal. The creativity and judgement of the researcher are very important, since at this stage, he is still attempting to get a "handle" on the exact nature of problem as well as the potential usefulness of various research strategies in solving it (Weiers, 1988). This is clearly reflected in Figure 5.1 which emphasises the importance of an exploratory study in approaching a marketing problem, and illustrates its relationship to the other research designs.

Descriptive research studies on the other hand, are part way along the continuum from exploratory to causal. They assume that relevant variables are known (Lehmann, 1989), and often involve the description of the extent of the association between two or more variables. Although associations can be used only to infer, and not to establish, a causal relationship, they are often useful for predictive purposes (Green, et. al., 1988). It is not always necessary to understand causal relations in order to make accurate predictive statements. Descriptive research often provides a sound basis for the solution of marketing problems, even though it does not "explain" the nature of the relationship involved. In other words, hypotheses in descriptive research often will exist but they may be tentative and speculative.

In general, the relationships between two sets of variables will not be causal in nature. However, they may still have utility in predicting (Aaker and Day, 1990). The purpose of descriptive research is to provide an accurate picture of some aspect(s) of the market environment. Therefore, descriptive research embraces a large proportion of marketing research (Aaker and Day, 1990). Examples of descriptive research include studies such as consumer profiles, attitude surveys, market potential studies, product-usage studies, sales analysis, media research, and price surveys (Tull and Hawkins, 1987).

Finally, causal research design is concerned with determining cause-and-effect relationships. Causal studies typically take the form of experiments, since experiments are best suited to determine cause and effect (Churchill, Jr., 1987). Descriptive research is not always sufficient, for all it can show is that two variables are related or associated. Of course, evidence of a relationship is useful, for otherwise we would have no basis for even inferring that causality might present. To go beyond this inference we must have

Figure 5.1 : The Importance of the Exploratory Research to the Early Stages of a Marketing Study



Source: Weiers, R. M. (1988)

reasonable proof that one variable preceded the other and that there were no other causal factors that could have accounted for the relationship (Aaker and Day, 1990).

5.4 The Process of Research Design

The three phases of the research process, as they relate to this study, were conducted as follows (see Figure 5.2):

I. The Preliminary Planning Phases:

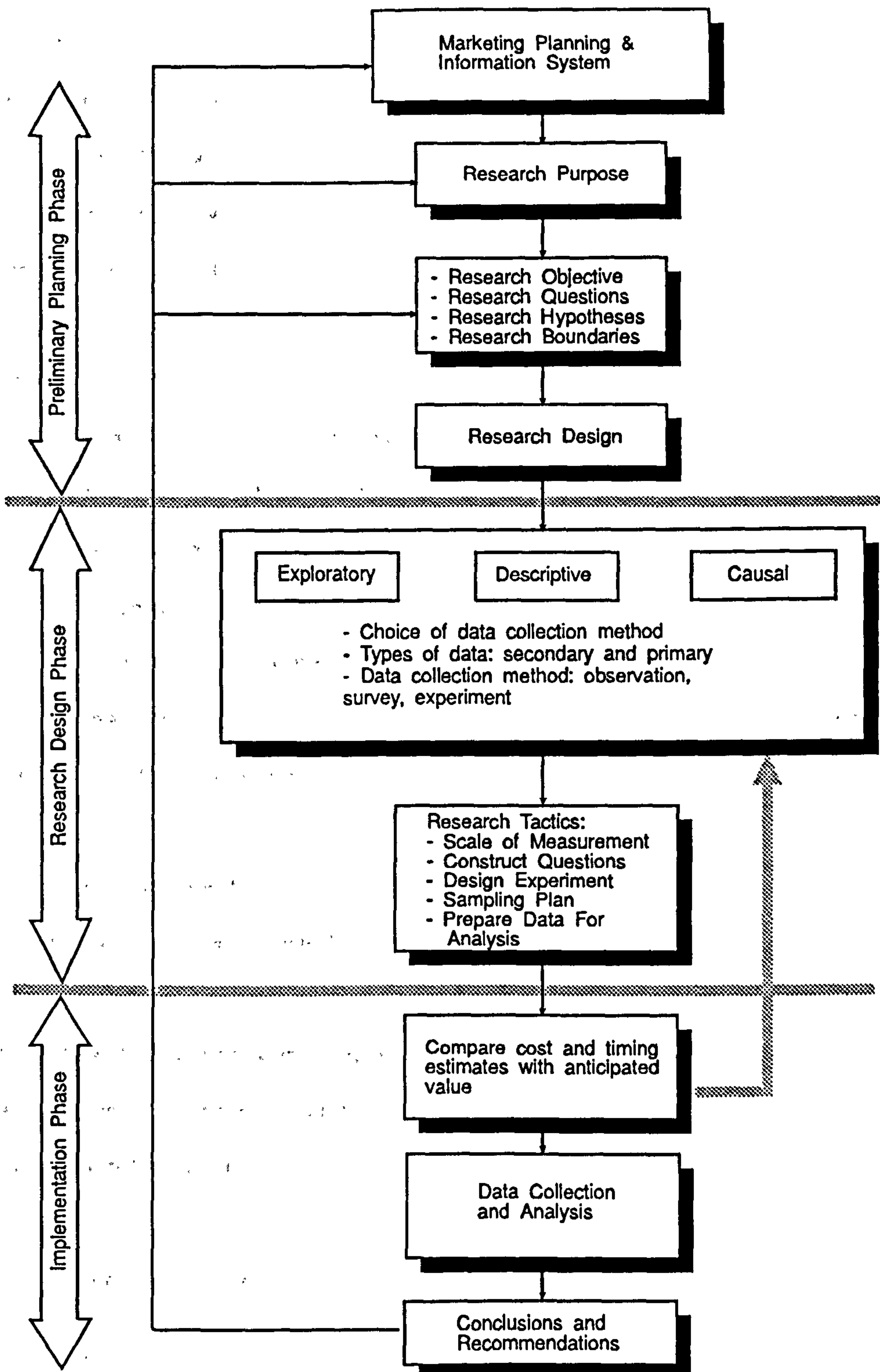
The consideration for the marketing planning and information system, was by-passed because this step is more of concern to business organisations dealing with specific marketing problems. As for the research purpose, at the early stage, it was decided that the purpose of this research is to study the marketing orientation of selected FTZs authorities around the world.

Later on, as our understanding of FTZs increased we started to formulate the research objectives, questions, and hypotheses. These are already presented in Chapter One. As for the research boundaries were identified as this research is concerned with studying the attitude of selected FTZs authorities towards the adoption of the marketing concept. The selected FTZs include those zones, who in addition to providing basic zone facilities, provide manufacturing/industrial facilities.

II. The Research Design Phase:

In this research we employed both exploratory research and descriptive research. We did not make use of causal research because the nature of our study is not concerned with causal relation. For example, we are not concerned with whether the marketing concept adoption, by FTZs authorities, affects (improves) the performance of FTZs operations in terms of profitability, sales volumes, return on investment (ROI), and/or any other related indicators (variables). Rather, in this study we are concerned with describing whether authorities of selected FTZs differ significantly in their marketing orientation and, if so, to identify those discriminating variables.

Figure 5.2 : The Research Process



Source: Aaker and Day (1990)

Therefore, we first made use of the exploratory research in order to accomplish four main goals: (a) to develop an understanding of the general nature of FTZs in terms of what they are and how they evolved into the present times, the different forms that exist today, the characteristics and benefits that are common among FTZs operations, and in terms of other information of importance to the understanding of the FTZs phenomena; (b) to develop an insight into how marketing principles could be used to study FTZs operations; (c) on the basis of (a) and (b) to generate marketing variables that are pertinent to FTZs operations; and (d) to plan and organise the task for conducting the descriptive research.

We attempted to achieve these goals through: (a) extensive reading on the available literature albeit limited particularly those directly related; (b) frequent consultation with the supervisor; (c) talking, by telephone, to the first four identified writers/authors on FTZs; and (d) reviewing earlier submitted theses on marketing.

Later on, we began the descriptive research process. The procedures and tactics followed in this research include: the data collection, questionnaire development, scale of measurement, the sampling plan, and preparing data for analysis. Each of these aspects is discussed in the following subsections: 5.4.1 through 5.4.5 and in Section 5.5 and 5.6.

III. The Implementation Phase:

After the data was collected, edited, coded and was ready to be fed to the computer, a decision was made for selecting the statistical techniques appropriate for testing the research hypotheses and achieving the research objectives. The procedures for the research findings, and the research conclusions and recommendations are presented in Chapters 7 and 8 respectively.

5.4.1 Data Types and Sources

This research aims to investigate the marketing concept adoption by the authorities of FTZs in the operations of the zones. As such, it is an attempt to: (a) classify the FTZs

around the world on the basis of their authorities' attitudes toward the employment of the marketing concept; (b) to identify the key marketing variables that would best profile and discriminate between/among the various groupings of FTZs; and (c) to find out a possible explanation behind the attitudinal differences between/among the various FTZs' groups in their marketing orientation.

The data needed for the present study were gathered from two major sources, namely, secondary and primary data sources.

In general, secondary data consist of information that has been collected, by someone other than the researcher, for purposes other than those involved in the research project at hand (Weiers, 1988). Compared to primary data, secondary information has the advantage of lower time and cost requirements, but may not be particularly relevant to the marketing problem under consideration. Other possible difficulties with secondary data include lack of recency, as well as the possible bias that the original researchers may have brought to their collection, analysis, interpretation, or reporting of the information (Green et al, 1988).

It should be emphasised here that the data collection was a very important stage in this research. This was so because: (a) the relevant secondary data was scarce, and (b) the need to rely on primary data by conducting a global study with 159 respondents (FTZs authorities) in 67 countries around the world, and on 34 identified people, as experts in FTZs, in Europe and the U.S.

The dearth of the secondary data on FTZs is perhaps due to: (a) The government's reluctance to disclose information on the operations of their zones; (b) the FTZs are very diverse and therefore comparison is difficult; and (c) there are objective problems in collecting data from FTZs authorities due to the great geographical dispersion. Therefore, for an independent researcher to embark a study on FTZs shall encounter difficulties in terms of cost, time, and obtaining correct and updated addresses.

Nevertheless, since the rapid spread of the EPZs in 1970;s and since the establishment of the World Export Processing Zones Association (WEPZA) in 1978, some

important data on FTZs became available. Yet, most of the data that we were able to collect were not of much relevance to the scope of the present study. Therefore, the data utilised in this study are obtained from very few sources which include published materials such as a limited number of books, articles, Ph.D. theses, and official reports on FTZs issued by the International Labour Office (ILO) and the United Nations Conference on Trade and Development (UNCTAD).

We encountered great difficulties in securing the secondary data. The main difficulties were:

- (a) Only five books were available on FTZs; none of them addresses marketing issues of FTZs (three volumes by Diamond, 1989; Currie, 1985; Basile and Germidis, 1984; Grubel, 1983; and Kelleher, 1976).
- (b) Few articles were obtained by the help of the Data-Base System on FTZs (e.g., Ryan, 1985; Robinson, 1983; Widdifield, 1983; Lota, 1981; Da Ponte, 1980). With the exception of two theoretical articles on economic aspects of FTZs (i.e., Grubel, 1982; and Hamada, 1974) all the articles just reflect different views on various issues on FTZs. In addition most of these articles do not represent systematic studies on the issues they tackled. However, only two of them address marketing aspects, which in turn motivated the researcher to conduct this study (i.e., Turnbull, 1981; and Feldman, 1983).
- (c) As for the official reports issued by the United Nations Agencies (ILO, and UNCTAD), the researcher had to make many contacts by telephone to the UN's offices in both New York City and Geneva in order to obtain copies of such reports on FTZs. These reports deal with FTZs from various aspects other than marketing, such as employment issues in FTZs; the role of multinational companies in FTZs; the financial and investment aspects of FTZs (e.g., Jequier, 1988; Kreye, 1987; Frazer and Erony, 1983; Maex, 1983).
- (d) Finally, only four theses were undertaken on FTZs, three of them are theoretical in nature, discussing economic aspects of FTZs. The remaining

one is an empirical study and concerned with the socio-economic and socio-political characteristics of the US FTZs.

The secondary data, however, were not sufficient enough to meet the information needs of this empirical study. The researcher, therefore, turned to formulating a research design based mainly on primary data from the target respondents (i.e., member of FTZs' expert panel and FTZs' authorities). In spite of the cost in money and time, there was no alternative but to conduct a global field study to collect the primary data needed for this study.

5.4.2 Deciding on the Appropriate Data Collection Methods

No matter what the basic design of the research, it is necessary to collect accurate data to achieve useful results. For this reason, it is helpful to consider methods of collecting data and the quality of information they may be expected to produce. Primary data can be gathered via the methods of observation, survey research and experiment.

Observation and survey research are the two basic methods of collecting data in marketing research. Observation is the process of recognising and noting people, objects, and occurrences rather than asking for information (Boyd et al, 1985). Sometimes individuals make the observations, on other occasions, mechanical devices note and record the desired information.

Some of the advantages of the observation method of collecting data as compared to the survey method are obvious. If the researcher observes and records events, it is not necessary to rely on the willingness and ability of respondents to report accurately (Zikmund, 1989). Furthermore, the biasing effect of interviewers or their phrasing of questions is either eliminated or reduced. Data collected by observation are, therefore, more objective and generally more accurate (Boyd et al, 1985). Unfortunately, the observational method has a number of weaknesses which keep it from being more widely

used. Probably the most limiting factor in the use of observation is the inability to observe such things as attitudes, motivation, and plans. Only as these factors are reflected in actions can they be observed, and then they are confounded with so many other factors as to make their identification difficult, if not impossible (Boyd et al, 1985). In addition, observations are often more costly and time consuming and yield biased results if there are sampling problems or significant observer subjectivity is involved (Aaker and Day, 1990).

Survey research, on the other hand, is currently one of the most widely used methods of primary data collection. Survey research is based upon asking the target respondents a number of questions to secure the desired information. A formal list of such questions is called a questionnaire.

Survey research is considered as one of the most important systematic, standardised approaches to the collection of data on individuals, households, or larger organised entities through the questioning of systematically identified samples of individuals (Rossi et al., 1983). The key advantage of survey research is that it can gather a great deal of information about an individual respondent at one time. The data collected by surveys may include: (a) depth and extent knowledge; (b) beliefs, attitudes, interests, and opinions; (c) behaviours, either past, or present, or even intended; and (d) classification variables (Aaker and Day, 1990). A further advantage of a survey is versatility; surveys can be used in any setting among males and females, or young and elderly people, and adopted to research objectives that necessitate either a descriptive or causal design (Aaker and Day, 1990).

Surveys, on the other hand, are not without drawbacks. They present some problems such as non-response bias due to refusals, inaccuracy in responses due to inability to give a response or unwillingness to respond accurately, and interviewer bias. However, a careful survey design helps to minimise these problems (Aaker and Day, 1990).

Survey research, which is based on a questionnaire can be conducted by different contact methods with the target respondents. The main contact methods commonly used in survey research are: personal interviews, telephone interviews, and mail surveys. The decision of selecting the appropriate contact method is not easy because of the variations

of these methods. Each of them has distinct advantages and limitations. Therefore, different criteria should be used in the choice of the appropriate one for a certain study, such as quality of data, accuracy, response rate, sample control, versatility, cost, time, ... etc.

Since we are concerned, in this investigation, with the attitudes of FTZs' authorities toward the adoption of the marketing concept in their FTZs operations, we could not select the observation method to collect the desired data. Thus, our decision was made to choose the survey approach as an appropriate data collection method for this study. Additionally, because our research is a global investigation, it was difficult to depend upon neither personal interviews nor telephone interviews for the reasons of cost and time.

The required primary data for this study, therefore, gathered by international mail survey, preceded by telephone and telex contacts. The pre-contacts were made in order to identify and verify the FTZs' addresses throughout the world as well as to request co-operation with the survey. The researcher encountered a great deal of difficulty in making these telephone pre-contacts due to: (a) global time differences, (b) language barriers, (c) refusals to answer because second party is not at office at time of calling, and (d) identifying telephone numbers via the international telephone directory.

In general the mail survey is still the method used most frequently by researchers. Mail surveys have a number of advantages as follows (Kress, 1988):

- (a) **Wide distribution.** Mail travels to all parts of the country, therefore if a proper mailing can be obtained, all potential sample members should be reached.
- (b) **No interviewer bias.** The respondents are not influenced or inhibited by the presence of an interviewer.
- (c) **Cost.** It can be an inexpensive way to obtain information relative to personal interviews and telephone interviews. However, this was not so with respect to this study, because this research involved international mail survey.
- (d) **Possibility of more accurate replies.**

In addition, there is consistent evidence that mail surveys yield more accurate results among those completing the questionnaire. Because the mail questionnaire is answered at the respondent's discretion, the replies are likely to be more thoughtful and others can be consulted for necessary information (Aaker and Day, 1990). Furthermore, compared to the other methods, the mail survey will tend to have a lower degree of response error, since there is no interviewer with whom the respondent must interact either in person or over the telephone. This advantage is related to the anonymity that can be promised (and believed by) the respondent (Weiers, 1988).

Mail surveys, on the other hand, have some disadvantages such as low response rate, bias due to faulty mailing list, and even sometimes an accurate or a suitable mailing list may not exist. However, over the last twenty years there has been a vast amount of research on ways to increase the response rates to mail surveys. Among the most effective methods of increasing response rates in the case of mail surveys are (Kanuk and Berenson, 1975): Preliminary techniques; follow-up techniques; and concurrent techniques including the length, content, and presentation of the questionnaire form; the cover letter, the anonymity and confidentiality; promising sending a copy of the results; and the self-addressed envelope.

Mail surveys can typically be effectively used in industrial international marketing research. In industrial countries, the primary advantages of mail surveys are that they typically enable coverage of a wider and more representative sample and they do not require a field staff. In addition, respondents may be more willing to provide information about certain issues (Douglas and Craig, 1983).

The mail questionnaire, is more than any other type of questionnaires, requires careful construction, for it alone comes under the respondent's complete control. It must truly be its own advocate. The absence of interviewer, the traditional crunch for poorly constructed questionnaires, means there is no way to gloss over construction deficiencies or to respond to typical respondent queries (Dillman, 1978).

Two basic limitations of mail questionnaires represent serious problems facing a survey researcher. The first problem is the low response rates. According to Kerlinger (1986) responses to mail questionnaires are generally poor. Returns of less than 40 or 50% are very common. Higher percentages are rare. At best, the researcher must content himself with returns as low as 50 or 55%. However, it is important to recognise that a low response rate in itself does not imply that a high non-response error is present in the data. It is only when there is a difference between the respondents and the non-respondents on the variables of interest that non-response error occurs (Kinnear and Taylor, 1987). In other words, the more homogenous the group, the less likely it is that a lower response rate will affect the overall findings. Even if the population is heterogeneous but the survey instrument is sent to a large number of subjects, a low response rate might still yield useful data (Rubin, 1983). The second problem is related to the inability to check the responses given. This becomes a problem only when the survey involves an issue that some members of the population are unfamiliar with (Weiers, 1988). However, mail survey respondents tend to be better educated (Zikmund, 1989).

5.4.3 Questionnaire Development

A questionnaire construction is a crucial stage in carrying out a survey. A questionnaire has become a popular mode of data collection. The subject of questionnaire design is intimately related to the general plan or design of the survey. A questionnaire is not just a list of questions or a form to be filled out. It is essentially a scientific instrument for measurement and for collection of particular kinds of data. Like all such instruments, it has to be specially designed according to particular specification and with specific aims in mind (Oppenheim, 1986).

Questionnaire construction is much more of an art than a science. No procedures have been established which will automatically lead to a good questionnaire (Boyd, et al, 1985). Most of what is known about making questionnaires is the result of general

experience. Neither a basic theory nor even a full systematised approach to the problem has been developed. Nevertheless, the extensive experience of many researchers and a limited number of organised experiments have led to a considerable understanding of the problem and rules of thumb (Boyd, et al, 1985). It is difficult to judge a questionnaire as good or bad, efficient or inefficient unless we know what job it was meant to do. This means that the researcher has to think not merely about the wording of particular questions, but, first and foremost, about the design of the investigation as a whole (Oppenheim, 1986).

With the growth of survey research came improvements in questionnaire design and question construction, along with the awareness of biases resulting from the questioning of the interviewing process (Kinnear and Taylor, 1987). A good questionnaire is much more than a collection of unambiguous questions. First, the scope of the questionnaire should be no more or no less than is necessary to satisfy the objective of the study. A further condition is imposed by the prior choice of data collection method. While this choice is the result of the push and pull of many factors, it does set definite limits on the number, form, and ordering of the specific questions. A final condition imposed by the respondent's willingness and ability to answer. Although the wording and sequence of questions can facilitate recall and motivate more accurate responses, there are definite limits to what can be done (Aaker and Day, 1990).

Aaker and Day (1990) described the process of designing a questionnaire as consisting of the following steps:

- (a) Plan what to measure.
- (b) Formulate questions to obtain the needed information.
- (c) Decide on the order of questions and on the layout of the questionnaire.
- (d) Using a small sample, test the questionnaire for omissions and ambiguity.
- (e) Correct the problems (and pre-test again) if necessary.

This empirical investigation aims primarily to explore the variation in the attitudes of FTZs authorities towards key factors related to the marketing concept. It is a global study of different groupings of FTZs: (i) most- vs moderate- vs less-marketing-oriented; (ii) the

marketing-oriented (the most + moderate) vs the less marketing-oriented and (iii) the FTZs in the developed vs the FTZs in the developing countries.

The design of this research required constructing a structured-undisguised questionnaire to obtain information on the attitudes of the FTZs authorities toward three key elements of the marketing concept.

The term "structure" means the degree of standardisation imposed on the questionnaire. In a highly structured questionnaire, the questions to be asked are only loosely predetermined, and the respondents are free to respond in their own words. A questionnaire in which the questions are fixed but the responses are "open ended" would represent an intermediate degree of structure (Churchill, Jr., 1987).

The term "Disguise", on the other hand indicates the amount of knowledge about the purpose of a study communicated to a respondent (Boyd et al, 1985; Kinnear and Taylor, 1987). An undisguised questionnaire makes the purpose of the research obvious by the questions posed while a disguised questionnaire attempts to hide the purpose of the study.

Structured-undisguised questionnaires are most commonly used in marketing research. With this type of questionnaire, questions are presented with exactly the same wording, and in exactly the same order, to all respondents. The reason for standardisation, of course, is to ensure that all respondents are replying to the same question (Churchill, Jr., 1987). Probably the greatest advantages of the structured-undisguised question are that it is simple to administer and easy to tabulate and analyse. Respondents should have little difficulty in replying. Their responses should be reliable in that if they were asked the question again, they would respond in a similar fashion (assuming, of course, their attitudes have not changed in the meantime). Providing alternative responses also often helps to make the question clear. The fixed-alternative question is most productive when possible replies are "well known", limited in number, and clear-cut.

The structured-undisguised questionnaire has also limitations. First, the reliability of fixed-alternative questions is sometimes associated with loss of validity in that the answers do not accurately reflect the true state of affairs. Second, fixed-alternative responses may

lower validity when the response categories themselves introduce bias. Third, it may also be that the respondent has an opinion, but none of the response categories allows the accurate expression of that attitude (Churchill, Jr., 1987).

The researcher was very aware of these limitations associated with the structured-undisguised questionnaire, and made every effort to reduce their effects on the reliability and validity of the data collection instrument. Much care has been given to the question wording, the alternative response categories, and pre-testing the questionnaire to reach a high degree of reliability and validity of the questionnaire.

5.4.4 Generating and Selecting the Marketing Concept Variables

Since this study is concerned with the marketing orientation of FTZs authorities around the world, we had to employ a set of specific variables (factors) that would best express the adoption of the marketing concept in a FTZ operation. Thus, a structured-undisguised questionnaire was developed for this study, and contained three different groups of variables, related to the marketing concept.

To generate these particular variables we had to rely totally on our own efforts because no research has been undertaken to investigate marketing aspects of FTZs operations. Most of these variables were generated basically from the literature of FTZs (Diamond, 1989^{*}; Kelleher, 1976; Currie, 1985; Feldmann, 1983; Turnbull, 1981), and also from textbooks on Marketing Management (Kotler, 1984, and Pride and Ferrell, 1985).

* This distinguished reference consists of three volumes on a variety of issues related to FTZs throughout the world. These issues mainly include: types of the available zones in the host country (e.g., warehouses, transit zones, EPZs, etc.); government legislations and regulations regarding the use of the zone; functions and services allowed in the zones; privileges, facilities and services offered by the zone authority; a summary of the history and type of government of the host country; a list of the available means of correspondence with the FTZ authorities; and many other relevant information. This work first appeared in 1977 and since then it is being updated quarterly through the distribution of releases.

However, we had to modify these variables only to the extent necessary for the nature and scope of this investigation in such a way as to reflect the adoption of the marketing concept in FTZs operations. Therefore, the original meaning of each item (variable) was retained, but it was only rephrased. Some of the variables were developed by the researcher himself relying on advice received from the supervisor, staff members, and colleagues; and comments received from the FTZs' experts panel. Examples of these variables include items 15-20; 28-30 in Table 5.1.

These three groups of the marketing concept variables and their sub-variables, as they relate to the operations of FTZs, are as follows (See Table 5.1).

- I. Satisfying Industrial Buyers' Needs. In the real world of FTZs, the package of satisfying the industrial buyers' needs mainly includes:
 - granting privileges which are of special right or benefit enjoyed by the industrial firms, for example, leasing an area inside the zone; allowing processing, assembly, manufacturing and other relevant operations,
 - offering facilities of importance to the industrial firms, for example, utilities for the operations such as energy sources, water supplies, control devices; ventilation system; transporting equipment such as cranes, shafts, carts, trolleys, dollies; availability of installing telecommunication systems inside the zone and,
 - performing services of interest to the industrial firms, typically, by assuring the zone users of the obligation of the zone authority to ensure the safety and well-being of the work force and the security of the zone, for example, by opening a cafeteria to cater for all the workers inside the premises of the zone; taking the necessary measures to observe the safety of the work force, the cleanliness of the zone area, the minimisation of the noise and air pollution, the security of the zone premises, and the supervisory manoeuvring of the zone facilities, services and activities. These privileges,

Table 5.1 : The Main Variables and Sub-Variables of the Marketing Variables As Related to the FTZ Operations

No.	MAIN VARIABLES	SUB-VARIABLES
I	Satisfying the needs of the Industrial Buyers	<ol style="list-style-type: none"> 1. Location of the zone. 2. Size of the zone area. 3. Capacity of space for warehousing and storage. 4. The offering of processing operations. 5. The offering of assembly operations. 6. Size of area available for manufacturing activities. 7. Utilities for manufacturing activities (e.g., Energy sources, water supplies, sites for machinery, control devices, etc.) 8. Transporting equipment (e.g., shafts, carts, trolleys, dollies, etc.) 9. Maintenance of equipment (e.g., machines, tools, devices, factory utilities etc.) 10. The offering of a Telex system. 11. The offering of a Facsimile system. 12. The maintenance of telecommunication systems (e.g. telephones, telex, facsimile, computers, teleprocessors, etc.). 13. The size of the work force (e.g., Managers, staff, technicians and labour). 14. Quality of the work force. 15. The well-being of the work force (e.g., cafeteria, recreation, social activities etc.) 16. Safety of the work force. 17. Cleanliness of zone area. 18. Sanitation of zone area (minimizing noise and pollution). 19. Security of zone premises. 20. Supervisory manoeuvring of zone privileges, facilities, services and activities.

Table 5.1 (Continued)

The Main Variables and Sub-Variables of the Marketing Variables
As Related to the FTZ Operations

No.	MAIN VARIABLES	SUB-VARIABLES
II	Achieving Organisational Goals	21. Maximisation of sales. 22. Maximisation of profits. 23. Maximisation of market share. 24. Maximisation of return on investment. 25. Minimising cost of zone operations. 26. Growth rate of Free Trade Zone. 27. Integration of the departmental functions of the zone authority. 28. Public relations with zone users. 29. Relations with government. 30. Free Trade Zone image/reputation.
III	Integrating the Marketing Functions	31. Expanding the area available for the zone privileges (e.g., spaces of warehousing and storage, sites of processing, assembly and manufacturing, cargo docks, etc.). 32. Improving the quality of the zone privileges (e.g., spaces of warehousing and storage, sites of processing, assembly and manufacturing, cargo docks etc.). 33. Updating the zone facilities (e.g., telecommunications systems, transporting equipment, manufacturing utilities, etc.) 34. Extending the capacity of the zone facilities (e.g., telecommunication systems, transporting equipment, manufacturing utilities, etc.). 35. Offering zone users more choice of operations inside the zone (e.g., packaging, repackaging, sorting, mixing, labelling, exhibition, containerisation, refrigeration, etc.).

Table 5.1 (Continued)

The Main Variables and Sub-Variables of the Marketing Variables
As Related to the FTZ Operations

No.	MAIN VARIABLES	SUB-VARIABLES
III	Integrating the Marketing Functions	36. Reviewing the pricing of the zone privileges, facilities, and services. 37. Using advertising channels for the zone privileges, facilities, and services. 38. Personal selling of zone privileges, facilities, and services. 39. Marketing research activities for the zone privileges, facilities, and services. 40. Policies for implementing plans for marketing the zone privileges, facilities, and services.

facilities, and services are expressed in terms of variables, items 1-20, in Table 5.1 and in the questionnaire, Appendix [4].

II. Achieving Organisational Goals. The FTZs' authorities in their undertaking to satisfy the needs of their industrial buyers also seek to achieve their own organisational goals. Most FTZ authorities usually pursue to achieve goals related to two main considerations:

- quantitative goals, which include those of monetary concerns such as the maximisation of sales, profits, market share and return of investment, and the minimisation of the cost of operating the zone. These goals of the monetary concerns are normally sought after by the private and the semi-government FTZs' authorities and to a lesser extent sought by FTZs run by government authorities,

- qualitative goals, which include those related to the status of the zone such as the growth rate of the zone, public relations with the zone users, relation with government, the zone image/reputation, and the integration of the departmental functions of the zone authority. These quantitative and qualitative goals are expressed in terms of variables, items 21-30, in Table 5.1 and in the questionnaire, Appendix [4].

III. Integrating the marketing functions of the organisation. Since the FTZs' authorities are involved with the industrial firms in a seller and buyer relationship then according to the marketing concept, in order for the FTZs' authorities to foster the accomplishment of both tasks (i.e., I and II) the FTZs' authorities should include a marketing function in their organisational structure to perform and execute a variety of duties related to the marketing mix: (a) product development such as expanding the area available for the zone facilities, improving the quality of the zone facilities, updating and extending the capacity of the zone services, and offering the zone users more privileges, (i.e., more choice of operations inside the zone), (b) pricing (i.e., reviewing the pricing of the zone facilities and services), (c) promotion (i.e., using advertising channels and personal selling for the zone privileges, facilities and services). Finally, performing marketing research activities and designing policies for implementing plans for marketing the zone privileges, facilities and services. The integration of these marketing functions as they relate to FTZs operations are expressed in terms of variables, items 31-40, in Table 5.1 and in the questionnaire, Appendix [4].

5.4.5 Scale of Measurement

Measurement may be defined as "the assignment of numbers to observed phenomena according to certain rules" (Bohrnstedt, 1983). It is the rule of correspondence

between the manifest observations and the numbers assigned that define measurement in a given instance. In designing rules of correspondence one should use the most refined measures available, since the better the measure the more accurately the underlying relationships between variables can be assessed (Bohrnstedt, 1983).

Churchill, Jr., (1987) makes two points about the above definition of measurement. First, the definition indicates that we measure the attributes of objects and not the objects themselves. Second, the definition is broad in that it does not specify how the numbers are to be assigned.

The rule may be very simple, as when a bus route is given a number to distinguish it from other routes. Here the only property is identity, and any comparison of numbers are meaningless. This is Nominal Scale. At the other extreme is the Ratio-Scale, which has very rigorous properties. In between the extremes are Ordinal and Interval Scales, as shown in Table 5.2.

Table 5.2 : Types of Scales of Measurement

SCALE	RULES FOR ASSIGNING	TYPICAL APPLICATION
Nominal	Objects are either identical or different.	Classification (by sex, geographic area, social class).
Ordinal or Rank Order	Objects are greater or smaller.	Rankings (preferences, class standing).
Interval	Intervals between adjacent ranks are equal.	Index numbers, temperature scales, some attitude scales.
Ratio	There is a meaningful zero point so comparisons of absolute magnitude are possible.	Sales, incomes, units produced, costs, age.

Source: Aaker and Day, 1990; Tull and Hawkins, 1987

With regard to attitudes-scaling procedures, there are a number of ways in which attitudes have been measured, including self-reports, observation of overt behaviour, indirect techniques, and psychological reactions (Churchill, Jr. 1987). By far the most common approach has been self-reports, in which people are asked directly for their beliefs or feelings toward an object or class of objects. A number of scales have been devised to secure these beliefs and feelings, such as Summated Ratings, Semantic Differential Scale, Likert Scale, Thurnstone Scale (Churchill, Jr., 1987; Aaker and Day, 1990; Anderson et al, 1983).

In this study, the required data on the attitudes of the FTZs authorities towards the marketing concept variables and sub-variables, were collected on a 9-point itemized rating scale, ranging from [1] "Not important at all" to [9] "Extremely Important". This type of scale is considered one of the summated rating scales which is similar to the Likert Scale. These types of scales are among the most commonly used scaling methods in social research (Anderson, et al, 1983). The summated rating scales generally offer a number of advantages. It is relatively easy to construct and administer. The instructions that must accompany these scales are easily understood. For example, the itemized rating scales require the rater to select one of few numbers of categories that are ordered in terms of their scale positions, indicating his or her attitudes, opinions, or judgements to a set of items of interest to the researcher. Such advantages make the methods of summated rating scales useful for mail and telephone surveys. Given these advantages, it is not surprising that the Likert Scale and the itemized rating scales are so widely used in marketing research (Tull and Hawkins, 1987).

A decision that must be made with rating scales is the number of scale points to use: if the scale is divided too finely the respondents will be unable to place themselves, and if too coarsely the scale will not differentiate adequately between them. Often five to seven categories are employed, but sometimes the number is greater (Moser and Kalton, 1989). In general, five to nine categories work best in that they permit fine distinctions and yet seem to be readily understood by respondents. Of course, more can be used

(Churchill, 1988). Any number of categories may be created, depending on the nature of the attitude being investigated. Although a specific measurement task may cause exceptions, rating scales should generally be between five and nine response categories. In situations in which several scale items are to be added together to produce a single score for an individual, five categories are generally adequate. When the focus is on discriminating attributes of various products or brands, more categories should be used (Tull and Hawkins, 1987).

5.4.6 Specifying the Domains of Study

Results are often wanted separately for special sub-groups of the population, known technically as domains of study (Moser and Kalton, 1989). For example, in a household survey separate estimates might be wanted for families with 0, 1, 2, ... children, for owners and renters, or for families in different occupation groups. The term domains of study has been given to these sub-populations by the U.N. Subcommittee on Sampling in 1950 (Cochran, 1977). The distinct word 'domains' is used in order to distinguish the situation where there is no control of sample sizes. At one extreme, the domain may consist of almost the whole population. At the other extreme, the domain may be a very small part of the population (Stuart, 1984).

In this study, the population of FTZs, encompasses diverse groups reflecting the specific nature of their operations. At the time of writing this research there have been 506 FTZs located in 85 countries around the world. These FTZs are operating under diverse labelling and titles, for example, there are: Free Ports, Bonded Warehouses, Free Parameters, Transit Zones, Special Customs Zones - discussion on types of zones is available in Chapter 2.

More specifically, the domains of study in this investigation can be defined as those zones who, in addition to offering basic zone privileges, facilities and services; provide manufacturing/industrial facilities to their zone users.

Accordingly; the domains of our study consist of all the export processing zones (EPZs) in the developing countries (i.e., the EPZs in Latin America, the Caribbean, Africa, Middle East, and Asia), some of the foreign trade zones in the U.S., and few of the Free Ports in Europe. Thus, the FTZs grand population was reduced to a new smaller one, in such a manner as to exclude all the FTZs that do not offer manufacturing or industrial facilities to their users.

By using three different sources*, each with a list of addresses of FTZs which presumably offer industrial/manufacturing facilities to their users, the researcher combined a list of addresses of 159 FTZs operating in 67 countries around the world. Although the addresses were unmatched across the three references they were still of much help to initiate the contacts.

Since there was no accurate and reliable frame for the FTZs of the domain of our study (i.e., FTZs offering manufacturing and industrial facilities), the researcher insisted on finding a feasible way which would help to identify all FTZs, representative of our study, throughout the world. Thus, it was decided to include a specific item in the questionnaire to easily detect which of the contacted FTZs do not offer manufacturing/industrial facilities. This particular questionnaire item is variable 6, i.e., size of area available for manufacturing activities, so that any FTZ authority gives a response of 5 or above, to variable 6, is included in the domains of study because the response indicates that such zone does offer manufacturing facilities. And if the response is below 5, such zone is considered not a representative of the domains of the study and thus it is discarded.

The selection of the domains of study was primarily based upon three reasons. First, all the FTZs with manufacturing facilities are considered as a homogeneous group because they market the same or similar products (privileges, facilities and services) to the same target market. Thus, the variables of the marketing concept would be readily observed and operationally depicted. Hence avoiding any interjecting bias that might have been involved if otherwise a random sample was drawn from the total FTZs grand

* Diamond, 1989; Currie, 1985; Kelleher, 1976

population. Second, the FTZs, with its manufacturing facilities, usually involve large capital investments among many countries and conducting an investigation on their marketing adoption is worthwhile. Third, the findings of this research would be equally applicable to the other forms of FTZs.

5.5 Data Collection

Rubin (1983) provides an interesting analogy with respect to the process of data collection:

Data gathering is the process of using the instrumentation to obtain the measures suggested by the operationalisation of the problem. It is like prospecting for gold. First, you decide what you want to find - gold, in this case. Then you decide upon a likely place to find gold ore. Next, you need a tool - an instrument - to dig out the ore, say a shovel. Now you fill up a bucket with the ore. Data gathering is the filling of the bucket with ore (gold bars have not yet been moulded). There are more steps in prospecting and in researching: assaying the ore (data analysis), refining the ore (data interpretation), and moulding the gold bars (communicating the results).

Data collection should accomplish the objectives of uniformity and reliability using the funds and time available. Data collection tends to be the most laborious aspect of a survey and, therefore often accounts for the greatest single expenditure of funds (Weinberg, 1983).

The questionnaire of this study was designed to be sent by international airmail to the operators of FTZs around the world, the majority of which hold high level managerial posts in their respective authorities. Realising this fact, the researcher was aware of the appropriate ways of increasing the response rate. Therefore, each survey was attached by a cover letter typed on the letterhead paper of the School of Management, University of Sheffield, and signed by the researcher's supervisor. The cover letter included: (a) a briefing of the nature of the study and its main objective; (b) assurance of the confidentiality

of the obtained data and (c) instruction on returning the completed questionnaire (See the questionnaire form in Appendix [4]). The structure of the questionnaire was initiated by a statement of reassurance regarding the confidentiality of the data. Then instructions were given to circle the appropriate number ranging from [1] "Not Important at all" to [9] "Extremely Important" reflecting the level of importance each FTZ authority attach to the employment of each variable in the actual operations of their FTZs. Finally, a three page list of the forty sub-variables of the marketing concept, relevant to the operations of the FTZ, was given. In order to avoid the possible bias due to groupings, the marketing sub-variables were given sequentially from 1 to 40 without reference to their three main groupings - the three key elements of marketing concept: (i) satisfying the needs of the industrial buyers, (ii) achieving organisational goals, and (iii) integrating the marketing functions.

The required data for this empirical investigation were gathered through two stages. The first stage, which is crucial to this study, was undertaken in order to establish the main criteria for the various levels of the marketing concept adoption in the FTZs' operations. At this stage, the required data for establishing the desired criteria were collected from a panel of FTZs' experts throughout the world. The second stage was concerned with the main survey in order to collect the needed information from all the respondents included in the domains of this study. A Pilot study, however, was not practical in this research. This is due to the limited number of the FTZs representative of the domains of our study.

5.5.1 Stage 1: Collecting Data from the FTZs' Panel of Experts

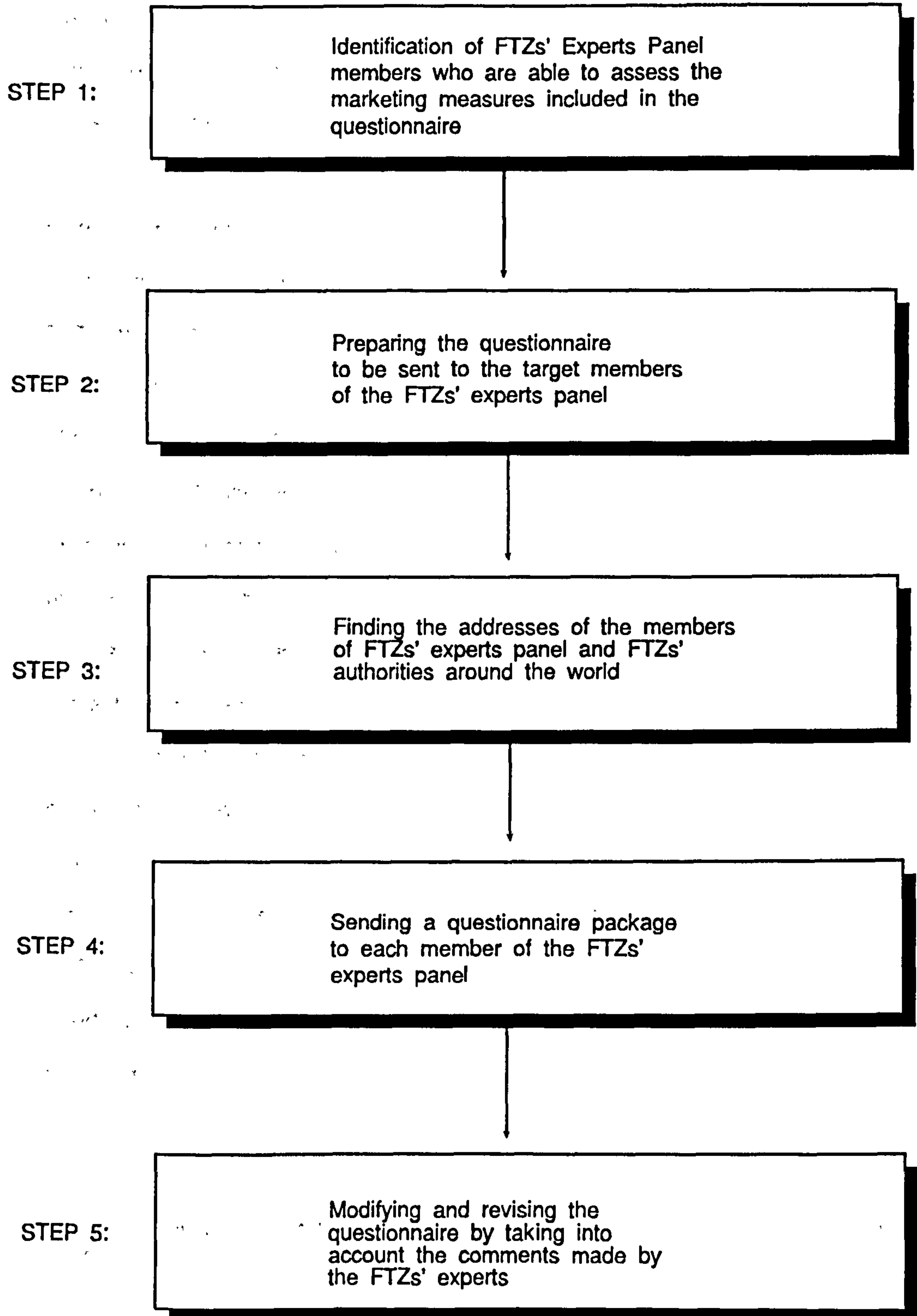
A unique problem encountered during the first phase of this investigation was how to identify the main criteria for the different levels of the marketing concept adoption in the operations of FTZs. Despite the variation in techniques that can be used to tackle such a problem, it was found, by consultation with Dr. Jonathan Tawn of the Statistical Clinic, Sheffield University, that the method of "Confidence Limits" (See Research Methodology,

Chapter 6, Section 6.2.2.1) was the most appropriate procedure in this respect. Therefore, the first stage of data collection was taken place in the Autumn of 1987 to: (a) receive any comments or feedback relevant to the content and conduct of the study, and accordingly (b) check on the content validity of the measuring instruments being employed in this study, (c) identify the main criteria for the different levels of the FTZs marketing concept adoption on the basis of the opinion of a panel of FTZs experts consisting of 34 members particularly from America and Europe, and (d) analyse how far different (or similar) the authorities' attitudes of each of the various FTZs groupings and the attitudes of the FTZs experts panel towards the relative importance of employing key discriminating variables, of the marketing concept, in the operations of FTZs.

The first stage of the data collection process was carried out through the key following steps (See Figure 5.3):

1. Identification of those people who are able to assess our specified forty marketing concept variables related to the operations of a FTZ, as well as to provide us with their judgement on the scale and measurement under study. Those people were selected on the basis of FTZ former professional working experience, academic background, recommendation by peers and/or a combination of these characteristics. A list of the identified FTZs' expert panel members is provided in Appendix [1].
2. In order to obtain the judgements of the FTZs experts, a structured-undisguised questionnaire was designed on three pages containing the three main elements/categories of the marketing concept (i.e., (i) satisfying industrial buyers needs; (ii) achieving organisational goals; and (iii) integrating the marketing functions). Then a list of the forty sub-variables, as related to the FTZ operations, was given under each main element of the marketing concept. The required information was obtained by using an itemised rating scale, ranging from (1) "Not Important at all" to (9) "Extremely Important". The questionnaire was initiated by instruction requesting the panel member to circle the appropriate number (from 1

Figure 5.3 : The Key Steps followed in Collecting Data from the FTZs' Panel of Experts



to 9) he or she believes a marketing-oriented FTZ authority would circle for every factor (i.e. sub-variable) reflecting the level of importance a marketing-oriented authority attaches in the operations of the zone - See Appendix [2].

3. Finding the addresses of the panel of the FTZ experts. This stage was in fact one of the most cumbersome problem faced by the researcher in conducting this Study. The starting point was to communicate with the publishers of the books and articles on FTZs. Therefore, four publishers in both America and Europe* were contacted by telephone in order to obtain the addresses of the five authors of the four books which the researcher used in generating the marketing sub-variables related to the FTZs operations. It should be noted that the use of telephone contact, with all the FTZs experts and authorities throughout the world, caused the researcher strained efforts and costs in terms of money and time due to geographical and time differences. Almost every one of the 34 panel members were contacted by telephone in order to establish rapport, acquaint them with the nature of the research, request their participation in the study, and check the accuracy of their addresses. This was followed by sending a letter of invitation to each of the first five authors requesting each to participate in the study and asking to recommend other peers and, if possible, to provide the address of those peers - for the content of the letter see Appendix [2]. By the same token, the latter panel members were requested to identify other names along with their addresses. Then the same procedures were repeated twice. Accordingly, a list of 34 names and addresses of FTZs experts were completely identified - The list is provided in Appendix [1].
4. Sending, to each panel member, a questionnaire package (See Appendix [2]) including:

* These publishers are: Mathew Bender in Albany, New York, The Economist in London, The Organisation for Economic Co-operation and Development (OECD) in Paris, and the United Nations Industrial Development Organisation (UNIDO), in Vienna.

- (a) Two letters. The first was a cover letter addressed by the supervisor, representing the University of Sheffield, to provide support to the seriousness of the study. The second letter was addressed by the researcher himself to invite each panel member, and to brief them about the scope of the study.
- (b) A questionnaire form.
- (c) A list of the panel members to acquaint each member with the others.
- (d) A self-addressed envelope. Each panel member was requested, in the invitation letter, to enclose the answered questionnaire in the attached self-addressed envelope (13 x 9 inches). Every self-addressed envelope was marked by two different red stamps: "IMPORTANT DOCUMENTS" and "PRIVATE AND CONFIDENTIAL".
- (e) The whole package was enclosed in a larger envelope (15 x 10 inches). The address of the panel member was typed and glued in the middle of the envelope, the address of the researcher was also typed and glued at the top left of the envelope. This large envelope was also marked by the same two red stamps used in the self-addressed envelope.

The total number of the questionnaire packages sent to the members of the FTZs' expert panel was 34. The complete usable questionnaires were 24 (about 71%).

It should be noted that the data collection at this stage took six months approximately. This was due to the fact that the questionnaire packages were sent at different intervals of time as explained earlier.

5. Modifying and revising the questionnaire. All the members of the FTZs' experts panel, with the exception of only four, unanimously gave their support to the structure of the questionnaire and the appropriateness of the measures being used. However, a constructive criticism was made regarding the presentation of the 40 variables. Here, the researcher was advised by one of the FTZs experts to present the 40 variables sequentially as they appear in the questionnaire but without

reference to the three dimensions of the marketing concept (i.e., satisfying the industrial buyer needs, achieving the organisation goals, and integrating the marketing functions). Accordingly, the comments made by the FTZs experts have been taken into account when we were revising the questionnaire. The four members criticised the questionnaire for not including additional variables concerning economic issues (such as cost and benefits), the tax incentives, investment, and legislative aspects of FTZs. The researcher sent his reply, with a great deal of appreciation for their co-operation, emphasising that the focus of this study is solely on the marketing aspects of FTZs operations. At a later stage, copies of the modified questionnaire were mailed to the FTZs' authorities members of the domains of the study.

Finally, the useable questionnaires were used to establish the criteria for 'a priori' classification of the different levels of the marketing concept adoption in the FTZs operations as explained in Chapter 6.

5.5.2 Stage 2: Collecting Data from all Respondents in the Main Survey

The researcher initiated the mail survey by sending telex messages and making telephone calls in order to: (a) identify all the FTZs authorities who would likely represent the domains of study; (b) obtain updated addresses for correspondence; and (c) request for co-operation with the survey. Next, a structured-undisguised and modified questionnaire form, with a cover letter, was mailed to each of the identified 159 FTZs' authorities in 67 countries around the globe. Each respondent was requested to fill in the questionnaire at his/her convenience and return it to Sheffield University using the self-addressed envelope provided. The questionnaire was put into 8 different languages (i.e., English, French, Spanish, German, Chinese, Arabic, Turkish and Malaysian - See Appendix [5]).

Of 159 questionnaires, 62 complete useable ones were returned, approximately 39% of the domains of study. Out of the 62 returned questionnaires, 13 were disregarded because they were not representative of the domains of study. They were eliminated because each of the 13 FTZs authorities circled number one on item [6] of the questionnaire. Item [6] is concerned with the importance attached to the size of area available for manufacturing. The net response rate (39%) was somewhat low but not surprising due to the difficulties inherent in the frame of the domains of study and the international character of the study.

The decision that had to be made was to employ the methods of follow-ups to increase the response rate. This first wave of the follow-ups was made using registered air-mail and increased the response rate significantly to 48%. The second wave of the follow-ups was made using telephone calls and also increased the response rate to 53% (i.e., 85 usable questionnaires), which is a reasonable response rate. According to Babbie (1973) a response rate of at least 50% is adequate for analysis and reporting. In addition, Perreault and his associates (1979) reported the findings of their study, in the *Journal of Business Research*, on the basis of a mail survey with a response rate (of usable questionnaires) of only 33%.

5.6 Preparing for Data Analysis

Once the data had been collected the next step was data analysis. However, before starting the stage of data analysis, it was necessary to conduct preliminary procedures for preparing the data to be analysed. One reason behind undertaking the procedures of preliminary data preparation is to examine the questionnaires received from respondents. Another reason is to make sure that the collected data are suitable for the pre-specified analytical techniques. A further reason is to code and enter the data into the computer.

The procedures followed in this study to prepare the collected data for analysis include: editing, coding, tabulation, and entering data into the computer. First, we examined the raw data for the purpose of ensuring that the information collected is legible, accurate, and complete. All the usable questionnaires were found accurate, and complete. It was obvious that the respondents have taken their responsibility seriously.

Second, the coding was done manually. There was little difficulty in coding the questionnaire, since all the questions included were to be rated in a 9-point scale. Thus, one was assigned to the response "Not important at all", while nine was assigned to the response "Extremely important". The numbers from two to eight related to the various evaluations between the two extremes (1-9).

Finally, each edited and coded questionnaire was transferred to the coding sheets. The completed and edited coding sheets were served for the purpose of data entry into the computer. The data, then, were copied on computer diskettes. The researcher also had to print out the data to check on their consistency with the edited coding sheets.

5.7 Summary

In this chapter we mainly discussed the key steps followed in the research design and data collection process. The chapter began with the definition and the concept of the research design, followed by a discussion of the research design approaches.

Next, we described in detail our research design. Two sources were employed to obtain the needed data for this study: Secondary and Primary sources. The Secondary data sources were limited. The Primary data were gathered via mail survey research. A structured-undisguised questionnaire was developed to obtain information on forty attitudinal variables regarding the key dimensions of the marketing concept (i.e., satisfying industrial buyers needs; achieving organisational goals; and integrating the marketing functions). The questionnaires were directed to the FTZs experts panel and FTZs' authorities. The variables were generated and selected from the literature of FTZs and also from textbooks on Marketing Management. The variables included in the questionnaire were measured on a

9-point itemised rating scale. This scale is relatively easy to conduct and administer, and the instructions provided are easily understood which makes it useful for mail survey.

The data were collected in two stages. At the first stage, the data were collected from the members of the FTZs panel of experts in order to: (a) receive any comments/feedback relevant to the content and conduct of the study, accordingly; (b) check on the content validity of the measuring instruments being employed in this study, (c) identify the main criteria for the different levels of the FTZs marketing concept adoption, and (d) analyse how far different (or similar) the authorities' attitudes of each of the various FTZs groupings and the attitudes of the FTZs experts panel towards the relative importance of employing key discriminating variables of the marketing concept, in the operations of FTZs. The panel members were selected on the basis of FTZs former professional experience, academic interest in FTZs, recommendations by peers and/or a combination of these characteristics. The total number of the identified panel members were 34, but only 24 responded and agreed to co-operate.

The domains of study included 159 FTZs authorities, and they were included at the second stage of data collection. Of the 159 some 85 FTZs, representing 48 countries, responded to the survey and returned their complete questionnaires (i.e. 53% response rate).

The chapter was concluded by the procedures followed to prepare the collected data for the purpose of analysis. The data was edited, coded, and tabulated to enter into the computer in order to be ready for applying the pre-specified analytical techniques.

CHAPTER SIX
THE METHODOLOGY OF ANALYSIS

	Page No		
6.1	Introduction	178	
6.2	Selecting the Methodology of Analysis	179	
	6.2.1	Selecting Among the Multivariate Techniques	180
	6.2.2	Review of the Research Questions	182
6.3	Discriminant Function Analysis (DFA)	189	
	6.3.1	The Objectives and Assumptions of DFA	194
	6.3.2	Description of the DFA Programme	195
	6.3.3	The output of DFA	197
	6.3.4	Justification of the Application of DFA	199
	6.3.5	Validating the Discriminant Functions	201
6.4	Profile Analysis	204	
6.5	Correlation Analysis	205	
6.6	Statistical Tests of the Research Hypotheses	208	
	6.6.1	The Wilks' Lambda	209
	6.6.2	The Univariate F-ratio Test	211
	6.6.3	The Hotelling's T^2 Statistic	212
6.7	Reliability and Validity Assessment	214	
	6.7.1	Testing the Internal Consistency Reliability: Application of Cornbach's Alpha	215
	6.7.2	Validity Assessment: Content (face) Validity	220
6.8	Summary	224	

6.1 Introduction

In investigating a particular marketing problem, a marketing researcher needs to employ a methodology relevant to the nature and circumstances in which the marketing problem exists. Through an appropriate research methodology the researcher can systematically analyse and draw conclusions about the problem of concern. A methodological research is a vital and indispensable part of the scientific process. Without the development and advancement of the research methodologies, the status of the physical and social sciences would still be in the stages of the dark ages (Kerlinger, 1986).

To the scientists and researchers the term "methodology" means the philosophy of the research process. This includes the assumptions and values that serve as a rationale for research and the standards or criteria the researcher used for interpreting data and reaching conclusions. The research methodology, for example, determines such factors as how the hypotheses should be stated and what level of significance is necessary to make the decision whether or not to reject a hypothesis (Bailey, 1987). A methodological research is also considered as a controlled investigation of the theoretical and applied aspects of measurement, mathematics and statistics, and ways of obtaining and analysing data (Kerlinger, 1986).

Thus a methodology for data analysis is simply a set of statistical techniques that can be used to obtain information and insights from the data. A competent marketing researcher should acquire a thorough understanding of the principles of data analysis. This knowledge is very useful to the researcher for several reasons. First, it can lead the researcher to information and insights that otherwise would not be available. Second, it can help avoid erroneous judgement and conclusions. Third, it can provide a background to help interpret, understand, and assess analysis conducted by others. Fourth, a knowledge of the power of data analysis methods can constructively influence the research objectives and the research design (Aaker and Day, 1990). On the other hand, no matter how sophisticated a data analysis technique is, it still cannot make up for poor problem

definition, bad research design, improper sampling, poor measurement, bad field work, or sloppy data processing. Data analysis is just one of the many activities that must be done correctly to yield relevant information. A relatively simple data analysis procedure, if properly applied, can provide valuable information (Kinnear and Taylor, 1987).

This chapter is concerned with six key issues related to the research methodology of data analysis in our research. First, the problems of selecting a multivariate technique and of establishing a criteria for 'a priori' classification of the FTZs under study. Second, Discriminant Function Analysis in terms of its objectives, assumptions, the computer output, the justification of its application, and validating the discriminant functions. Third, Profile Analysis, its description and the purpose for using it. Fourth, Correlation Analysis, its description and the purpose for using it. Fifth, selecting the statistical tests appropriate for testing the research hypotheses. Last, assessing the reliability and validity of the study.

Each of these issues will be examined in turn.

6.2 Selecting the Methodology of Analysis

There is a range of alternative methodologies available for marketing researchers. These range from qualitative to quantitative methods. The quantitative methods are well developed and consist mainly of a host of statistical techniques including univariate analysis, bivariate analysis, and multivariate analysis to solve marketing problems involved with one variable, two variables, and more than two variables respectively depending on the number of variables (Weiers, 1988). However, one of the most striking trends that has taken place in marketing research methodology within the past two decades is the attention accorded to the multivariate statistical procedures. Today an imposing array of such procedures - Multiple Regression, Analysis of Variance, Multivariate Analysis of Variance, Discriminant analysis, Cluster Analysis, Factor Analysis, Multidimensional Scaling - is being used in the description and analysis of associative data (Green, Tull, and Albaum, 1988). Indeed, one is forced to conclude that unless a marketing problem is treated as a multivariate one, it is

treated superficially (Sheth, 1971). Furthermore, multivariate techniques are used in international marketing research in the same way as in domestic research. However, of particular interest, is their application in cross-country analysis. Here, a key problem is to test for the significant differences between countries in the dependent variables, or the relationship between dependent and independent variables, while checking these are not due to any spurious factors related to research design or sampling procedures (Douglas and Craig, 1983).

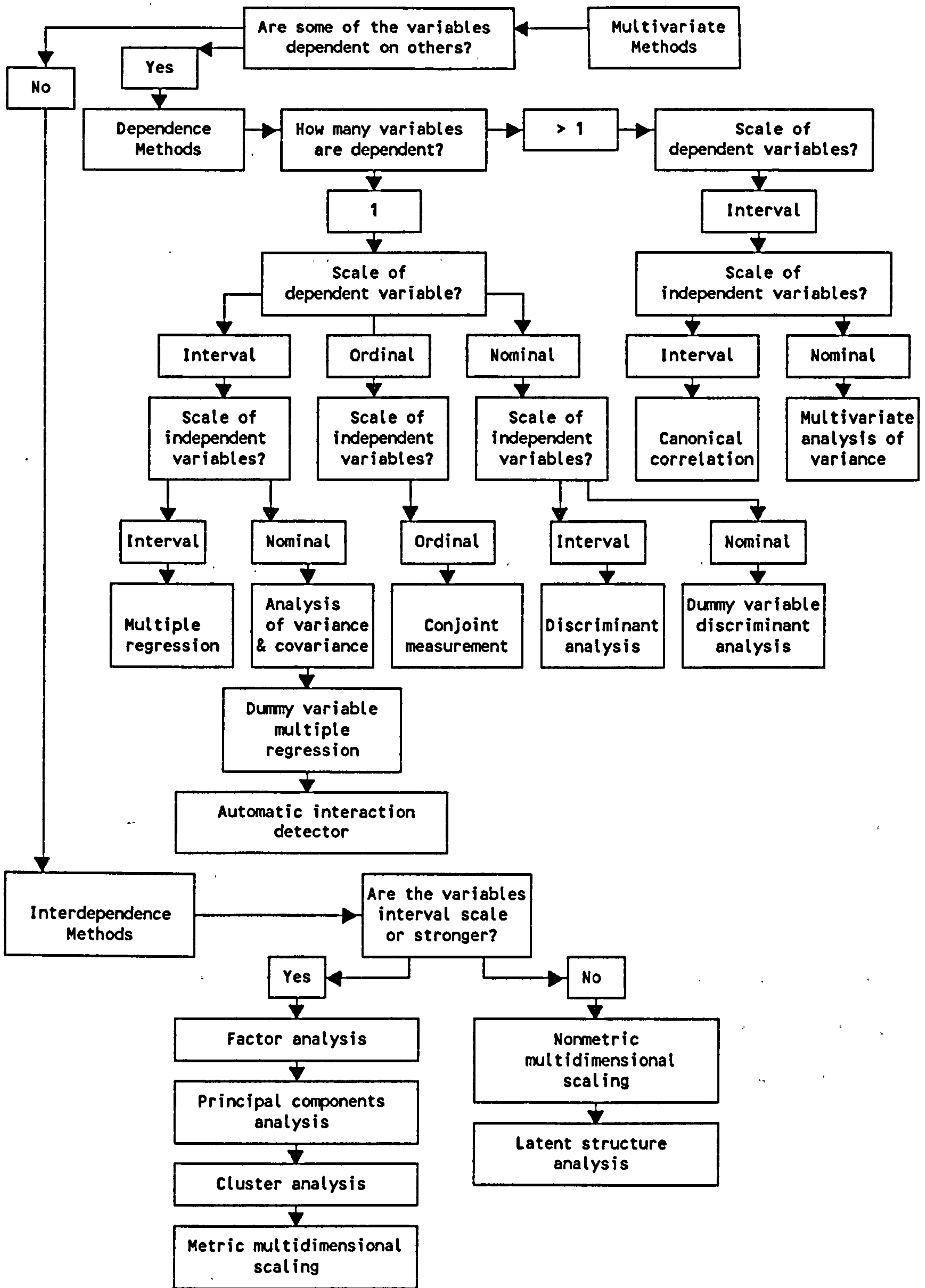
The computer has influenced the rapid diffusion of multivariate analysis in business research. A number of 'Canned computer programmes' have changed techniques that were once expensive and exotic into affordable and regular forces of analysis. With the multivariate statistical revolution, the researchers, using these powerful tools of analysis, need not bother themselves with the mathematical complexity involved in the calculations they require, because they are typically carried out by special computer programmes (Zikmund, 1988).

6.2.1 Selecting Among the Multivariate Techniques

Multivariate techniques can be categorised by the structure shown in the flowchart of Figure 6.1. Basically, the selection of an appropriate analysis strategy depends on the answers to the three questions discussed below (Sheth, 1971; Kinnear and Taylor, 1971; Weiers, 1988):

- I Are some of the variables dependent on others? If we are assuming that one or more variables might be predicted or explained by the values of two or more other (independent) variables, dependence is involved. With interdependence, no variable is assumed to be dependent on, predicted, or explained by any other, and we are primarily interested in relationships that exist among the entire set of variables.

Figure 6.1: A Taxonomy of Multivariate Techniques in Marketing Research



Sources: Sheth, N. (1971); Kinnear, T. C. and Taylor, J. R. (1971); and Weiers, R.M. (1988)

- II Is there more than one dependent variable? If the answer to question (1) is no, the answer to this one will also be no. However, some techniques (e.g., multiple regression) can handle only one dependent variable at a time, while others (e.g. multivariate analysis of variance) are capable of simultaneously considering more than one dependent variable.
- III What is the nature of the data? At this juncture, the scale of measurement is considered - that is, whether the data are metric (interval or ratio scale) or nonmetric (nominal or ordinal scale). For approaches relying on dependence, we must first note that the scale of measurement of the dependent variable(s), while for interdependence, all variables are considered at once. As shown in the flowchart of Figure 6.1, further subdivisions can be made on the basis of the scale of the independent variables.

6.2.2 Review of the Research Questions

This empirical research investigates the attitudes of selected FTZs authorities* towards the adoption of the marketing concept in the operations of their zones. It is mainly an attempt to answer the following research questions:

1. Can the FTZs be classified into three distinct groups - most, moderate, and less marketing-oriented, on the basis of the authorities' attitudes towards the adoption of the marketing concept in the operations of their zones?

* Those FTZs who, in addition to providing basic zone operations, offer manufacturing/industrial facilities. This category of FTZs includes: the export processing zones (EPZs) of the third world countries, some of the foreign trade zones of the U.S., and few of the free ports of Europe.

2. What are the marketing concept variables* that would best discriminate among the 'a priori' three FTZ groups (i.e., the most, moderate, and less marketing-oriented zones)?
3. What are the most discriminating marketing concept variables* between the grouping of marketing-oriented FTZs (i.e. the most and the moderate, combined) and the group of less marketing-oriented FTZs?
4. Do variables of the marketing concept discriminate between the FTZs in the developed and developing countries? and what are the most discriminating marketing variables between these two typologies?
5. Are the authorities of the three classified FTZs groups (i.e., the most, the moderate, and the less marketing-oriented FTZs) different from the FTZs experts panel in their evaluative attitudes towards the importance attached to the employment of the marketing concept variables in the operations of the zones?
6. Are the authorities of the FTZs operating in both the developed and developing countries different from the FTZs experts panel in their evaluative attitudes towards the importance attached to the employment of the marketing concept variables in the operations of the zones?

6.2.2.1 The 'a Priori' Classification of FTZs' Marketing Orientation

First, since the classification of the marketing orientation of the 85 FTZs included in this research was unknown beforehand, it has been found that it is inevitable to find out a formal and pragmatic way to establish such a classification of FTZs according to their authorities attitudes towards the adoption of the marketing concept. Thus, we decided to

* These variables are related to the three key elements of the marketing concept: (i) satisfying the customer (industrial buyer) needs; (ii) achieving organisation goals; and (iii) integrating the marketing functions. For more details see Table 5.1 in Chapter 5.

conduct a survey research on a group of experts, in the field of FTZs, to enable us to establish "a prior" classification of FTZs marketing orientation. Such prior classification of FTZs should make it feasible to employ the statistical technique of Discriminant Function Analysis (DFA) and carry out more meaningful analysis.

In order to define the ranges of the three assumed levels of marketing orientation among the FTZs around the world, we followed a number of steps as follows:

- (a) Tabulating the responses received from each panel member across all the 40 marketing variables under investigation.
- (b) Calculating the average of the responses obtained from each panel member to all the 40 marketing variables.
- (c) Calculating the average of the responses obtained from each FTZ authority to all the 40 marketing variables.
- (d) The 24 averages obtained from step (b) were listed in ascending order as shown in Table 6.1. The main reason behind this step is to discard the outliers (i.e., two to three extreme scores on both ends). Thus we had to eliminate the two first scores on the lower end (6.10) and (6.50) which would be considered as representative scores of the FTZs authorities of the less marketing-oriented. And also discard the last two scores on the upper end (8.03) and (8.13) which would be considered as representative of the FTZs authorities of the most marketing-oriented. Accordingly, we came up with scores ranging from 6.75 to 7.93 which would be considered as representative of the FTZs authorities of the moderate marketing-oriented.
- (e) Based upon the empirical confidence limits (6.75-7.93)* and the average responses of the FTZs' authorities, we were able to suggest a classification

* The term "confidence limits" used here stands for both the lower and higher average responses in Table 6.1 after the outliers were discarded. The range of the "confidence limits" is between the lower score (6.75) and the higher score (7.93) representing the range of attitudes expressed by the panel of FTZs experts to the 40 marketing concept variables. This range of "confidence limits" is, in turn, would be regarded as representative of the attitudes of the marketing-oriented FTZs authorities. This statistical rule was built upon the advice of the Statistical Clinic, Sheffield University.

Table 6.1: The Ascending Order of the FTZs Experts' Average Responses to the Marketing Concept Variables

No.	Average Responses in ascending order	No.	Average Responses in ascending order
1	6.10*	13	7.43
2	6.50*	14	7.50
3	6.75	15	7.58
4	6.85	16	7.58
5	6.90	17	7.60
6	6.90	18	7.73
7	7.00	19	7.80
8	7.05	20	7.83
9	7.33	21	7.90
10	7.35	22	7.93
11	7.35	23	8.03*
12	7.35	24	8.13*

* Outliers as extremes on both ends

of the FTZs based on their levels of marketing orientation, as follows: first, any average responses of a FTZ which falls into the confidence limits would be considered as "moderate marketing-oriented FTZ", since such confidence limits represent the judgements of the FTZs' experts on what a marketing-oriented FTZ should score on the marketing variables. Second, any average responses of a FTZ which falls above the same confidence limits would be regarded as "most marketing-oriented". Finally, any FTZ's average responses which falls below the confidence limits would be viewed as "less marketing-oriented FTZ". In other

words, the classification of the levels of the marketing concept adoption, in the operations of FTZs under study, was established on the basis of:

Less marketing-oriented < 6.75 ≤ moderate ≤ 7.93 > most marketing-oriented.

The researcher proposed a triple classification of the FTZs under study for two main reasons: first, there is no viable method(s) to classify FTZs into more than three groups; second, if the classification was assigned as two groups, then there will be two extremes, and one can not see to what extent there are transitional FTZs that can become marketing oriented. It is also worth mentioning that it was not possible to assign a category for non-marketing-oriented FTZs. The reason is that with the exception of variable six (i.e., the area available for manufacturing activities), only two variables received, by very few FTZs authorities, a score of (4) in the itemised rating scale used in this survey. Thirteen of the 159 contacted FTZs authorities scored [1] to variable [6] and they were eliminated because they are not representative of the domains of our study.

Now providing answers to the research questions 2, 3 and 4 requires examination of the three important questions raised earlier in Section 6.2.1 concerning the selection of a multivariate technique as depicted in the flowchart of Figure 6.1. The three important questions were: (i) Are some of the variables dependent on others? (i.e., are the variables associated in a dependence or interdependence relation?, (ii) Is there more than one dependent variable?, and (iii) What is the nature of the data? (i.e. what is the level of measurements of the data?). Below we canvass each of these three important questions as each relates to the data of this research.

6.2.2.2 The Nature of the Relation of the Research Variables

One of the objectives of this research is to predict the group membership of FTZs, as being most, or moderate, or less marketing-oriented, on the basis of the attitudinal responses, made by the FTZs authorities, to the forty marketing concept variables.

Therefore, the research questions 1, 2, 3 and 4 are concerned with several variables associated in a dependence relation where the dependent (criterion) variable is the group membership of FTZs, and the independent (predictor) variable is the marketing concept variables. Accordingly, in the flowchart of Figure 6.1 we should search for a multivariate technique from those belonging to the dependence relation.

6.2.2.3 The Number of Dependent Variables

In this research there is only one dependent (criterion) variable. This dependent variable, as explained above, is the group membership of FTZs. The dependent variable has three categories. These categories are the most, the moderate, and the less marketing-oriented groups of FTZs. Therefore, in the flowchart of Figure 6.1 under the techniques of dependence, we should select a multivariate technique suitable for data of one dependent variable.

6.2.2.4 The Level of Measurements

The level of measurements is a very important point of consideration in selecting a statistical technique to analyse the research data. It was mentioned earlier, in Section 5.4.4 of Chapter 5, that the required data on the attitudes of the FTZs authorities, towards the marketing concept variables and subvariables, contained in the questionnaire, were collected on a 9-point itemised rating scale ranging from (1): "Not important at all" to (9): "Extremely Important". The itemised rating scale is a form of the summated rating scales which are considered among the most widely used attitude-scaling techniques in marketing research. It is particularly useful since it allows the respondents to express the intensity of their feelings (Churchill, 1987).

Most authorities in marketing research treat data collected on itemised rating scale and summated rating scales as interval data. Strictly speaking, variables such as attitudes,

opinions, preferences and judgements cannot be quantified to yield exact interval scales. Nevertheless, responses made to rating scales are frequently assumed to form an interval scale. They are considered to be interval-scaled under the assumption that respondents will treat the differences between adjacent response categories to be equal, especially since the categories are physically separated by equal distances (Parasuraman, 1986).

Indeed, it is doubtful that the interval between each of these categories is exactly equal. However, most researchers treat the data from such rating scales as if they were equal intervals in nature since the results of most standard statistical techniques are not affected greatly by small deviations from the interval requirement (Tull and Hawkins, 1987). Virtually the entire range of statistical analysis can be applied to intervally scaled data. Such descriptive measures as the mean, median, mode, range, and standard deviation are applicable. Also, correlation analysis, t-test, ANOVA test (Univariate F-ratio test) and most multivariate techniques can be used on intervally scaled data (Tull and Hawkins, 1987).

As for the dependent variable, however; the level of measurements is nominal. The reason is that when analysing the research questions 2, 3, and 4 the dependent variable is to be categorised into FTZs groups, as follows: (i) analysing the second research question requires the group membership to be categorised into three FTZs groups (i.e., the most, the moderate, and the less marketing-oriented FTZs); (ii) in the third research question, the group membership of FTZs is to be categorised into two groups (i.e., the grouping of marketing-oriented combining the most and the moderate marketing-oriented FTZs on one side versus the group of less marketing-oriented on the other side); and (iii) in analysing the fourth research question, the group membership of FTZs is to be categorised into two typologies (i.e., one typology represents the group of FTZs operating in the developed countries, and the other typology represents the group of FTZs operating in the developing countries).

In view of the preceding discussion and to answer the research questions 2, 3, and 4 we should review the flowchart of Figure 6.1 and select a multivariate technique applicable to data that can be described by the following characteristics: (1) the variables are

associated in a dependence relation; (2) there is only one dependent variable; and (3) the level of measurements of the dependent variable is nominal, and the level of measurement of the independent variable is interval. Accordingly, it was decided to employ the multiple (three-group) Discriminant Function Analysis (DFA) to analyse the second research question, and to employ the two-group Discriminant Function Analysis (DFA) for analysing the third and the fourth research questions. A Profile Analysis is a further technique that will be used to deal with the remaining two questions, 5 and 6, of this research. Table 6.2 depicts the plan of data analysis and hypothesis testing for this research. In the following two sections, 6.3 and 6.4 respectively, we discuss DFA and Profile Analysis as each relates to the nature of this study.

6.3 Discriminant Function Analysis (DFA)

Marketing researchers are often asked to classify people or objects, by a set of independent variables, into two or more mutually exclusive categories, (i.e. groups) and to determine the most important characteristics that would best differentiate between (among) these groups. For example, the researcher may be asked to divide into two groups individuals who can be classified as buyers or nonbuyers. Another example is when the researcher is asked to classify the performance of the sales force, on the basis of a set of characteristics (independent variables), into: most, moderate, and less successful sales representatives. The marketing researcher will find that the two-group Discriminant Function Analysis and the multiple (three) - group Discriminant Function Analysis to be as the most appropriate techniques in handling the situations of the first example and the second example respectively.

In the two-group approach to discriminant function analysis, the researcher is interested in classifying and/or describing objects or individuals membership in just two groups. Discriminant analysis is also capable of expansion so that the researcher is able to identify and describe three or more groups, in such cases it is referred to as Multiple Discriminant Function Analysis (MDFA). This is essentially an extension of the two-group

Table 6.2 : The Research Plan of Data Analysis and Hypotheses Testing

Research Objective	Technique of Data Analysis	Research Hypothesis (H0)	Statistical Test	Comments
(i) To classify the FTZs into three groups; as most, moderate and less marketing-oriented; on the basis of the authorities' attitudes to the importance attached to the employment of the forty marketing concept variables in the operations of their zones.	Constructing a criterion for a triple classification of FTZs marketing orientation based on "empirical confidence limits" where the average responses of the FTZs experts panel across all the 40 variables is considered, after discarding the outliers, as representative of the moderate marketing-oriented FTZs group. And any response made above this limit is considered most marketing-oriented. Any response made below this limit is considered less marketing-oriented.			The main reason for such prior classification of the FTZs authorities is to prepare the data for the applications of both the Multiple and the Two-group Discriminant Function Analysis (DFA).
(ii) To identify the key marketing variables that would best profile and discriminate among the most, the moderate, and the less marketing-oriented FTZs according to the authorities attitudes towards the employment of the marketing concept variables in the operations of their zones.	Multiple Discriminant Function Analysis (MDFA).	H0(1): There is no significant discrimination among the three FTZs groups according to the authorities' attitudes towards the importance attached to the employment of the forty marketing variables in the operations of their zones.	Wilks' Lambda and Univariate F-ratio.	The two tests are provided routinely by the Multiple DFA Computer Programme in SPSSX.

Table 6.2 : The Research Plan of Data Analysis and Hypotheses Testing (Continued)

Research Objective	Technique of Data Analysis	Research Hypothesis (H0)	Statistical Test	Comments
(iii) To identify the key marketing variables that would best profile and discriminate between the marketing-oriented FTZs grouping (i.e., the most and the moderate, combined) and the less marketing-oriented FTZs according to the authorities' attitudes towards the employment of the marketing concept variables in the operations of their zones.	Two-group Discriminant Function Analysis (Two-group DFA).	H0(2): There is no significant discrimination between the marketing-oriented FTZs grouping (i.e., the most and the moderate, combined) and the less marketing-oriented FTZs group according to the authorities' attitudes towards the importance attached to the employment of the forty marketing concept variables in the operations of their zones.	Wilks' Lambda and Univariate F-ratio.	The two tests are provided routinely by the Two-group DFA Computer Programme in SPSSX.
(iv) To find out whether there is any differentiation between the FTZs in the developed and developing countries with respect to the authorities' attitudes towards the importance attached to the employment of the marketing concept variables in the operations of their zones. And to identify the key marketing variables that would best profile and discriminate between the FTZs in the two typologies.	Two-group Discriminant Function Analysis (Two-group DFA).	H0(3): There is no significant discrimination between the FTZs, in the developed and the developing countries, with regard to the authorities' attitudes towards the importance attached to the employment of the forty marketing concept variables in the operations of their zones.	Wilks' Lambda and Univariate F-ratio.	The two tests are provided routinely by the Multiple DFA Computer Programme in SPSSX.

Table 6.2 : The Research Plan of Data Analysis and Hypotheses Testing (Continued)

Research Objective	Technique of Data Analysis	Research Hypothesis (H0)	Statistical Test	Comments
(v) To examine to what extent the authorities' attitudes of the three FTZs groups (i.e., the most, the moderate, and the less marketing-oriented) are different from the attitudes of the attitudes of the FTZs experts panel towards the importance of the key discriminating marketing concept variables identified by the Multiple Discriminant Function Analysis (MDFA).	Profile Analysis.	H0(4): The authorities' attitudes of the most marketing-oriented FTZs group are similar to the attitudes of the FTZs experts panel towards the importance of the 19 key discriminating marketing concept variables identified by the Multiple Discriminant Function Analysis (MDFA).	Hotelling's T^2 Statistic.	The test is provided routinely, by the SPSSX Computer Programme, through the application of the Multivariate Analysis of Variance (MANOVA).
		H0(5): The authorities' attitudes of the moderate marketing-oriented FTZs group are similar to the attitudes of the FTZs experts panel towards the importance of the 19 key discriminating marketing concept variables identified by the MDFA.	Hotelling's T^2 Statistic.	The test is provided routinely, by the SPSSX Computer Programme, through the application of the Multivariate Analysis of Variance (MANOVA).
		H0(6): The authorities' attitudes of the less marketing-oriented FTZs group are similar to the attitudes of the FTZs experts panel towards the importance of the 19 key discriminating marketing concept variables identified by the MDFA.	Hotelling's T^2 Statistic.	The test is provided routinely, by the SPSSX Computer Programme, through the application of the Multivariate Analysis of Variance (MANOVA).

Table 6.2 : The Research Plan of Data Analysis and Hypotheses Testing (Continued)

Research Objective	Technique of Data Analysis	Research Hypothesis (H0)	Statistical Test	Comments
(vi) To examine to what extent the authorities' attitudes of the FTZs, in both the developed and developing countries, are different from the attitudes of the FTZs experts panel towards the importance of the key discriminating marketing concept variables identified by the second run of the Two-group Discriminant Function Analysis (Two-group DFA).	Profile Analysis.	<p>H0(7): The authorities' attitudes of the FTZs in the developed countries are similar to the attitudes of the FTZs experts panel towards the importance of the key marketing concept variables identified by the second run of the Two-group Discriminant Function Analysis (Two-group DFA).</p> <p>H0(8): The authorities' attitudes of the FTZs in the developing countries are similar to the attitudes of the FTZs experts panel towards the importance of the key marketing concept variables identified by the second run of the Two-group Discriminant Function Analysis (Two-group DFA).</p>	<p>Hotelling's T^2 Statistic.</p> <p>Hotelling's T^2 Statistic.</p>	<p>The test is provided routinely, by the SPSSX Computer Programme, through the application of the Multivariate Analysis of Variance (MANOVA).</p> <p>The test is provided routinely, by the SPSSX Computer Programme, through the application of the Multivariate Analysis of Variance (MANOVA).</p>

DFA application (Hair, et al., 1987). The underlying objectives, assumptions, and the basic DFA methodology are applicable to either the two groups or multiple groups (Dillon and Goldstein, 1984). Before employing either versions of the technique, the users of DFA must understand the objectives and should ensure that their data meet the basic assumptions for the fitting procedure to work. The underlying objectives and assumptions of the DFA technique are highlighted in the following subsection.

6.3.1 The Objectives and Assumptions of DFA

6.3.1.1 The Objectives of DFA

There are four important objectives a researcher can achieve when using the DFA technique, these four objectives are (Hair, et al, 1987 and Green, et al, 1988):

- Classification of people or objects into groups - based on measurement for the various independent variables, discriminant analysis produces linear combinations (i.e., discriminant function(s)) of the predictor variables that enable the researcher to separate the groups by maximising among-groups relative to within-groups variation. This way people or objects can be classified into one of two or more mutually exclusive and exhaustive groups. For example, marketing researchers are constantly using discriminant analysis to categorise customers on the basis of variables such as gender, age, income, marital status, level of education.
- Establishing profiles of the groups characteristics, and accordingly:
- Determining which characteristic variables account most for intergroup differences in mean profiles. On the basis of the characteristic variables (i.e., the independent variables) of the classified groups, discriminant analysis can help the researcher to assign new individuals or objects, whose profiles but not group identity are known, to one of two or more groups.
- Testing whether significant differences exist between the mean predictor-variable profiles of the two or more groups. Testing whether the group centroids (i.e., the multidimensional means of the groups) differ significantly is proceeded in

discriminant analysis on the basis of an F-ratio test that, in turn, is calculated from a variability measure known as Mahalanobis squared distance (D^2).

6.3.1.2 The Assumptions of DFA

The assumptions of discriminant functions analysis can be stated as (Klecka, 1980):

1. The criterion or dependent variable is qualitative or categorical (nominal or nonmetric).
2. The predictor or independent variables are quantitative or metric (interval or ratio) so that means and variances can be calculated and so that they can be legitimately employed in mathematical equations.
3. There are two or more groups: $g \geq 2$.
4. There are at least two cases per group: $n_i \geq 2$.
5. There is no limit on the number of discriminating variables as long as the total number of cases exceeds the number of variables by more than two.
6. Each group has been drawn from a population with a multivariate normal distribution on the discriminant variables. Such a distribution exists when each variable has a normal distribution about fixed values on all the others. This permits the precise computation of tests of significance and probabilities of group membership.

6.3.2 Description of the DFA Programme

Discriminant function analysis (DFA) is a statistical multivariate technique for investigating dependence relation (i.e., criterion/predictor association). With two groups the DFA involves deriving a linear combination (i.e. a discriminant function) of the predictor variables that can best discriminate between the two 'a priori' groups. This is done statistically by maximising the between-group variance relative to the within-group variance. When there are three groups, two discriminant functions can be calculated (Norusis, 1988).

What primarily distinguishes multiple discriminant function analysis from the two-group case is that more than one discriminant function may be computed. In general, if there

were G groups, then $G - 1$ discriminant functions can be computed. Not all the discriminant functions may be statistically significant. It is a characteristic of the multiple DFA that the first function, as in the two-group case, accounts for the highest ratio of the between-groups to the within-groups variability, the second the function is the next highest, and so on. Accordingly, the researcher may want to consider only the first few functions (Green, et al., 1988).

In essence, DFA involves deriving linear combinations (discriminant functions) of the independent variables that will discriminate between the 'a priori' defined groups in such a way that the misclassification error rates are minimised. This is accomplished by maximising the between-group variance relative to the within-group variance.

The technical aspects of DFA can be viewed as follows: DFA can be thought of in terms of a rather simple "scoring system" that assigns to each individual or object in the sample a score that is essentially a weighted average of the individual's or object's values on the set of independent variables. Once a score is determined, it can be transformed into a posteriori probability that gives the likelihood of the individual or object belonging to each of the groups (Dillon and Goldstein, 1984).

The DFA can be expressed by the following equation (Frank, et al., 1965; Robertson and Kennedy, 1968; Morrison, 1969; Churchill, 1987):

$$Z_i = W_0 + W_1 x_{i1} + W_2 x_{i2} + \dots + W_n x_{in}$$

where Z_i = the discriminant score for the i^{th} individual.

W_0 = Constant

x_{i1}, x_{i2}, x_{in} = the scores of the i^{th} individual on the independent variables.

W_1, W_2, W_n = the discriminant weights* (coefficients) for each respective independent variable.

*The discriminant weights are equivalent to the beta weights in regression analysis and thus they are interpreted in the same way. Thus, independent variables with relatively large weights contribute more to the discriminating power of the function than do variables with smaller weights. And the sign of the discriminant weights merely denotes that the variable makes either a positive or a negative contribution (Hair, et al., 1987).

Fortunately, in practice, virtually all DFA of any appreciable size are carried out by the computer. Several statistical packages are available to perform DFA on a computer. The most widely used statistical packages are SAS and SPSS. However, many researchers prefer SPSS to SAS because of its stepwise procedures and their familiarity with its instructions (Green, et al., 1988).

The DFA stepwise method, in deriving the discriminant function, is useful when the researcher wants to consider a relatively large number of independent variables for inclusion in the function. By sequentially selecting the next best discriminating variable at each step, variables that are not useful in discriminating between the groups are eliminated and a reduced set of variables is identified. As additional variables are included, some previously selected variables may be removed if the information they contain about group differences is available in some combination of the other included variables. The final reduced set, or independent variables, typically is almost as good as, and sometimes better than, the complete set of variables (Hair, et al., 1987).

In this empirical study, we employed the stepwise method in both the two-groups DFA and multiple DFA, using the SPSS statistical package.

6.3.3 The Output of DFA

The SPSS computer output of the DFA application (of either version the two-groups or multiple-groups) produces various important results and statistics. The key DFA output can be summarised as follows:

- Standardised discriminant function coefficients. These coefficients reflect the relative ability of each predictor variable to determine discrimination between groups when the other predictors are held constant (Aaker and Day, 1990). The absolute magnitude of the standard function coefficients (which are similar to the coefficients of the multiple regression analysis) is used as an indication of the relative importance of a predictor variable. The larger the discriminant coefficients, the more important the variable is as a discriminator (Tabachnick and Fidell, 1989).

- Eigenvalue - Indicates the discriminating power of the discriminant function. It is the ratio of the between-groups sum of squares to the within-groups sum of squares. Large eigenvalues are associated with 'good' functions and vice versa (Norusis, 1988).
- Canonical correlation. It is a measure of the degree of association (relationship) between the discriminant function scores (i.e., the predictor or independent variables) and the group membership (i.e., the criterion or dependent variable). It is the square root of the ratio of the between-groups sum of squares to the total sum of squares. When the canonical correlation is squared, its value represents the proportion of the total variance attributable to differences among the groups. Thus, large canonical correlation values are associated with 'strong' association between the discriminant function scores and the group membership (Norusis, 1988).
- The Wilks' Lambda (also called the U statistic). It is a measure of group differences over the discriminating variables. It is the ratio of the within-groups sum of squares to the total sum of squares. It is the proportion of the total variance in the discriminant scores not explained by the differences among the groups (i.e., the value of Wilks' Lambda + square the value of the canonical correlation = 1). Thus values of Lambda near zero indicate high discrimination, and when it equals its maximum of value of 1.0 the group centroids are equal and there is no discrimination (Green et al., 1988). A group centroid is the mean value for the discriminant Z-scores for a particular category or group. In DFA each group has one centroid (Hair et al., 1987).
- Statistical significance - Fortunately, most measures of significance are routinely computed by the SPSSX computer programme. A Chi-square value with its degrees of freedom and its level of significance are provided. Moreover, the SPSSx programme of DFA automatically discontinues the analysis if the discriminant function does not show significance at or beyond the 0.05 level (Hair et al., 1987). Univariate F-ratio for each predictor variable is also provided, but only with the stepwise methods which is employed in this research.
- Classification or confusion matrix (also known as the hit-miss table). This matrix helps to visualise how accurately the discriminant function 'predicted' group membership.

It provides sufficient information for classification of individuals or objects into their respective groups. The most important value to be considered in the classification matrix is the predictive accuracy of the discriminant function (Lehmann, 1989).

- **Group means** - The profiles of groups in terms of means on the variables serve two basic purposes. First, they are useful to check whether the data were input correctly (a mean of 5.4 on a variable scaled 1 to 5 indicates the input is 'messed up'). More important, they give the first indication of which variables distinguish between members of the two or more groups (Lehmann, 1989).
- **All-groups histogram of the discriminant score** - the discriminant function scores for each group (1, 2, 3, 4, ... , K) are plotted in a histogram. Four or five or six symbols of each group represent one case. The number of cases represented by a symbol depends on the number of cases used in an analysis. The purpose of this histogram is to show how much two or more groups overlap and to examine the distribution of the discriminant score (Norusis, 1988).

6.3.4 Justification of the Application of DFA

Discriminant Function Analysis (DFA) has been used quite extensively in marketing. Some of the topics investigated, using the Two-group DFA, include: an examination of differences between people who save money in commercial banks and those saving at savings and loan association (Claycamp, 1965); identifying variables that determine early adopters of new fashions (King, 1965); the development of a checklist of properties that separate successful new products from those that fail (Ferber, 1966); classification of buyers versus nonbuyers of new product (Pesseimier, et al., 1967); determination of the characteristics of users of Crest toothpaste (Shuchman and Reisz,, 1975); determination of the characteristics of the signature goods purchasers and avoiders (Jolson, et al., 1981); the selection of store sites (Sands, 1981); and the analysis of consumer responses to nutrition labelling (Edris, 1989).

As for the Multiple DFA, Perreault and his associates in their article (1979) remarked that marketing researchers now have two decades of experience with multiple DFA and have beneficially applied it in a wide variety of situations. Such multiple DFA applications include: the use of demographic and psychological factors in identifying Ford and Chevrolet buyers (Evans, 1959); the determination of audience characteristics of radio stations (Massy, 1965); the examination of consumer behaviour toward new products or brands (Frank, et al., 1965; Robertson and Kennedy, 1968); an analysis of supermarket buyer decisions (Montgomery, 1975); identifying characteristics that would improve the salesman selection process (Perreault, et al., 1977); identifying the potential opportunities in the existing retail milieu and discovering directions in which any or all of the retail stores images may be modified for greater sales and profitability (Ring, 1979); determining the nature of the differences in the innovator and the non-innovator in two demographic market segments in terms of the various factors (variables) which influence the purchase decision (Perreault, et al., 1979).

At the international marketing level, on the other hand, MDFA has been used by the Singer Company in a study of the factors underlying profitability in its North and South American and European markets (Ferber and De Sa, 1977). Discriminant Analysis has also been used to examine differences in magazine readership between working and non-working wives in the United States and France (Douglas, 1977).

The concern of this research is with the identification and prediction of the FTZs adoption of the marketing concept. Forty marketing concept variables were generated using both the literature of FTZs and textbooks on marketing management. Also, a classification criteria was established to assign each of the 85 sampled FTZs into one of three mutually exclusive and exhaustive groups: (1) most marketing-oriented; (2) moderate marketing-oriented; and (3) less marketing-oriented. The classification criteria was carried out by manual calculation of responses made, to the forty marketing variables, by a panel of 24 FTZs experts - more detail is provided in this Chapter, subsection 6.2.2.1. Accordingly, "a priori" three groups was established on the basis of the marketing concept adoption.

The DFA, with its two versions (the two-groups and the multiple groups) is found to be more suitable than any other statistical technique to answer the research questions and to attain the research objectives - the bases on which the decision was made on choosing the DFA are fully discussed in Section 6.2.2. The DFA, with its two versions, is chosen for a number of specific reasons; they are:

- (1) To accurately classify the FTZs into (a) Three groups (most, moderate and less marketing-oriented); (b) two groups (marketing-oriented and less marketing-oriented); and (c) in the developed and developing countries according to their authorities' attitudinal responses to the marketing concept variables.
- (2) To determine the degree of association (relationship) between the marketing variables and the group membership in each classification (mentioned above).
- (3) To identify the marketing concept variables that would best discriminate among/between the FTZs' groups (mentioned above).

6.3.5 Validating the Discriminant Functions

The application of the DFA can be divided into three major stages: (1) derivation, (2) validation, and (3) interpretation. The derivation stage involves determining whether or not a statistically significant function can be derived to separate the two (or more) groups. The validation stage involves developing a classification matrix to evaluate further the predictive accuracy of the discriminant function. The interpretation stage involves determining which of the independent variables contribute the most to discriminating between the groups (Hair, et al., 1987). Each of these stages is reported, in an integrated fashion rather than as steps, in each of the three DFA runs. The discussion is presented in the research findings chapter (Chapter 7).

Accordingly, in this research we must determine that our discriminant model is a valid predictor of the group's membership under study. This typically can be accomplished by applying the appropriate validation method(s) and examining the classification matrix. There are a number of methods that have been suggested for validating discriminant

functions. The selection of a validation method depends upon the amount of time and facilities available and the degree to which the researcher wishes to follow a rigorous analysis procedure. Crask and Perreault, in their article (1977), discuss the procedures of some of these methods.

The most frequent methods utilised in validating the discriminant function are the split-sample which is commonly used with larger samples ($n \geq 100$), and the jackknife method which is most often used with smaller sample sizes.

The essence of the split-sample method (also called cross-validation approach) is to divide the total sample of respondents randomly into two sub-samples. One sub-sample is used to derive the discriminant function, referred to as the analysis sample, and the second sub-sample, referred to as the holdout sample, is used only to test the classification of the discriminant function. Because each of the two sub-samples will tend to have different sampling errors, the holdout sub-sample will give a better estimate of the ability to correctly predict the total population (Klecka, 1980). The outcome of the split-sample method will always show a higher hit ratio for the analysis sub-sample than for the holdout sub-sample. This demonstrates the upward bias in not using a holdout sample to validate the discriminant function. Therefore, in order to evaluate the effectiveness of the discriminant model completely, the obtained hit ratio for the holdout sub-sample must be compared to the results of the maximum chance and proportional chance criteria. Hair and his associates (1987) discuss in detail the procedures of both the maximum and proportional chance criteria.

The use of the split-sample method in small sample research is impractical because splitting an already small sample makes the derived coefficients even less reliable; the error rates in classification may not be representative of the function which would be derived with the total sample. In 1967, Lachenbruch proposed a procedure for validating the discriminant function of smaller samples. This procedure, which is called the U-Method, focuses on the issue of classification errors. Frequently, it is inaccurately referred to as jackknife (Crask and Perreault, 1977).

The U-Method makes use of all of the available data without serious bias in the estimating error rates, it holds out one observation at a time, estimates the discriminant function based on $n_1 + n_2 - 1$ observations, and classifies the held-out observation. This process is repeated until all the observations are classified. This method yields almost unbiased estimates of the misclassification probabilities. Recently, the U-Method has been gaining wider use in applied research. This is due, in large part, to its availability in the BMDP Package series number P7M where it is referred to as jackknife. Notwithstanding, the U-Method has received some criticism with regard to the variance and mean square (Dillon and Goldstein, 1984).

In this research, since the number of cases to be analysed is 85 FTZs authorities (i.e., $n < 100$) therefore the most appropriate procedure must be the U-Method which we prefer to call jackknife, in line with the BMDP package and the staff at the Department of Statistics, University of Sheffield. The jackknife is applied to validate the classification accuracy of the discriminant function in each of the three DFA runs. The researcher encountered a great deal of difficulty in applying the jackknife because neither the SPSSX package nor the SAS package (both packages are available at the University of Sheffield) has a command for the jackknife. The BMDP package series number P7M is the only computer programme that has a command for running the jackknife procedure. The nearest University where the BMDP package is available on the mainframe is the University of Manchester.

Fortunately, the University of Sheffield has a computer programmer who represents the University of Manchester Department of Computing services. The Manchester computer programmer advised the researcher to transfer, the three files used in each DFA run, from the SPSSX package in Sheffield, to the BMDP package in Manchester in order to perform the jackknife on each of the three DFA runs. The computer printout of the jackknife results was received a few days later at the Sheffield University computer centre. The findings of the jackknife application are presented and discussed in the research findings chapter, Chapter Seven.

6.4 Profile Analysis

A simple and useful method for analysing multivariate variables (i.e., attributes, statements, or objects) is commonly used in marketing and consumer research, is called "Profile Analysis" (Aaker and Day, 1990; Kotler, 1984). This technique is based upon the mean (average) response obtained from a questionnaire. All types of questions measured on summated rating scales of agreement/importance, semantic differential scales, preference or satisfaction scales all could be analysed by profile analysis. Profile Analysis involves computing the mean, or medium value assigned to each variable by respondents of a specific group. This profile can then be compared with the profile of another individual or an "ideal" responses or another group (Tull and Hawkins, 1987).

The main virtue of Profile Analysis is that it enables the researchers to compare two or more groups of respondents according to their average responses to each question. Another advantage of this method is to profile the average responses of K-groups of respondents in such a way that one can easily visualise differences (or similarities) between or among the respondents in their answers. A further virtue of Profile Analysis is versatility. Such an analytical method can be used with different types of data in different marketing situations. In marketing research, Profile Analysis is widely used to isolate strong and weak attributes of products, brands, stores, and so forth. Marketing strategies are then devised to offset weak attributes and/or to capitalise on strong ones (Tull and Hawkins, 1987).

However, Profile Analysis is not without limitations. For example; when there are many groups to compare and when the differences are very small, or when the profile lines intercept in more than one location. This makes the following of and understanding of the Profile challenging. In this case the researcher loses the simplicity of presentation. In most cases the researcher would be obliged to simplify the plot by comparing two, three or maximum four objects at a time.

In this study, Profile Analysis is employed to visualise the differences/similarities of the different typologies of FTZs (i.e., the most, the moderate, and the less marketing-oriented; the FTZs in the developed and in the developing countries; and the panel of FTZs experts),

in their evaluative attitudes towards the importance they attach to the employment of selected marketing concept variables in the operations of a FTZ.

Accordingly, Profile Analysis is applied twice. First to display the differences/similarities among the FTZs' experts panel; the most, the moderate, and the less marketing-oriented FTZs authorities in their attitudes towards 19 marketing concept variables. These 19 marketing variables were obtained from the results of the three-group DFA and the corresponding responses of the FTZs' experts panel as they appear in Appendix [6]. The second application of Profile Analysis was to visualise the differences/similarities among the FTZs' experts panel, the FTZs authorities in the developed countries, and the FTZs authorities in the developing countries in their attitudes towards another set of 19 marketing concept variables. These 19 marketing concept variables were obtained from the results of the second run of the two-group DFA and the corresponding responses of the FTZs' experts panel as they appear in Appendix [6].

Five hypotheses were generated to test these differences/similarities. Each hypothesis is concerned with comparing one of the five FTZs groups versus the FTZs experts panel. And the Hotelling's T^2 Statistic, which is one of MANOVA procedures, is found to be the most appropriate statistical technique for testing the significance of each of the five hypotheses where the independent variable consists of two categories (samples, groups) and are differentiated across two or more dependent variables (Morrison, 1990).

6.5 Correlation Analysis

The correlation analysis between the attitudinal data was chosen for application in this research for two main reasons. First, to identify those marketing variables that are associated with each other in order to be able to see the way in which they are related and how this can be interpreted in light of the research context. Second, during the application of DFA, like a Regression Analysis, it is advisable to check for multicollinearity. This is done by requesting the computer to print a correlation matrix, which shows the correlation

coefficient (r) of each variable in the analysis with every other variable in the analysis (Tull and Hawkins, 1987).

Correlation is a measure of the extent to which two variables share variation between them. The index of this measure is called the correlation coefficient, and it is designated with the letter (r). The correlation coefficient r can range in value from -1 to $+1$. A correlation of $r = +1$ signifies a perfect positive linear relationship; the paired values on the respective variables being exactly equal. With such a perfect correlation, to know an object's value on one variable is to know its exact value on the other. A correlation of $r = -1$ signifies a perfect negative (inverse) linear relationship; an increase in one variable determines an exact decrease in the other. Such perfect negative correlation allows us to predict exactly an object's score on one variable if we know its score on the other. A correlation coefficient of $r = 0$ suggests there is no relationship between the respective values of the two variables: High values on one are just as likely to be paired with high or low values on the other variable; similarly with low values (Kachigan, 1986).

Rarely, if ever, though, will two variables have perfect correlation of $+1$ or -1 . More often, variables are either uncorrelated or have intermediate degrees of correlation. In general, if r is bigger than 0.8 (sign of relation ignored), the relationship between the two variables is very strong; if r is between 0.4 and 0.8 , the relationship is a moderate to strong one; and if r is less than 0.4 , the relationship is a weak one (Kinnear and Taylor, 1983; Luck and Rubin, 1987).

Multicollinearity exists whenever two or more of the independent variables are highly correlated with each other (Weiers, 1988). What constitutes "serious" multicollinearity is ambiguous. Some researchers have adopted various rules of thumb; for example, any pair of predictor variables must not correlate more than 0.9 ; if so, one of the variables is discarded (Green, et al. 1988).

A correlation matrix is nothing more than a systematic and orderly tabular arrangement of all the correlation coefficients that can be calculated from all the possible pairings of all the variables; for example, between x_1 and x_2 , x_1 and x_3 , x_1 and x_4 , x_1 and x_5 etc. Also, between x_2 and x_3 , x_2 and x_4 , x_2 and x_5 , and so on. A correlation matrix may be compared

to a between-city mileage table, except that instead of cities the research variables are substituted and instead of mileage a coefficient of correlation is substituted. Each cell of the matrix is occupied by a correlation coefficient between the pairing variables represented by the particular row and column that the cell occupies (Zikmund, 1989).

There are a number of procedures developed for calculating the correlation coefficient depending on the measurement level of the research data. For example, either Spearman rank correlation or Kendall's rank correlation can be applied to ordinaly-scaled data; while the Pearson (Product-Moment) correlation is appropriate to interval or ratio scale data (Zikmund, 1988).

Since the data of this research is intervally scaled, then the Pearson (Product-Moment) correlation is applied. The Pearson correlation is a more refined measure than any other correlation technique. It is insightful in its own right and also plays a key role in multivariate analysis procedures. This correlation coefficient is found in essentially all canned computer output (Lehmann, 1989).

The formula for calculating the correlation coefficient (r) for two variables (X) and (Y) is as follows (Luck and Rubin, 1987):

$$r = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum (X - \bar{X})^2 \sum (Y - \bar{Y})^2}}$$

where: \bar{X} and \bar{Y} represent the sample mean of X and Y , respectively

X = deviation of each case from the mean \bar{X}

Y = deviation of each case from the mean \bar{Y}

$\sum (X - \bar{X})(Y - \bar{Y})$ = value of covariation

$(X - \bar{X})^2$ = square of each X deviation

$(Y - \bar{Y})^2$ = square of each Y deviation

The calculations of the r values for a large number of values and cases become very involved. Fortunately, computer software packages are available to perform such lengthy calculations and produce the correlation matrix including all the needed information. In this

research, we used the PEARSON CORR command, in the SPSSX computer package, to calculate and produce the correlation matrix for our forty marketing concept variables.

6.6 Statistical Tests of the Research Hypotheses

In statistical theory an 'hypothesis' is an unproven proposition that tentatively explains certain facts or phenomena. An hypothesis is a statement, an assumption, about the nature of the world. In its simplest form an hypothesis is a guess (Zikmund, 1988). There are two main criteria for formulating a good hypothesis: (1) an hypothesis is a statement about relations between two or more measurable (or potentially measurable) variables; (2) an hypothesis should carry clear implications for testing the stated relationship (i.e., specifying how the variables are related). A statement that lacks either or both these characteristics is no hypothesis in a scientific sense (Kerlinger, 1986).

Hypothesis testing allows us to evaluate the differences between what we expect on the basis of our hypothesis, and what we observe, but only in terms of one criteria, the probability that these differences could have occurred by chance (Henkel, 1976). Hypothesis testing is one of the most fundamental and elementary forms of statistical analysis, and is also one of the oldest. Starting with observations, an hypothesis is constructed about the chance mechanism generating the observations. A test statistic is formed from the observations, leading to verification or rejection of the hypothesis (Uslander, 1976).

The basic idea of most statistical techniques is to increase our knowledge about populations using information in samples taken from them. In statistical testing, we are concerned with examining the truth, or otherwise, of hypotheses about some feature(s) of one or more populations. There is generally a large number of statistical tests available for analysing any given set of data. The range of these tests can be classified under two major categories: Parametric tests and non-parametric tests. The parametric tests are statistical procedures that utilise interval or ratio scaled data and assume population or

sampling distribution with normal distribution. The nonparametric tests are those statistical procedures that utilise nominal or ordinal scaled data and make no assumptions about the distribution of the population (Zikmund, 1989). The function of both types of tests is identical. In both cases the researcher uses the tests to discover the probability that the results of his analysis occurred due to chance fluctuations caused by unknown variables. On the basis of this, the researcher can decide whether this change probability is low enough to warrant rejecting the null hypothesis and accepting the alternative one (Greene and D'Oliveira, 1982).

The design of this empirical research is guided by eight hypotheses, as mentioned earlier in Table 6.2. And since the scale of measurement of our data is interval, therefore we shall employ three parametric tests to evaluate the significance of the eight hypotheses. These parametric tests are the Wilks' Lambda, the Univariate F-ratio, and the Hotelling's T^2 Statistic. In the following three subsections we provide a discussion on each of these three tests as they relate to the testing of the research hypotheses.

6.6.1 The Wilks' Lambda

Wilks' Lambda, sometimes called the U-Statistic or the Likelihood Criterion, is the ratio of the within-groups variance (sums of squares) to the total variance (sums of squares). A Wilks' Lambda value of 1 occurs when all observed group means are equal and values close to 0 occur when the within-groups variability is small compared to the total variability, that is, when most of the total variability is attributable to differences between the means of the groups. Thus, large values of Wilks Lambda indicate group means do not appear to be different, while small values indicate that group means do appear to be different (Norusis, 1988).

Wilks' Lambda is one of the four main multivariate test statistics associated with the application of the Multivariate Analysis of variance (MANOVA). The other three test statistics are: Pillai-Bartlett trace (Pillai's Criterion), Roy's greatest characteristic root (Roy's gcr

criterion), and Hotelling's trace criterion (Hotellings T^2 - statistic) (Bray and Maxwell, 1985). The distributions of these four statistics are complicated. They are not simple F-distribution or anything like that. However, by applying appropriate mathematical transformations, statistics can be derived which approximately follow chi-square or F-distributions. It is these transformed statistics which yield the test results printed in the computer output listings (Hand and Taylor, 1987).

In this study, the Wilks' Lambda test statistic is employed to test the significance of each of the first three hypotheses. In other words, the Lambda test statistic is used to determine the significance of each of the forty marketing concept variables, taken together, in distinguishing among and between the different sets of FTZs groups in each of the three DFA runs.

The command DSCRIMINANT, in the SPSSX computer programme, routinely prints the value of Wilks' Lambda and its associated transformed chi-square value, the degrees of freedom, and the significance level. However, since the measurement level of our data is interval, we had to manually calculate the transformed F-distribution value for each of the three Wilks' Lambda statistics using two equations (Dillon and Goldstein, 1984):

[I] For 3 groups and any number of variables (as in the first hypothesis):

$$F = \left(\frac{1 - \lambda^{1/2}}{\lambda^{1/2}} \right) \left(\frac{N - P - 2}{P} \right)$$

and the degrees of freedom (d.f.) = F
[2P, (N - P - 2)]

[II] For 2 groups and any number of variables (as in the second and third hypotheses):

$$F = \left(\frac{1 - \lambda}{\lambda} \right) \left(\frac{N - P - 1}{P} \right)$$

and the degrees of freedom (d.f.) = F
[P, (N - P - 1)]

where: λ = Value of Wilks' Lambda
 N = Total number of cases or observations
 P = Total number of Predictor Variables

6.6.2 The Univariate F-ratio Test

The Univariate F-ratio test is generally referred to as the Analysis of Variance (ANOVA) which is a parametric statistical test often used to test for significances among the variances of two or more samples (Brown, 1980). In fact, the Univariate F-ratio test is used as a procedure in the application of ANOVA to determine whether two variances are significantly different (Parasuraman, 1987).

To perform a Univariate F-ratio test, one of the two variances (i.e., the between-mean squares) is placed in the numerator and divided by the other variance (i.e., the within-mean squares) which is placed in the denominator. The F-table is referred to with respect to the degrees of freedom corresponding to the numerator and the denominator and according to the level of significance. If the calculated value of the F-ratio test is larger than the critical value in the F-table then the variances differ significantly and therefore we have to reject the null hypothesis otherwise we return it (Lehmann, 1989).

In marketing research, the ANOVA procedures are often employed to analyse data from marketing experiments in which different groups of units (e.g., stores) are exposed to various levels of an experimental treatment (e.g., amount of in-store promotion for a brand) and are measured on some criterion variable (e.g. sales of the brand) (Parasuraman, 1986).

The application of the Univariate F-ratio test is especially appropriate in situations where the dependent variable is metric (i.e., interval or ratio) and the independent variable is nonmetric or categorical (i.e., nominal or ordinal) (Hamilton, 1990). Thus, in this research the Univariate F-ratio test is employed to test the significance of each of the first three hypotheses regarding the significance of the discriminating power of each of the forty marketing concept variables, taken separately, in distinguishing among and between the various sets of groups in each of the three DFA runs. The values of the F-ratio test for each variable, is routinely computed and provided with the application of the DFA technique in the computer programme of the SPSSX package.

6.6.3 The Hotelling's T^2 Statistic

The Hotelling's T^2 statistic is a multivariate test used to assess the statistical significance of the difference between two sets of sample means across two or more variables (Hair, et. al, 1987). The Hotelling's T^2 statistic is a generalisation of the t-statistic or, to be more precise, it is the square of the value of the t-statistic. A significantly large value for this statistic is evidence that the mean vectors are different for the two sampled populations. The significance or lack of significance of T^2 is determined more accurately through a transformed value that follows the F-distribution (Manly, 1986).

The Hotelling's T^2 statistics is one of the four main statistics associated with the application of the Multivariate Analysis of Variance (MANOVA). The other three statistics are the Pillai's criterion, the Wilks' Lambda, and the Roy's gcr criterion (Bray and Maxwell, 1985).

According to our survey of the literature on MANOVA, very few marketing researchers made use of the procedures related to the MANOVA techniques (e.g., Wind and Denny, 1974; Perreault and Darden, 1975). In addition, Green and Tull (1978) remarked that MANOVA, like Canonical Correlation, has received little attention so far by marketing researchers. It is our belief that researchers in marketing avoided the use of the MANOVA procedures for two possible reasons. First, the MANOVA techniques have been always associated with the analysis of multivariate experimental designs. But according to Dillon and Goldstein (1984), the MANOVA techniques are typically, but not exclusively, employed in experimental design. Second, up to the late 1970's, the MANOVA techniques were available only on the Biomedical Computer Programmes (the BMD - 12V) and it was for the exclusive use of mainframes (Green and Tull, 1978). However, by the late 1980's, the MANOVA techniques became available on three additional computer programmes: the SPSS, the SAS, and the SYSTAT. And all the four computer programmes provide packages for use with the microcomputers (Tabachnic and FiddeI, 1989).

The distribution of the four MANOVA test statistics is complicated. However, by applying appropriate mathematical transformations, statistics can be derived which

approximately follow chi-square or F-distributions. It is these transformed statistics which yield the test results printed in the computer output listings (Hand and Taylor, 1987).

Fortunately, in the application of the Multivariate Analysis of Variance (using the MANOVA command), the SPSSX computer programme produces in the output the results of the four main test statistics: the Pillai's criterion, the Hotellings T^2 , the Wilks' Lambda, and the Roy's gcr criterion, along with the corresponding values of the F-ratio transformation for each of the four statistics (Norusis, 1988). When the independent variable consists of two categories [i.e., when the degrees of freedom (d.f.) = 1], the values of the F-tests are identical for all the four test statistics. And when it has more than two categories (i.e., d.f. > 1), the F values are often different but all the statistics are either significant or all are nonsignificant (Tabachnick and Fidell, 1989).

In this study, each of the last five hypotheses is concerned with comparing one of the five FTZs groups versus the FTZs experts panel on 19 key discriminating marketing concept variables. And the Hotelling's T^2 is found to be the most appropriate, of the MANOVA procedures, for evaluating mean differences of two categories (i.e., samples, groups, etc.) on a number of dependent (criterion) variables (Morrison, 1990). Therefore, in this study, we make use of the Hotelling's T^2 statistic to test the significance of each of the last five hypotheses which are related to the two applications of Profile Analysis.

It is worth mentioning here that instead of generating five hypotheses for the two applications of Profile Analysis, we could have generated only one hypothesis for each of the two applications of Profile Analysis. In other words, one hypothesis for evaluating the differences of four FTZs groups (i.e., the most vs the moderate vs the less vs the experts panel) and a second hypothesis for evaluating the differences of three FTZs groups (i.e., the FTZs in the developed countries vs the FTZs in the developing countries vs the FTZs experts panel). Then apply the Pillai's statistic to test the significance of the two hypotheses. However, for the purposes of this research, this approach is not appropriate for two main reasons. First, the significance of the differences among the three FTZs groups (i.e., the most, the moderate, and the less marketing-oriented) is to be tested in the

first hypothesis, by both Wilks' Lambda and the Univariate F-ratio, through the application of the Multiple DFA. And the significance of the differences between the two FTZs groups (i.e., in the developed and developing countries) is to be tested in the third hypothesis, by Wilks' Lambda, through the second application to the Two-group DFA. The second reason for not using one hypothesis for testing the significance of each Profile application is that we might get ambiguous results if differences exist. Because we will not be able to know which of the four (or of the three) groups is accountable for the group differences. And it requires a further statistical analysis to detect the group most accountable for the group differences (Tabachnick and Fidell, 1989).

6.7 Reliability and Validity Assessment

Just as it is important to understand whether the variables are measured on an interval or ordinal scale, it is important to understand that the measurements instrument used in the research should be evaluated for their reliability and validity. If invalid measures are used, then any conclusions that might be drawn are meaningless, just as if an inappropriate descriptive procedure were used for nominal data. Likewise, if the measurements are unreliable, we have little confidence that the same results would be obtained if the research were repeated. Reliability and validity are two important characteristics of any measurement procedure involved in the scientific method. Reliability and validity are related topics but address rather separate aspects of the measurement process (Lehman, 1991).

Reliability identifies the stability or consistency of the research results. It seeks to indicate the level of conformity of the research findings if the research activities were repeated under similar circumstances. Validity, however, refers to how well the research measures what it claims to measure. It seeks to verify whether the treatment was totally responsible for the outcome or did other factors also have some major impact (Kress, 1988).

On the other hand, the issues of the reliability and validity assessment are still debatable. According to Bohrnstedt (1970), not all scientists will agree with the

interpretations given by the results of the reliability and validity assessment and the reader should recognise that there is still debate about their issues. Undoubtedly, the debate about the meanings of reliability and validity will continue for some time. This perhaps might explain why many marketing researchers are less enthusiastic to assess the reliability and validity of their work as was reported in the literature by Peter (1979); Ray (1979); and Edris (1989).

However, in order to be on the safe side we have decided to address the issues of the reliability and validity assessment as they relate to this study. Therefore, in this section, we discuss first reliability and then validity. The discussion highlights each of the reliability and validity in terms of: the concern, the different methods, the method employed in the assessment of this research, and the justification for choosing the particular method of assessment.

6.7.1 Testing the Internal Consistency Reliability:

Application of Cronbach's Alpha

The goal of science is to understand relations among variables. The implementation of this goal is heavily dependent upon the ability of the researcher to measure his variables with as little error as possible because errors in measurement tend to distort relationships among variables (Bohrnstedt, 1970): Reliability reflects the relative absence of measurement errors in a measuring instrument and is associated with random (or chance) errors (Peter, 1979).

Briefly, there are three basic statistical methods available to the marketing researchers for assessing the reliability of their measures (Edris and Meidan, 1990):

(A) Measures of Stability (e.g., the test-retest procedure).

(B) Measures of Equivalence (e.g., the internal consistency methods which include the split-halves using the Spearman-Brown Prophecy formula, the Kuder-Richardson

formulas KR20 and KR21, the Guttman formula, and Cronbach's alpha which is commonly known as the alpha correlation coefficient method).

(C) Alternative form reliability.

All the above mentioned techniques of reliability assessments attempt to determine the proportion of variance in a measurement scale that is systematic. They also depend heavily upon correlation between parallel measures. The higher the correlation the more reliable the measure (Churchill, 1979; Edris and Meidan, 1990).

The basic difference among the three methods is in what the scale is to be correlated with to compute the reliability coefficient (Peter, 1979). In the test-retest method, an identical set of measures is applied to the same subjects at two different times. The two sets of obtained scores are then correlated. In the internal consistency methods, a measurement scale is applied to the same subjects at one point in time, subsets of the items within the scale are then correlated. In the alternative forms, two similar sets of items are applied to the same subjects at two different times. Scale items on one form are designed to be similar (but not identical) to scale items on the other form. The resulting scores from the two administrations of the alternative forms are then correlated (Peter, 1979).

In this study, we developed an attitudinal scale that could be employed to evaluate the marketing orientation in the operations of FTZs. The scale consists of 40 attitudinal measures (i.e., variables) related to three dimensions of the marketing concept, as they relate to the operations of FTZs. The three dimensions of the marketing concept are: (a) satisfying the industrial buyers needs, and consists of 20 variables; (b) achieving the organisational goals, and consists of 10 variables; and (c) integrating the marketing functions, and consists of 10 variables. Most of these variables were generated from the literature of both marketing management and FTZs.

In order to assess the reliability of these 40 measures, comprising the scale of this study to evaluate the marketing orientation in FTZs operation, the decision was made to

employ Cronbach's Alpha method. The justifications for choosing this particular technique rather than the other available methods can be reported as follows:

- In the test-retest method of reliability assessment, the same scale is applied a second time to the same subjects under conditions as similar as the investigator can make them. The scores from the two administrations then are correlated and the resulting index is interpreted in terms of the stability of performance of the measures over time. A two-week interval is the generally recommended retest period (Peter, 1979). While test-retest correlations represent an intuitively appealing procedure by which to assess reliability, they are not without serious problems. First, different results may be obtained depending on the length of time between measurement and remeasurement. In general, the longer the interval the lower the reliability estimate (Bohrnstedt, 1970). Second, if a change in the phenomenon occurs between the first and the second administration there is no way to distinguish between change and unreliability (Hiese, 1969). Third, not only can it be unduly expensive to obtain measurements at multiple points in time, but it can be impractical as well (Carmines and Zeller, 1979). Fourth, as for the mail survey, Bailey (1987) reported that, unfortunately, the bulk of studies in the literature have not consisted of testing and retesting the same mailed questionnaire but rather of comparing the same questionnaire in mailed versus interview situations. Fifth, if the test-retest method is employed, it should be supplemented with internal consistency estimates for each administration (Peter, 1979).
- In the split-half approach to reliability, the total number of items in a composite is divided into two halves, and the two half-scores are then correlated. Since the actual measure is twice as long as the half-score being correlated, the correlation is usually inserted into a formula known as the Spearman-Brown prophecy formula (Bohrnstedt, 1983). Although, the split-half method is one of earliest variety of equivalence measures and is the basic form of internal consistency estimate, yet there is pointed criticism being directed at this method of reliability as the measure

of internal consistency of scale. The criticism focuses on the necessarily arbitrary division of the items into equivalent halves. Each of the many possible divisions can produce different correlations between the two forms or different reliabilities. Which division is correct or, alternatively, what is then the reliability of the scale being measured (Churchill, 1987). It is no wonder then that the split-half method began to fall into disuse as more precise methods for estimating reliability were developed (Bohrnstedt, 1983). By far the most popular of these reliability estimates is developed by Cronbach in 1951 which is known as the alpha correlation coefficient or simply as Cronbach's alpha (Carmines and Zeller, 1979). Finally, as for its application in the mail survey, Bailey (1987) indicated that the split-half reliability procedures would be difficult if not impossible to administer for a mail questionnaire as a whole.

- The alternative form reliability method is, in some ways, similar to the test-retest method in that it also requires two testing situations with the same subjects (people). However, it differs from the test-retest method in one very important regard: The same test is not given on the second testing but an alternative, and presumably equivalent, form of the same test is administered to the same people. These two forms of the measuring instrument are intended to measure the same thing. As in the test-retest reliability method, the results of the two tests are correlated on an item-by-item basis to obtain a reliability coefficient (Churchill, 1987). Although the alternative-form method is superior to the simple test-retest method, primarily because it reduces the extent to which individuals' memory can inflate the reliability estimate, it suffers from certain basic limitations (Carmines and Zeller, 1979). The first problem is associated with the extra time, expense, and trouble involved in obtaining two truly equivalent measures (forms) (Churchill and Peter, 1984). The second problem, which is a technical one, is related to the development of substantially equivalent alternative measures so that the mean, variance, and intercorrelation of items on each form must be equivalent (Gulliksen,

1950). Though this problem has been overcome to some extent in educational testing, it remains a serious consideration for the measurement of other behavioural constructs (Peter, 1979). An even more perplexing problem with the application of the alternative form reliability is the practical difficulty of constructing two alternative forms that are parallel and proving that the two measures are equivalent in content (Carmines and Zeller, 1979). For example, if the correlation between the scores on the two forms is low, it is difficult to determine whether the measures have intrinsically low reliability or whether one of the forms is simply not equivalent in content to the other (Nunnally, 1967). The importance of assessing reliability with the alternative forms depends on the phenomenon under investigation. If the phenomenon is expected to vary over a relatively short period of time, then alternative form measures may be necessary for examining changes (Peter, 1979). Though the alternative form method may be necessary for the investigation of some marketing constructs, coefficient alpha usually will provide a close estimate of the alternative forms reliability (Nunnally, 1967).

- A better approach to internal consistency reliability is known as coefficient alpha. This method, in effect, produces the mean of all possible split-half coefficients resulting from different splittings of the measuring instrument. The resulting coefficient alpha can range from 0 to 1. A value of 0.6 or less is usually considered as unsatisfactory (Churchill and Peter, 1984). At the same time, it is often too costly in terms of time, money, and efforts to try to obtain a higher reliability coefficient beyond 0.8 (Nunnally, 1967; Carmines and Zeller, 1979). The key advantages of the alpha correlation coefficient method of the reliability assessment are as follows: First, it is a very general reliability coefficient encompassing both the Spearman-Brown prophecy formula as well as the Kuder-Richardson 20 equation. As such it is the most commonly accepted formula for assessing the reliability of a measurement scale with multi-point items (Bohrstedt, 1983). Second, it is particularly easy to use because it requires only a single test

administration, and the minimal effort that is required to compute alpha is more than repaid by the substantial information that it conveys about the reliability of a scale (Carmines and Zeller, 1979). Third, according to Nunnally (1967) the alpha correlation method is one of the most important deductions from the theory of measurement errors and it is the single most meaningful measure of internal consistency reliability and, therefore, should routinely be applied to all new tests to assess the quality of the instrument. Finally, although some aspects of deriving the alpha coefficient have been criticised by few researchers, it still offers a useful and usable approach to assessing the reliability of measurement scales in marketing research (Peter, 1979).

Since our scale is constructed to measure three dimensions relating to the adoption of the marketing concept in the operation of FTZs [i.e., satisfying the industrial buyers needs (20 variables); achieving the organisational goals (10 variables); and integrating the marketing functions (10 variables)], we had to compute the correlation alpha for the measures (variables) in each dimension, one at a time. In addition, correlation alpha was computed for all the three dimensions. In other words, four runs of reliability analysis were performed to assess the ability of our scale to reduce the random error of measurement in the process of data collection.

6.7.2 Validity Assessment: Content (Face) Validity

The validity of a scale is the extent to which it is a true reflection of the underlying variable(s) it is attempting to measure. Alternatively, it is the extent to which the scale fully captures all aspects of the construct to be measured. The most common approaches to

assess the validity of a measurement are*: construct validity, criterion-related validity, and content (face) validity. Below we briefly discuss construct validity and criterion validity. Content (face) validity is discussed in more detail.

Construct Validity - involves understanding the theoretical rationale underlying the obtained measurement. The approach is to relate the construct of interest to other constructs such that a theoretical framework is developed for the phenomenon being measured. Construct validity can be evaluated with other approaches. If a construct exists, it should be successfully measured by methods that are different or independent. **Convergent validity** involves the measurement of a construct with independent measurement techniques and the demonstration of a high correlation among the measures. Alternatively, if a construct exists, it should be distinguished from constructs which differ from it. **Discriminant validity** involves demonstrating a lack of correlation among differing constructs.

Criterion-related validity - in pursuing the objective of criterion validity, the researcher attempts to develop or obtain an external criterion against which the scaling results can be matched. The outside criterion may, of course, be another scale. Criterion validity can be assessed by correlating the set of scaling results under study with some other set, developed from another instrument. Criterion-related validity can take two forms, based on the time period involved: concurrent and predictive validity. **Concurrent validity** involves comparing the results of two different measures of the same characteristic in the same object at the same point in time. Concurrent validation is not limited to comparisons between scores on measurement instruments. It can also occur between two behaviours or between a behaviour and a measurement. **Predictive validity** refers to the extent to which a particular measure (test) predicts another "criterion" measure. If the correlation among the two measures is high, the initial measure is said to have predictive validity. Measures that have good predictive validity are extremely useful in determining what may happen next in

*Sources: Discussion on types of validity is based on various sources including: Carmines and Zeller, 1979; Bohrnstedt, 1983; Rubin, 1983; Kerlinger, 1986; Green et al, 1988; Lehmann, 1989; Lehman, 1991.

a program or organisation or what people are likely to do next. From a decision-making perspective predictive validity is known as **Pragmatic validity**.

Content (face) validity - the content of a measurement instrument concerns the substance, matter and topics included as they relate to the characteristic that is being measured. Since a measuring instrument includes only a sample of the possible items that could have been included, content validity is concerned with how representative the scale or instrument is of the universe of the property or characteristic being measured.

By its very nature, content validation is essentially judgemental. The researcher ordinarily attempts to measure content validity by the personal judgements of experts in the field. That is, several content experts may be asked to judge whether the items being used in the instrument are "representative" of the field being investigated.

Establishing a content-valid measure of attitude(s) involves a number of inter-related steps (Carmines and Zeller, 1979; Rubin, 1983; Kerlinger, 1986).

First, a domain of content must be fully specified. Next, the available literature on the domain of content must be thoroughly explored, hoping thereby to come to an understanding of the domain. A thorough search and examination of the literature may suggest, for example, that the domain is properly conceived of in terms of a number of dimensions. In addition, it may be useful to further subdivide these dimensions. It is then necessary to construct items that reflect the meaning associated with each dimension and each subdivision of the domain being studied. It is impossible to specify exactly how many items need to be developed for any particular domain of content. But one point can be stated with confidence: It is always preferable to construct too many items rather than too few; inadequate items can always be eliminated, but one is rarely in a position to add "good" items at a later stage in the research.

Finally, although in construct or criterion-related validity, a correlation coefficient is generally used to define the degree to which a test relates to other measures of the same or related variables. In content validity there is no external referent and a correlation is meaningless. Therefore, content validity is a judgmental process, with the investigator or

others deciding if the test seems well constructed and samples its domain adequately (Lehman, 1991). Accordingly, competent judges (experts), on the field of the domain, should judge the content of the items. The domain of content must be clearly defined, and the judges must be furnished with specific directions for making judgements, as well as with specification of what they are judging. The consensus of the experts (judges) opinion should be taken into full consideration in particular with respect to which dimensions or subdimension(s) (i.e., variables or subvariables) to be included in or deleted from the measure being developed. To insure that the developed measure has content validity, these steps must be worked out thoughtfully and meticulously throughout.

In this empirical study, the decision was made to employ content validity for the following reasons:

- (a) It is clear that the process of construct validity is, by necessity, theory-laden. Strictly speaking, it is impossible to "validate" a measure of a concept in this sense unless there exists a theoretical network that surrounds the concept (Carmines and Zeller, 1979). Given the relative paucity of good theory in marketing, construct validity rarely receives much attention in marketing research practices (Lehmann, 1989).
- (b) The greatest difficulty of criterion-related validation is the criterion (Kerlinger, 1986). Criterion validation cannot be applied to all measurement situations in the social sciences. The most important limitation is that, for many if not most measures in the social sciences, there simply do not exist any relevant criterion variables against which a developed measure can be reasonably evaluated. Therefore, criterion validation procedures have rather limited usefulness in the social sciences (Carmines and Zeller, 1979).
- (c) Content validity estimates are essentially systematic but subjective evaluations of the appropriateness of the measuring instrument for the task at hand (Moser and Kalton, 1989). In addition, the most common use of content validity is with multi-item measures where a number of items (questions) are combined to represent

one dimension. Similarly, other items can be combined to constitute other dimensions. The content validity of these items (questions) is to be determined by having a panel of judges (e.g., supervisor(s), colleague(s), and/or a panel of experts on the domain of content) to assess the representatives of the items used to measure the domain of content being studied (Kinnear and Taylor, 1987). Finally, content validity is the most common form of validation used in marketing research (Kinnear and Taylor, 1987; Tull and Hawkins, 1987).

6.8 Summary

In this chapter, we have outlined the methodology of analysis employed in this study. First, we highlighted the different approaches to the methodology of marketing data analysis where a flowchart, depicting the selection of an array of multivariate techniques, was presented and showing the path we followed to select Discriminant Function Analysis (DFA) as the most appropriate multivariate technique for the purposes of this study. It was expressed that the Discriminant Function Analysis (DFA) (i.e., the two-group DFA and the multiple DFA), and Profile Analysis were both employed in this research. Also, in the beginning of the chapter, we provided a discussion on the method employed for establishing 'a priori' classification of the FTZs under study. It was emphasised that a survey research was conducted on a group of expertise, in the domain of FTZs, to enable us to establish 'a priori' classification of the FTZs according to their marketing orientation. According to the responses of the FTZs experts to the survey, we were able to establish 'confidence limits' ranging from 6.75 to 7.93 which stands for the category of the "moderate marketing-oriented FTZs" group. Thus, any FTZ authority response falling below these limits should be considered as "less marketing-oriented" and if it falls above the limits it should be regarded as "most marketing-oriented". The survey on the FTZs experts panel was a critical stage to this research. With such 'a priori' classification our data can be readily available for the DFA applications and more meaningful analysis can be carried out.

Second, we provided the presentation of DFA. The DFA was canvassed in terms of: the objective and assumptions, the description of the programme, the computer output, the justification of the application of its two versions, and the validation of its functions. It was emphasised that: (i) the multiple DFA was employed in order to achieve a number of objectives, including: (a) to accurately classify FTZs adoption of the marketing concept into three distinguishing groups (i.e., most, moderate, and less marketing-oriented FTZs); (b) to identify the marketing concept variables that would best discriminate among the three FTZs groups; (c) to predict group membership to any of the three FTZs groups. (ii) the two-group DFA was employed also in order to: (a) to identify the marketing concept variables that would best discriminate between the grouping of marketing-oriented FTZs (i.e., the most and the moderate) and the group of less marketing-oriented FTZs; (b) to predict the group membership to any of the two FTZs groupings, as being either marketing-oriented or less marketing-oriented; and (c) to identify the marketing concept variables that would best discriminate between the FTZs in the developed and developing countries.

Third, the discussion of our analytical plan was turned to Profile Analysis. A major virtue of Profile Analysis is to profile the average responses of K-groups of respondents in such a way that one can easily visualise differences (or similarities) between or among the respondents in their answers. It was indicated that Profile Analysis was used in this research to visualise the comparative profiles of the authorities' attitudes of the different FTZs groupings and of the attitudes of the FTZs experts panel towards the importance they attach to the employment of key marketing variables in the operations of FTZs.

Fourth, we presented the technique of Correlation Analysis. It was defined as a measure of the extent to which two variables share variation between them and the index of this measure is called the correlation coefficient (r). It was stressed that there is a number of procedures developed for calculating the correlation coefficient depending on the measurement level of the research data. And since the data of our research is intervally scaled then the Pearson (Product-Moment) Correlation is applied for two main purposes. First, to identify those marketing variables that are related and how this can be interpreted

in light of the research context. Second, during the application of DFA, like in Regression Analysis, it is advisable to check for multicollinearity (i.e., to check for any $r_s > 0.9$ for any pair of variables).

Fifth, the appropriate statistical tests, for evaluating the significance of the eight research hypotheses, were discussed. Here, it was pointed out that since the scale of measurement of our data is interval then three parametric tests are applied for testing the significance of the eight research hypotheses. The three tests are the Wilks' Lambda, which is a procedure of MANOVA; the Univariate F-ratio, which is a procedure of ANOVA; and the Hotelling's T^2 statistic, which is another procedure of MANOVA. While the Wilks' Lambda is used, in each of the first three hypotheses, to test the significance of the forty marketing variables, taken all together, in discriminating among and between the different sets of FTZs groupings. And the Univariate F-ratio is used, also in each of the first three hypotheses, to test the significance of the forty marketing variables, each taken separately. the Hotelling's T^2 statistic is used to test the significance of each of the last five hypotheses, associated with the two applications of Profile Analysis, regarding the differences/similarities between each of the five FTZs groups and the FTZs experts panel.

Finally, we concluded the chapter with a discussion of the reliability and validity assessment of this research. Reliability is concerned with the consistency of the research findings if the research activities were repeated under similar circumstances. Validity, however, refers to how well the research measures what it claims to measure. Here, we pointed out that in this research it is most relevant to assess the reliability by employing the Alpha Correlation method, and to use the Content (Face) Validity method to assess the validity. The justifications for employing each method of assessment were discussed in detail.

CHAPTER SEVEN
RESEARCH FINDINGS

		Page No
7.1	Introduction	228
7.2	Testing the Research Hypotheses	230
	7.2.1 The Wilks' Lambda Test	231
	7.2.2 The Univariate F-Ratio Test	234
	7.2.3 The Hotelling's T^2 Statistic	241
7.3	Main Results of Discriminant Function Analysis (DFA)	245
	7.3.1 Validating the Discriminant Functions	246
	7.3.2 Discrimination Among the Most, Moderate and Less Marketing-Oriented FTZs According to their Adoption of the Marketing Concept	249
	7.3.3 Discriminating between the Groupings of the Marketing-Oriented (Most and Moderate) and the Group of Less Marketing-Oriented FTZs on the basis of their Authorities' Attitudes toward the Marketing Concept Adoption	263
	7.3.4 Discriminating between the Attitudes of FTZs' Authorities, in the Developed Countries and in the Developing Countries, toward the Marketing Concept Adoption	269
7.4	Profile Analysis of the Evaluative Attitudes of the Authorities in the various FTZs' Groupings and The FTZs Experts Panel toward the Marketing Concept Adoption	277
	7.4.1 Comparative Attitudes Between the Authorities of the FTZs Groupings (most/moderate/less marketing-oriented) and the FTZs' Experts Panel toward the Marketing Concept Adoption	278
	7.4.2 Comparative Attitudes Between the FTZs' Authorities in the Developed/Developing Countries and the FTZs Experts Panel towards the Marketing Concept Adoption	281
7.5	Correlation Analysis	286
7.6	Reliability and Validity Assessment	290
	7.6.1 Testing the Internal Consistency Reliability: Application Cornbach's Alpha	290
	7.6.2 Examining the Content (Face) Validity	295
7.7	Summary	298

7.1 Introduction

The concern in this empirical study is with the adoption of the marketing concept by FTZs authorities throughout the world in the operations of their zones. Generally speaking, the study attempts to find out to what extent the FTZs authorities around the world are oriented by the marketing concept, in terms of: satisfying industrial buyers' needs, achieving their organisational goals and integrating the marketing functions.

The study aims to answer a number of questions, as follows:

- (1) Can the FTZs be classified into three distinct groups (i.e., most/moderate/less marketing-oriented) on the basis of the authorities' attitudes toward the marketing concept dimensions?**
- (2) What are the marketing variables that would best discriminate (and profile) among the three FTZs groups (mentioned above)?**
- (3) What are the marketing variables that would best discriminate (and profile) particularly between the marketing oriented (i.e., most and moderate, combined together) and less marketing oriented FTZs?**
- (4) Are the FTZs in the developed countries different from their counterpart FTZs in the developing countries in terms of their responses to the marketing concept in their operations? and what are the major marketing discriminators between them?**
- (5) Are the members of FTZs' experts panel different from the FTZs' authorities of the various groups under study, in their evaluative attitudes toward the adoption of the marketing concept?**
- (6) Are the members of FTZs' experts panel different from the FTZs' authorities in the developed and developing countries, in their evaluative attitudes toward the adoption of the marketing concept in the operations of the zones?**

The required information for this investigation was gathered via mail survey preceded by pre-contacts by telephone and telex. The survey was administered to 159 FTZs and 34

members of the FTZs' experts panel around the world (See Chapter 5). In order to reduce measurement errors and to check on the internal consistency of the collected data, a correlation alpha analysis was performed on all the measures employed in this study, taken separately and together. In addition, correlation analysis was conducted in order to find those marketing variables that are associated with each other and also to check for multicollinearity.

In order to find convincing answers to the research questions, we decided to analyse our data via Discriminant Function Analysis (The methods of the two-groups and the three-groups DFA), and profile analysis.

The assessment of reliability and validity, the analysis of the data, and the required interpretation all are reported in this chapter. More specifically, Chapter Seven presents the analysis and interpretation of the results through the following stages:

- (i) Testing the Research Hypotheses.
- (ii) Validating the Discriminant Functions.
- (iii) Identification and Differentiation among the FTZs, according to the authorities' attitudes towards the marketing concept adoption in the operations of the zones.
- (iv) Discrimination between the grouping of the marketing-oriented (most and moderate) and the less marketing-oriented FTZs group on the basis of the authorities attitudes toward the employment (i.e., adoption) of the marketing concept variables.
- (v) Comparison between the FTZs in the developed and developing countries on the basis of their attitudes toward the variables of the marketing concept.
- (vi) Profile analysis of the evaluative attitudes of the authorities in the various FTZs' groupings and the FTZs' experts panel toward the Marketing Concept dimensions.
- (vii) Correlation Analysis.
- (viii) Reliability and Validity of the Measures under study.

Each of the above stages shall be discussed in detail in the following sections.

7.2 Testing the Research Hypotheses

The design of this research is guided by eight key hypotheses about discriminations and variations among and between different groupings of the 85 FTZs and 24 FTZs experts according to their attitudes towards the employment of 40 marketing concept variables in the operations of the zones.

Three of the eight hypotheses are related to the DFA output, and five hypotheses are related to the results of Profile Analysis. The eight hypotheses are tested via three statistical tests. A statistical test is a technical device a researcher uses to decide whether he/she accepts or rejects the null hypothesis(es) under consideration. The three tests employed in this investigation are the Wilks' Lambda ratio, the Univariate F-ratio, and the Hotelling's T^2 statistic.

The Wilks' Lambda-ratio is used to test the first three hypotheses to determine the significance of the 40 marketing variables (in aggregate), included in each discriminant function, to distinguish among and between the different sets of FTZs groups in each of the three DFA runs.

The Univariate F-ratio is used to test also the first three hypotheses to determine the significance of each predictor variable, included in each discriminant function, to discriminate among and between the different sets of groups in each of the three DFA runs.

And the Hotelling's statistic is used to test the last five hypotheses to determine the significance of 19 key marketing variables (in aggregate) to differentiate between each of the five FTZs groupings and the FTZs experts panel in their attitudes towards the marketing concept variables.

The calculations for the three tests are performed by the computer. While the SPSSX computer output routinely produces the values of the Chi-square transformation of the computed Wilks' Lambda in each of the three DFA runs, the values of the Univariate F-ratio transformation of the computed Wilks' Lambda had to be calculated manually. Furthermore, in the application of the Multivariate Analysis of Variance (MANOVA), the

SPSSX computer output produces routinely the values of the Univariate F-ratio transformation of the Hotelling's T^2 statistic for each of the last five hypotheses.

7.2.1 The Wilks' Lambda Test

The purpose of using the Wilks' Lambda test is to check on how significant the marketing variables, taken together, are in discriminating between/among the FTZs groups in each run of the DFA. It was hypothesized that:

H0(1): There is no significant differentiation (variation) among the three groups of FTZs (i.e., most, moderate, and less marketing-oriented) according to the authorities' attitudes towards importance attached to the employment of the forty marketing concept variables*, taken together, in the operations of their zones.

HA(1): There is a significant differentiation (variation) among the three groups of FTZs (i.e., most, moderate, and less marketing-oriented) according to the authorities' attitudes towards importance attached to the employment of the forty marketing concept variables*, taken together, in the operations of their zones.

Looking at Table 7.1 in the first row H0(1), we find that Wilks' Lambda has a value of .0378 which is very small (i.e., closer to (0) than to (1)). Such small values of Wilks' Lambda indicate that the group means do appear to be different (Norusis, 1988). In addition, the computed transformation values of both the Chi-square and the Univariate F-ratio exceed their corresponding critical values at $\alpha = 0.05$. On this basis, we should reject the null hypothesis H0(1) in favour of the alternative one HA(1). In other words, the result of Wilks' Lambda in the Multiple DFA computer programme indicates that the authorities of the three FTZs groups (i.e., the most, the moderate, and the less marketing-oriented) do differ in their evaluative attitudes towards the importance attached to the employment of the

* A list of the forty variables is provided in Table 5.1, Chapter 5.

forty marketing concept variables, taken together, in the operations of their zones. These differences in the attitudes might be due to the fact that each FTZs group operates at a different level, (i.e., most, moderate, and less marketing-oriented).

Table 7.1 : Wilks' Lambda Values for the first Three Hypotheses and the Corresponding Values of their Transformation into the Chi-Square and Univariate F-ratio Distributions

Hypotheses	Wilks' Lambda λ	Chi-square x^2 Computed	Chi-square x^2 Critical	Degrees of Freedom $\alpha = .05$	Univariate F-ratio (computed manually)	Univariate F-ratio Critical	Degrees of Freedom $\alpha = .05$
H0(1)	.0378	230.90	34.76	48	4.454	1.450	(80,86)
H0(2)	.1586	139.91	6.75	14	5.836	1.71	(40,44)
H0(3)	.2408	104.66	10.12	19	3.468	1.71	(40,44)

HO(2): There is no significant difference (variation) between the grouping of the marketing-oriented FTZs (i.e., the most, and the moderate, combined) and the less marketing-oriented FTZs on the basis of the authorities' attitudes towards the importance attached to the employment of the forty marketing concept variables (mentioned above), taken together, in the operations of their zones.

HA(2): There is a significant difference (variation) between the grouping of the marketing-oriented FTZs (i.e., the most, and the moderate, combined) and the less marketing-oriented FTZs on the basis of the authorities' attitudes towards the importance attached to the employment of the forty marketing concept variables (mentioned above), taken together, in the operations of their zones.

The second row in Table 7.1 shows that the Wilks' Lambda of testing H0(2) has a value of .1586 which is small indicating that the group means do appear to be different. In addition, the computed transformation values of both the Chi-square and the Univariate F-ratio exceed their corresponding critical values at $\alpha = 0.05$. Accordingly, we reject the null hypothesis H0(2) in favour of the alternative one HA(2). Hence, the result of the Wilks' Lambda, in the first run of the Two-group DFA computer programme, indicates that the grouping of the marketing-oriented FTZs (the most and the moderate marketing-oriented, combined) do indeed differ from the less marketing-oriented FTZs in their authorities' attitudes towards the importance of employing the forty marketing concept variables, taken together, in the operations of the zones.

H0(3): There is no significant difference (variation) between the FTZs in both the developed and developing countries with regard to the authorities' attitudes towards the importance attached to the employment of the forty marketing concept variables, taken together, in the operations of their zones.

HA(3): There is a significant difference (variation) between the FTZs in both the developed and developing countries with regard to the authorities' attitudes towards the importance attached to the employment of the forty marketing concept variables, taken together, in the operations of their zones.

The third row in Table 7.1 shows that the Wilks' Lambda of testing H0(3) has a value of .2408 which is still small indicating that the group means do appear to be different. In addition, the computed transformation values of both the Chi-square and the Univariate F-ratio exceed their corresponding critical values at $\alpha = 0.05$. Accordingly, we reject the null hypothesis H0(3) in favour of the alternative one HA(3). In other words, the result of Wilks' Lambda, in the second run of the Two-group DFA computer programme, indicates that the FTZs operating in the developing countries are distinguished from those FTZs operating in the developed countries in terms of their authorities' attitudes towards the employment of the forty marketing concept variables, taken together, in the operations of the zones.

7.2.2 The Univariate F-ratio test

The F-ratio test was also used in testing the variables in the discriminant functions. The F statistic was computed to determine the significance of each discriminator (marketing variable), included in each discriminant function, to discriminate among and between the four different FTZ groupings. It was hypothesized that:

H0(1): There is no significant differentiation (variation) among the three groups of FTZs (i.e., the most, moderate and less marketing-oriented) in their attitudes towards the importance of employing the forty variables* related to the three key elements of the marketing concept (i.e., satisfying the industrial buyers needs, achieving the organisational goals, and integrating the marketing functions, taken separately.

HA(1): There is a significant differentiation (variation) among the three FTZs groups (i.e., the most, moderate, and less marketing-oriented) in their attitudes towards the importance of employing the forty marketing concept variables* taken separately.

Table 7.2 summarises the computed value of the F-ratio, and its significant level for each predictor variable in the multiple DFA and the other two runs of the Two-group DFA. These values are arranged to show the results of testing the three hypotheses H0(1), H0(2), and H0(3).

Looking closely at Table 7.2 in testing for the first hypothesis H0(1) we find that the computed Univariate F-values indicate that all the forty marketing concept variables are significant at .05 level of significance. Thus, the decision is to reject the null hypothesis H0(1) in favour of the alternative one HA(1), and conclude that the three FTZs groups (i.e., the most, moderate, and less marketing-oriented) are indeed different with respect to their authorities' attitudes towards the importance of employing the forty marketing concept variables, taken separately.

* A list of the forty variables is available in Table 5.1, Chapter 5

Table 7.2: Univariate F-Values and its Significant Level for the Three Hypotheses H0(1), H0(2), and H0(2)

VARIABLES	F-value (2,82)	F-value (1,83)	F-value (1,83)
	H0(1)	H0(2)	H0(3)
(i) <u>Satisfying the industrial buyer needs:</u>			
1. Location of the zone	5.20 ^c	6.57 ^d	.02 ^o
2. Size of the zone	6.30 ^b	4.93 ^d	.17 ^o
3. Capacity of space for warehousing and storage	9.88 ^a	15.78 ^a	6.09 ^d
4. The offering of processing operations	20.68 ^a	33.82 ^a	1.28 ^o
5. The offering of assembly operations	17.84 ^a	28.31 ^a	1.15 ^o
6. Size of area available for manufacturing activities	11.05 ^a	14.65 ^a	9.26 ^a
7. Utilities for manufacturing activities	10.82 ^a	15.64 ^a	26.08 ^d
8. Transporting equipment	15.22 ^a	16.53 ^a	.38 ^o
9. Maintenance of equipment	16.25 ^a	17.80 ^a	.03 ^o
10. The offering of a telex system	4.90 ^d	4.80 ^d	7.03 ^d
11. The offering of a facsimile system	7.60 ^c	13.30 ^a	1.81 ^o
12. The maintenance of telecommunication system	5.39 ^c	9.96 ^b	.01 ^o
13. The size of the work force	9.05 ^a	5.91 ^d	8.22 ^d
14. Quality of the work force	18.83 ^a	34.11 ^a	.17 ^o
15. The well-being of the work force	14.66 ^a	17.20 ^a	.04 ^o
16. Safety of the work force	11.87 ^a	20.52 ^a	.01 ^o
17. Cleanliness of the zone area	12.25 ^a	12.59 ^a	.34 ^o
18. Sanitation of zone area	11.51 ^a	18.90 ^a	1.56 ^o
19. Security of zone premises	4.76 ^d	8.29 ^c	.17 ^o
20. Supervisory manoeuvring	4.23 ^d	6.02 ^d	1.12 ^o
(ii) <u>Achieving the organisational goals:</u>			
21. Maximisation of sales	7.36 ^a	13.67 ^a	.47 ^o
22. Maximisation of profits	7.46 ^a	14.54 ^a	1.42 ^o
23. Maximisation of market share	18.93 ^a	36.13 ^a	.01 ^o
24. Maximisation of return on investment	11.79 ^a	18.84 ^a	.04 ^o
25. Minimising cost of zone operations	9.97 ^a	14.62 ^a	.04 ^o
26. Growth rate of FTZ	24.32 ^a	34.17 ^a	1.14 ^o
27. Integration of the departmental functions of the zone authority	15.17 ^a	19.94 ^a	6.67 ^d
28. Public relations with zone users	18.13 ^a	10.75 ^a	.03 ^o

Table 7.2 : (Continued)

VARIABLES	F-value (2,82)	F-value (1,83)	F-value (1,83)
	H0(1)	H0(2)	H0(3)
29. Relations with government	9.04 ^a	12.51 ^a	.10 ^e
30. Free Trade zone image/reputation	10.19 ^a	15.13 ^b	3.66 ^e
<u>(iii) Integrating the marketing functions:</u>			
31. Expanding the area available for the zone	15.52 ^a	22.21 ^a	.92 ^e
32. Improving the quality of facilities	16.56 ^a	20.88 ^a	.07 ^e
33. Updating the zone facilities	7.65 ^a	9.21 ^b	1.29 ^e
34. Expanding the capacity of the zone facilities	14.90 ^a	18.19 ^a	6.82 ^d
35. Offering zone users more choice	13.54 ^a	23.84 ^a	6.42 ^d
36. Reviewing prices	18.42 ^a	30.06 ^a	1.28 ^e
37. Using advertising channels	13.64 ^a	19.19 ^a	3.35 ^e
38. Personal selling	22.30 ^a	44.68 ^a	11.09 ^d
39. Marketing Research activities	42.06 ^a	80.78 ^a	.79 ^e
40. Policies for implementing plans for marketing the zone privileges and services	16.57 ^a	32.73 ^a	.06 ^e

- a = significant beyond .001 level
- b = significant at .002 level
- c = significant at .01 level
- d = significant at .05 level
- e = not significant

H0(2): There is no significant difference (variation) between the grouping of the marketing-oriented (i.e., the most, and the moderate, combined) and the less marketing-oriented FTZs on the basis of their attitudes towards the importance of employing the forty variables related to the marketing concept (mentioned above), taken separately.

HA(2): There is a significant difference (variation) between the grouping of the marketing-oriented (the most, and the moderate, combined) and the less marketing-oriented FTZs on the basis of their attitudes towards the importance of employing the forty marketing concept variables (mentioned above), taken separately.

Looking at Table 7.2, we find that the F-ratio values are all significant at .01. Accordingly, we should reject the null hypothesis H0(2) in favour of the alternative one HA(2) and conclude that the grouping of the marketing-oriented (the most, and the moderate, combined) and the less marketing-oriented FTZs do differ on the basis of their authorities' attitudes towards the importance of employing the forty marketing concept variables, taken separately.

H0(3): There is no significant difference (variation) between the FTZs, in both the developed and the developing countries, with regard to their authorities' attitudes towards the importance of employing the forty marketing concept variables, taken separately.

HA(3): There is a significant difference (variation) between the FTZs, in both the developed and developing countries, with regard to their authorities' attitudes towards the importance of employing the forty marketing concept variables, taken separately.

Looking closely at Table 7.2, we find that the values of the F-ratio test indicate that out of the 40 marketing variables included in the analysis, only 9* are significant at .05 level of significance, while the other 31 variables were not significant in discriminating between the FTZs in both the developed and developing countries. Therefore we should refute the null hypothesis H0(3) with respect to these 9 significant variables, but accept H0(3) regarding the other 31 non-significant variables. Accordingly, we may conclude that: there is a significant differentiation (variation) between the two FTZs groups, in both the developed and developing countries, with regard to their authorities' attitudes towards the

* These significant variables are explained elaborately in the following page.

importance of employing 9 of the 40 marketing concept variables, taken separately. But there is no significant differentiation among these same FTZs groups with respect to their attitudes towards the importance of employing the remaining 31 marketing variables, taken separately. A possible explanation as for why the attitudes of the FTZs authorities in both typologies, the developed and the developing countries, did not indicate significant differences with regard to the 31 marketing variables, when each variable was considered individually, is that the two FTZs groups, of the developed and developing countries, are more or less homogenous. In other words; the moderate, and the less marketing-oriented FTZs are all contained and spread, in nearly equal proportions, across the two typologies (see Table 7.10).

However, a possible explanation as for why the FTZs authorities, in both the developed countries and developing countries, indicated significant differences in their attitudes towards the importance of employing these only 9 marketing variables, could be that such marketing variables are related to the nature of the FTZs operations which does indeed differ in both typologies (i.e., the nature of the FTZs operations in the developing countries is different from their counterparts in the developed countries). Below we briefly discuss the possible explanation behind each of the nine significant marketing concept variables.

V_3 = Capacity of space for warehousing and storage. The FTZs authorities in both typologies (i.e., the developed and the developing countries) differ in their attitudes towards the importance of employing this variable in the actual operations of their zones, the reason might be because manufacturing activities are not allowed in many FTZs of the developed countries therefore, the authorities of these zones had to pay more attention to warehousing than their counterparts in the developing countries. However, the FTZs in the developing countries do consider warehousing in their zone operations but not as much as in the developed and this could explain why this variable has an F-ratio value = 4.09 which is not much larger than its critical F-value = 3.95. This in turn explains why this variable (i.e., V_3) did not appear among the most important discriminators between the FTZs in both

typologies (See Table 7.11). Accordingly, variable V_3 shows its ability to discriminate only when it is considered separately and not in conjunction with other variables.

V_6 = Size of area available for manufacturing activities, and V_7 = Utilities for manufacturing activities. The FTZs authorities in both typologies differ in their attitudes towards the importance of employing these two variables in the actual operations of their zones because the FTZs in the developing countries are more manufacturing-oriented than the zones in the developed countries. These two variables ($V_6 + V_7$) are considered among the most important discriminators between the FTZs in both typologies (See also Table 7.11).

V_{10} = the offering of a telex system. The FTZs authorities in both typologies differ with respect to this variable because the FTZs in the developing countries rely upon the telex system as a fast means of communications with their correspondents. The reason is because the facsimile system, which is more used by the FTZs in the developed countries, is more expensive to operate and thus is less commonly used in the developing countries. Variable V_{10} is also considered among the most important discriminating variables between the FTZs in both typologies (See Table 7.11).

V_{13} = size of work force. The reason that the FTZs, in both typologies, differ with regard to this variable is because among the key objectives of establishing FTZs in the developing countries is to provide a source of employment for the nationals. Therefore, the FTZs in the developing countries are more labour-intensive (ILO, 1988). This variable (V_{13}) is not regarded as a strong discriminator when is considered in conjunction with other marketing variables, and thus it is not shown in Table 7.11 among the discriminating variables between the FTZs in the developed and the developing countries.

V_{27} = integration of the departmental functions of the zone authority. The reason that the FTZs authorities, in the two typologies, differ with regard to this variable (V_{27}) might be because the organisational structure of the FTZs in the developing countries is more complex. Because the authorities of these zones are usually more involved in communication flow and feedback with the zone users, government bureaucracies, the

Public, and other people or organisations of interest. This in turn adds up to the complexity of the internal structure of its organisation. Therefore, the FTZs in the developing countries give this variable (V_{27}) more weight in the operations of their zones. This variable is also considered as an important discriminator between the FTZs in both typologies (See Table 7.11).

V_{34} = extending the capacity of the zone facilities. The reason the FTZs authorities, in the two typologies, differ in their attitudes with respect to this variable might be because the FTZs, in the developing countries are operating in a competing market to attract more users (usually coming from the industrial countries). Thus, in the hope of developing facilities that would meet more needs of the zone users, we find that the FTZs in the developing countries are exerting more efforts, than the FTZs in the developed countries, to extend the capacity of the zone facilities such as the capacity of: the telecommunications systems, the manufacturing utilities, the transporting equipments, and the like. This variable V_{34} is also considered among the most important discriminators between the FTZs in the two typologies (See also Table 7.11).

V_{35} = offering the zone users more choices of operations. The reason that the FTZs authorities, in the two typologies, differ with respect to this variable (V_{35}) might be because some governments of the developed countries (particularly those in the EEC) impose some form of regulations which impede the growth and expansion of certain industries taking place inside a FTZ. Therefore, the authorities of these FTZs might have resorted to the offering of more choices of permitted operations inside the zone. Thus, in lieu of allowing increasing manufacturing activities, these FTZs authorities developed a product with a package, hoping, that could be equally appealing to interested zone users. This variable (V_{35}) is considered among the important discriminating variables between the FTZs in both typologies (See Table 7.11).

V_{38} = Personal selling of zone facilities. The reason that the FTZs authorities, in the two typologies, differ in their attitudes towards this variable (V_{38}) might be that modern techniques of marketing including personal selling are more advanced and more in use in

the industrial countries than in the developing countries. This variable (V_{38}) is also considered among the most discriminating marketing variables between the FTZs in the two typologies (See Table 7.11).

7.2.3 The Hotelling's T^2 Statistic

Now we turn our attention to test the significance of the last five null hypotheses regarding the attitudinal differences between each of the five FTZs groupings versus the FTZs panel of experts towards the employment, in FTZs operations, of the 19 key discriminating marketing variables identified by the computer applications of the Multiple DFA and the second run of the Two-group DFA. The Hotelling's T^2 statistic, which is one of the MANOVA procedures, is found to be the most suitable test for checking significant differences between two groups across many variables (Morrison, 1990). Therefore, the Hotelling's T^2 statistic is used, in this research, to test the significance of each of the following five null hypotheses:

H0(4): The authorities' attitudes of the most marketing-oriented FTZs are similar to the attitudes of the FTZs experts panel towards the 19 key discriminating marketing concept variables* identified by the Multiple Discriminant Function Analysis (MDFA).

HA(4): The authorities' attitudes of the most marketing-oriented FTZs are not similar to the attitudes of the FTZs experts panel towards the 19 key discriminating marketing concept variables* identified by the Multiple Discriminant Function Analysis (MDFA).

H0(5): The authorities' attitudes of the moderate marketing-oriented FTZs are similar to the attitudes of the FTZs experts panel towards the importance of the 19 key discriminating marketing concept variables* identified by the MDFA.

HA(5): The authorities' attitudes of the moderate marketing-oriented FTZs are not similar to the attitudes of the FTZs experts panel towards the importance of the 19 key discriminating marketing concept variables* identified by the MDFA.

* The list of these 19 variables is shown in Table 7.6, Section 7.3.2.

H0(6): The authorities' attitudes of the less marketing-oriented FTZs are similar to the attitudes of the FTZs experts panel towards the importance of the 19 key discriminating marketing concept variables* identified by the MDFA.

HA(6): The authorities' attitudes of the less marketing-oriented FTZs are not similar to the attitudes of the FTZs experts panel towards the importance of the 19 key discriminating marketing concept variables* identified by the MDFA.

H0(7): The authorities' attitudes of the FTZs in the developed countries are similar to the attitudes of the FTZs experts panel towards the importance of the 19 key discriminating marketing concept variables** identified by the second run of the Two-group DFA.

HA(7): The authorities' attitudes of the FTZs in the developed countries are not similar to the attitudes of the FTZs experts panel towards the importance of the 19 key discriminating marketing concept variables** identified by the second run of the Two-group DFA.

H0(8): The authorities' attitudes of the FTZs in the developing countries are similar to the attitudes of the FTZs experts panel towards the importance of the 19 key discriminating marketing concept variables** identified by the second run of the Two-group DFA.

HA(8): The authorities' attitudes of the FTZs in the developing countries are not similar to the attitudes of the FTZs experts panel towards the importance of the 19 key discriminating marketing concept variables** identified by the second run of the Two-group DFA.

Table 7.3 shows the computer results for testing the significance of each of the last five hypotheses in terms of the Hotelling's T^2 statistic and the corresponding values of the

* The list of these 19 variables is shown in Table 7.6, Section 7.3.2.

** The list of these 19 variables is shown in Table 7.11, Section 7.3.4.

computed Univariate F-ratio, the critical F-value and the degrees of freedom at $\alpha = 0.05$. Since the values of the Hotelling's T^2 do not follow a distribution of its own but rather follow the F-distribution (Hair, et al., 1987), therefore for testing each of the five hypotheses we shall look at the corresponding computer calculated F-ratios of the Hotelling's T^2 statistics and compare them with their critical F-values.

Table 7.3 : The Results of the Hotelling's T^2 statistic and the Corresponding Values of their Transformation into the Univariate F-ratio Distributions for each of the Last Five Hypotheses

Hypotheses	Hotelling's T^2 Statistic	Univariate F-ratio (computed by the computer)	Critical F-value at $\alpha=.05$	Degrees of Freedom
H0(4)	6.20	5.85	4.12	(1,36)
H0(5)	0.93	2.00	4.00	(1,58)
H0(6)	4.92	9.83	4.02	(1,57)
H0(7)	1.35	2.35	4.04	(1,51)
H0(8)	1.55	4.88	3.96	(1,78)

Looking at the first row of Table 7.3, for testing the significance of the fourth null hypothesis H0(4), we find that the value of the computer computed F-ratio (5.85) exceeds its critical F-value (4.12) at $\alpha = 0.05$. Thus, the decision is to reject the null hypothesis H0(4) in favour of its alternative form, and conclude that the authorities' attitudes of the most marketing-oriented FTZs group are not similar to the attitudes of the FTZs experts

panel towards the importance of the 19 key discriminating marketing concept variables identified by the MDFA.

To test the significance of the fifth null hypothesis $H_0(5)$, we look at the second row of Table 7.3 and find that the value of the computed F-ratio (2.00) is lower than its critical F-value (4.00) at $\alpha = 0.05$. Thus, the decision is to retain the null hypothesis $H_0(5)$, and conclude that the authorities' attitudes of the moderate marketing-oriented FTZs group are similar to the attitudes of the FTZs experts panel towards the importance of the 19 key discriminating marketing concept variables identified by the MDFA. This finding confirms the accuracy of the 'confidence limits' method used in this study to establish the criteria for the 'a priori' classification of the FTZs marketing orientation. In other words, the average responses of the FTZs panel of experts, to the marketing concept variables, represent the average responses of the moderate marketing-oriented FTZs group.

As for testing the significance of the sixth null hypothesis $H_0(6)$, we look at the third row of Table 7.3 and find that the value of the computed F-ratio (9.83) exceeds its critical F-value (4.02) at $\alpha = 0.05$. Therefore, we have to reject the null hypothesis $H_0(6)$ in favour of its alternative one, and conclude that the authorities' attitudes of the less marketing oriented FTZs group are not similar to the attitudes of the FTZs panel of experts towards the importance of the 19 key discriminating marketing concept variables identified by the MDFA.

And to test for the significance of the seventh null hypothesis $H_0(7)$, we look at the fourth row of Table 7.3 and find that the value of the computed F-ratio (2.35) is smaller than its critical value (4.04) at $\alpha = 0.05$. Accordingly, we have to retain the null hypothesis $H_0(7)$, and conclude that the authorities' attitudes of the FTZs operating in the developed countries are similar to the attitudes of the FTZs experts panel towards the importance of the 19 key discriminating marketing concept variables identified by the second run of the Two-group DFA. A possible explanation for this similarity in the attitudes is that the moderate marketing-oriented FTZs group constitutes about 43.3% of the total number of the FTZs operating in the developed countries.

Finally, to test the significance of the eighth null hypothesis $H_0(8)$, we look at the last row of Table 7.3 and find that the value of the computed F-ratio (4.88) exceeds its critical F-value (3.96) at $\alpha = 0.05$. Thus, we reject the null hypothesis $H_0(8)$ in favour of its alternative one, and conclude that the authorities' attitudes of the FTZs operating in the developing countries are not similar to the attitudes of the FTZs experts panel. It is worth mentioning here that, in testing for the significance of $H_0(8)$, we find that the difference between the values of the computed F and the critical F (i.e., $4.88 - 3.96 = .92$) is less than 1 which is not much difference. Again, this might be due to the fact that the moderate marketing-oriented FTZs group constitutes about 41.8% of the total number of the FTZs operating in the developing countries. However, the small 1.5% difference (i.e., $43.3\% - 41.8\% = 1.5$), indicating higher percentage of moderate marketing-oriented FTZs group in the developed rather than in the developing countries might have contributed to the acceptance of the $H_0(7)$ and the rejection of the $H_0(8)$.

7.3 Main Results of the Discriminant Function Analysis (DFA)

In this study we applied the DFA, three times, as a tool to accomplish the first three research objectives. These objectives are:

- (1) To classify the FTZs into three groups according to their authorities' attitudes towards the employment of the marketing concept in their operations: most, moderate and less marketing-oriented FTZs.
- (2) To identify the key marketing variables that would best profile and discriminate the various groupings of FTZs:
 - (a) the most, moderate and less marketing-oriented.
 - (b) the most and moderate marketing-oriented, combined together as one group, and the less marketing-oriented as a second group.

- (3) To explore whether there are any differences between the FTZs in the developed and developing countries with respect to their authorities attitudes towards the adoption of the marketing concept in the operations of the zones.

The purpose of this section is to report on the main findings and interpretation of the data analysis of each of the three DFA applications through the following four key stages:

- (i) Validating the Discriminant Functions
- (ii) Discrimination Among the Most, Moderate and Less Marketing-Oriented FTZ's According to their Adoption of the Marketing Concept
- (iii) Discriminating between the Groupings of the Marketing-Oriented (Most and Moderate) and the Group of Less Marketing-Oriented FTZs on the basis of their Authorities' Attitudes toward the Marketing Concept
- (iv) Discriminating between the Attitudes of FTZs' Authorities, in the Developed Countries and in the Developing Countries, toward the Marketing Concept Adoption

7.3.1 Validating the Discriminant Functions

From the statistical point of view, we applied DFA, three times, for two major purposes: (a) developing predictive models to classify individuals (i.e., FTZs) into distinct mutually exclusive and exhaustive groups; and (b) identifying the major underlying dimensions (i.e., marketing variables) which differentiate best among/between the groups. However, the application of DFA poses a very serious question: How valid are our sampled-based DFA results with respect to the broader population of FTZs? The issue of validity

can be raised for each of the two purposes in each of the three DFA runs. First, is actual classification potential as high as our sample estimates indicate? Second, are our underlying sample-based dimensions (i.e., most important discriminators) generalisable to the population of FTZs?

The issue of the discriminant function validity has been treated extensively in the literature (e.g., Frank, et. al, 1965; Lachenbrucy and Mickey, 1968; Morrison, 1969; Montgomery, 1975; Crask and Perreault, 1977; and Eisenbeies, 1977). These efforts resulted in a number of approaches to validating the discriminant functions. A good discussion on these approaches is found on Eisenbeies, 1977; Tabachnick and Fidell, 1983; and Hair and his associates, 1987.

In this research we applied the jackknife method* to validate the discriminant function of each of the three DFA runs. The jackknife is found to be the most appropriate procedure for validating the discriminant function of samples with smaller number of cases ($n < 100$) (Crask and Perreault, 1977). In addition; there is a supporting evidence that the jackknife is superior to all the other validation methods including the split-sample approach (Eisenbeies, 1977). This is due to the fact that the jackknife method, unlike the other approaches, makes use of all the available data without any serious bias in the estimating error rates (Dillon and Goldstein, 1984).

Using the jackknife method to validate a discriminant function involves leaving out each of the cases in turn, calculating the function based on $n_1 + n_2 - 1$ cases, and then classifying the left-out case. This process is repeated until all the cases are classified (Eisenbeis, 1977). Since the case which is being classified is not included in the calculation of the discriminant function, the method yields almost unbiased estimates of the misclassification probabilities (Dillon and Goldstein, 1984).

In order to validate each of our three discriminant functions, the jackknife method was applied, to the same data, using the BMDP computer package series number P7M.

* In the literature sometimes it is referred to as the U-method.

Table 7.4 presents a comparison between the two hit ratio results obtained from the DFA and from the jackknife method with respect to each of the three sets of groupings: (1) the most vs the moderate vs the less marketing-oriented FTZs; (2) the marketing-oriented FTZs vs the less marketing-oriented FTZs; and (3) the FTZs in the developed countries vs the FTZs in the developing countries.

Table 7.4: A comparison between the hit ratios of the DFA and the Jackknife method

FTZs Grouping	The Hit Ratios of the DFA Functions	The Hit Ratios of the Jackknife
The Most vs the Moderate vs the Less Marketing-Oriented FTZs	98.82%	94.10%
The Marketing-Oriented FTZs vs the Less Marketing-Oriented FTZs	97.65%	92.90%
The FTZs in the Developed Countries vs the FTZs in the Developing Countries	96.47%	88.20%

Table 7.4 shows that the percentage of correct classification of the jackknife is very high for each of the three sets of the FTZs groupings, but it is still less than three corresponding percentages we obtained from the three DFA functions. On this ground, we may conclude that each of our three discriminant functions is a valid model in discriminating among/between the particular FTZs grouping. In other words, these findings provide concrete evidence on the ability of our marketing concept variables to differentiate among/between each set of the FTZs grouping and accordingly, to predict the group membership in each set.

7.3.2 Differentiation Among the Most, Moderate and Less Marketing-Oriented FTZs According to their Adoption of the Marketing Concept

As we have reported in Subsection 6.2.2.1 of Chapter Six, FTZs could have been classified into three groups on the basis of the levels of marketing adoption in their zone operation. According to the results of the FTZs' experts panel survey, these possible different FTZs are: the most marketing-oriented (G1), moderate marketing-oriented (G2) and less marketing-oriented (G3). The basic assumption behind such "a priori" classification groupings is that the degree of marketing adoption among the three presumed groups is different due to the variation in their authorities attitudes towards the employment of the 40 variables related to the 3 main dimensions of the marketing concept (i.e., satisfying the industrial buyer needs, achieving the organisation goals and integrating the marketing functions).

However, this prior classification of FTZs had to be tested. Then, FTZs' group membership could be predicted. Moreover, the most important variables (discriminators) that would best explain the differentiation among these FTZs' groups could be identified.

In order to achieve the above objectives, it was decided to use the Multiple (three-group) Discriminant Function Analysis (MDFA). The responses of the FTZs authorities to the forty variables of the marketing concept (See the questionnaire in Appendix 4) were submitted to the MDFA Computer Programme, using the stepwise technique in the SPSSX Package. The number of respondents (cases) was N=85. The MDFA produced two functions. The first was found more significant than the second one. The decision was to rely on the first function and ignore the second (Green, et al., 1988). The results of the MDFA in terms of the canonical discriminant functions, classifications and prediction of group membership are shown in Table 7.5.

**Table 7.5: Canonical Discriminant Functions, Classifications and Group Membership
(Main results of classifications: MDFA)**

Function	Eigenvalue	Canonical Correlation	Wilks' Lambda	Chi-squared*	d.f.
1	13.20	0.96	0.04	230.90	48
2	0.86	0.68	0.54	43.85	23
Classification Matrix					
Actual Group	No. of Cases	Predicted Group Membership			Total
		(1)	(2)	(3)	
Group 1 (Most Marketing-oriented)	14	14 (100%)	0 (0.0%)	0 (0.0%)	14
Group 2 (Moderate Marketing-oriented)	36	0 (0.0%)	36 (100%)	0 (0.0%)	36
Group 3 (Less Marketing-oriented)	35	0 (0.0%)	1 (2.9%)	34 (97.1%)	35
Total	85	14	33	36	85
Percent of "Grouped" cases correctly classified: 98.82%					

* The first function is significant at 0.000

Referring to the upper section of Table 7.5, the canonical correlation coefficient of the first discriminant function is 0.96. This indicates that there is a strong relationship (Klecka, 1976; Nie, et al., 1986) between the marketing concept variables (independent) and the levels of FTZs adoption of the marketing concept in the operations of their zones (i.e.,

most, moderately, and less adopting) as the dependent variable. Equally important is the level of significance of the discriminant functions which reflects that the first function discriminates significantly among the three FTZs groups under investigation. It is worth mentioning that the first function has a higher Eigenvalue and a lower Wilks' Lambda than have the second function. This supports our preference on relying upon the first function (Churchill, 1987; Aaker and Day, 1990).

The lower section of Table 7.5 contains a diversity of information on the correctly classified FTZs and their group membership. The overall percent of cases (FTZs) correctly classified is 98.82. The correctly classified FTZs as plotted by the MDFA Computer Programme is depicted in Figures 7.1 and 7.2 each of the three FTZs groups (most marketing-oriented = G1; the moderate marketing-oriented = G2; and the less marketing-oriented = G3) is separately plotted in the diagram. However, only one member of G3 is mixed with the moderate marketing-oriented G2 (See also the lower section of Table 7.5).

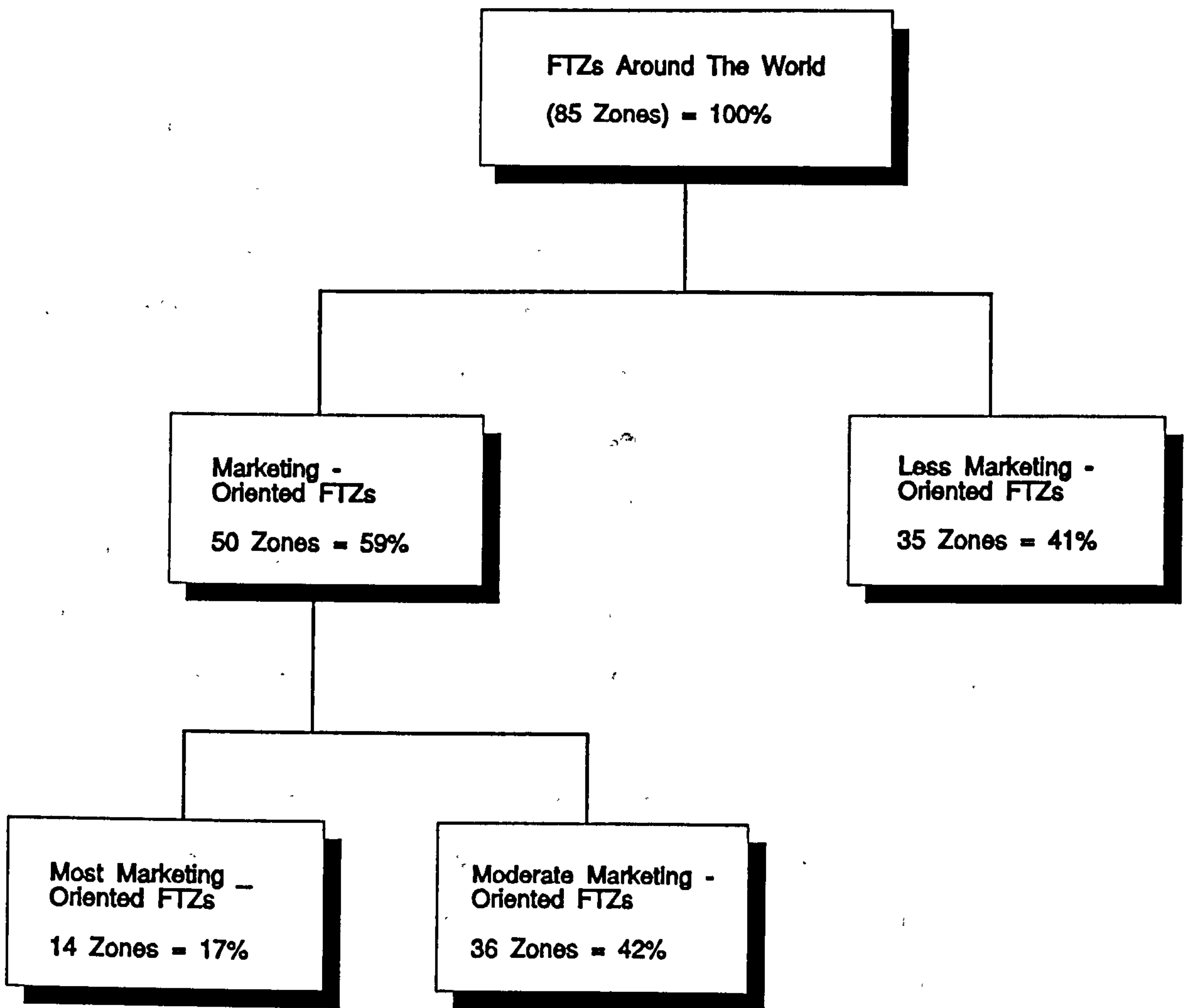
The attention now should be turned to the most important marketing variables which best discriminate among the three FTZs groups being investigated (i.e., the most, the moderate and the less marketing-oriented). These variables represent the three key elements of the marketing concepts; (i) satisfying the industrial buyers needs, (ii) achieving the organisational goals and (iii) integrating the marketing functions.

We shall provide profiles of the three FTZs groups according to each of the three key elements of the marketing concept variables, as discussed below:

(i) Satisfying the industrial buyer needs

This category of discriminating variables; among the most, the moderate and the less marketing-oriented FTZs; should represent the primary concern to the authority (management) of any particular FTZ. According to the marketing concept, satisfying the buyer needs and wants effectively and efficiently is the key to any organisation to achieve its goals (Pride/Ferrell, 1985). In the practice of FTZs, the package of satisfying the industrial buyers needs includes providing privileges, facilities, and services that are considered of importance to the needs of the industrial firms using the zone.

Figure 7.2: A Flow Chart of the Sampled FTZs' Classification According to their Marketing Orientation



As shown in Table 7.6 there are 11 most important variables related to satisfying the industrial buyer needs. In their order of importance they are: the maintenance of telecommunication systems (.91), the offering of a facsimile system (.51), size of area available for manufacturing activities (.42), the size of the work force (.31), cleanliness of the zone area (.30), the well-being of the work force (.22), capacity of space for warehousing and storage (.20), size of the zone area (.18), safety of the work force (.17), maintenance of equipment (.16), and the offering of assembly operations (.11).

Looking at Table 7.6 we observe that the first variable of satisfying the industrial buyer needs (i.e., the maintenance of telecommunication systems) is regarded as extremely important by the two FTZs groups (i.e., the most and the moderate marketing-oriented, G1 and G2) with a slight difference. This emphasises that the role the telecommunication systems play in the FTZs operation, at the three levels of marketing adoption, is equally important as it is in today's world business communication.

The offering of a facsimile system is the second variable of importance. The most marketing-oriented FTZs (G1) and the moderate marketing-oriented FTZs (G2) consider this variable as extremely important but the less marketing-oriented FTZs (G3) gave this same variable a rating of above average importance. This observation of the extreme importance of the offering of a facsimile system, provides a further support to the vital importance of a modern telecommunications system in the operation of FTZs.

The size of area available for manufacturing activities is ranked third among the most discriminating marketing variables with respect to satisfying the industrial buyer needs. The most marketing-oriented (G1) and the moderate (G2) rated this variable in the range of extreme importance, and the less marketing-oriented FTZs (G3) put it at above average. The responses of the FTZs authorities, particularly G1 and to a lesser extent G2, to this variable reflect that the size of the area available for manufacturing activities is highly demanded to satisfy the needs of the industrial buyers. This indicates that, in the real world of FTZs, the FTZs authorities acknowledge that the industrial firms [usually multinational

Table 7.6: Standardised Canonical Discriminant Coefficients and Group Means: MDFA Output

Discriminant Variables*	Group Means			Standardised Discriminant Coefficients
	G1	G2	G3	
(i) <u>Satisfying the industrial buyer needs:</u>				
1. The maintenance of telecommunication systems	8.6	7.7	7.0	.91
2. The offering of a facsimile system	8.0	6.9	6.2	.51
3. Size of area available for manufacturing activities	7.6	7.0	6.0	.42
4. The size of the work force	7.9	6.8	6.3	.31
5. Cleanliness of zone area	8.6	7.8	7.8	-.30
6. The well-being of the work force	8.0	6.5	5.6	.22
7. Capacity of space for warehousing and storage	7.5	7.1	5.4	.20
8. Size of the zone area	7.7	6.9	5.8	.18
9. Safety of the work force	8.2	7.2	7.0	.17
10. Maintenance of equipment	7.2	5.7	4.8	-.16
11. The offering of assembly operations	7.5	6.4	5.3	-.11
(ii) <u>Achieving Organisational Goals:</u>				
12. Maximisation of sales	6.8	7.2	6.5	-.85
13. Maximisation of market share	6.7	7.3	4.9	.68
14. Minimising cost of zone operations	8.5	7.3	6.9	-.29
15. Public relations with zone users	8.5	7.7	7.6	-.04

* Significant at 0.000

Table 7.6: (Continued)

Discriminant Variables*	Group Means			Standardised Discriminant Coefficients
	G1	G2	G3	
(iii) <u>Integrating the Marketing Functions:</u>				
16. Marketing Research activities for the zone privileges, facilities and services	7.2	7.3	5.0	.53
17. Expanding the area available for the zone privileges	8.3	6.8	5.6	.44
18. Updating the zone facilities	8.2	7.3	6.9	-.33
19. Reviewing the pricing of zone privileges, facilities and services	7.1	6.7	5.7	-.16

* Significant at 0.000

companies (MNCs)] have high demand for the availability of a sizeable land in order to build factories and to establish their needed infrastructure.

The fourth variable of importance among the marketing factors related to satisfying the industrial buyer needs is the size of the work force. This variable is rated in the range of extreme importance by the most marketing-oriented (G1) and the moderate marketing-oriented (G2) FTZs, and it is put at a little above average by the less marketing-oriented FTZs (G3). This result indicates that, in the practice of FTZs, at the different levels of marketing adoptions, the FTZs authorities realise that the industrial firms demand highly a sizeable pool of a work force including managers, staff, technicians and labourers to handle tasks ranging from high-echelon posts to masonry jobs.

Cleanliness of the zone area is ranked as the fifth most important variable among the marketing factors related to satisfying the industrial buyer needs. This variable was rated in the range of extreme importance by all the three FTZs groups. But the most marketing-oriented FTZs (G1) put this variable at the higher end while both the moderate and the less marketing-oriented FTZs (G2 and G3) put it at the lower end. This finding demonstrates that there is agreement among the three FTZs groups that the service, provided by the authorities for the purpose of cleanliness of the zone area (e.g., dumping the industrial waste), is by all means an essential need for the industrial firms.

A further important marketing factor of satisfying the industrial buyer needs is the well-being of the work force. As established by the FTZs authorities, this factor comes to be as the sixth most important one compared with the other factors in the same category of variables. The most marketing-oriented FTZs group (G1) rated this variable as highly important, whereas the moderate FTZs (G2) rated this same variable as a little above average importance, but the less marketing-oriented (G3) put it as average importance (See Table 7.6). This variation in the ratings of this variable is due to the different levels of importance each group of FTZs attach to the offering of services pertinent to the well-being of the work force. In other words, it might be that the most marketing-oriented FTZs group (G1) consider that it is highly vital to their success to offer the work force, working inside the zone premises, pleasant and relaxing atmosphere such as cafeteria, recreational and social activities. But the moderate marketing-oriented FTZs group (G2) do not reckon this kind of offering to be as high, while the less marketing-oriented FTZs group (G3) regard it to be as relatively important to their operations.

In addition, the multivariate analysis of the FTZs authorities' attitudes revealed that there are some other important marketing variables which might discriminate among the three FTZs groups under investigation. These variables include (See Table 7.6): capacity of space for warehousing and storage (.20), size of the zone area (.18), safety of the work force (.17), maintenance of equipment (.16) and the offering of assembly operations (.11). It should be noted that these 5 variables have less discriminant weights, ranging from .20

to .11, than have the previous variables in the same cluster (i.e., satisfying the industrial buyer needs). Furthermore, the analysis showed that there are clear differences between the respondents' ratings to the latter variables and to the former ones. At the same time, members of the first FTZs group (most marketing-oriented) indicated higher rating of importance to these 5 variables than did the other two FTZs groups. Equally important is the lower ratings of importance to these variables is given by the less marketing-oriented FTZs group (G3).

Based upon this latter findings, it can be said that both the most and the moderate-marketing-oriented FTZs (G1 and 2) are more aware than the less marketing-oriented (G3) of the importance of the size of the zone area, capacity of space for warehousing and storage, the offering of assembly operations and maintenance of equipment to meet and satisfy the industrial buyer needs. On the other hand, the FTZs authorities, at the different levels of marketing adoption, attach high degree of importance, in their operations, to the safety of the work force (See Table 7.6). This shows clear indication that the majority of FTZs authorities acknowledge the vested need of the industrial firms for necessary measures to be employed for the safety of their work force.

(ii) Achieving Organisational Goals

Through its efforts to satisfy the needs of the industrial buyers (and other zone users), a FTZ authority aspires to achieve its own goals. Evidently, a certain FTZ authority may seek the same or different goals than those thought after by other FTZs. The nature of the FTZs goals could be quantitative such as the maximisation of: sales, profits, market share, and return on investment meanwhile minimising the cost of the zone operations. The goals of the FTZs could also be qualitative such as maintaining acceptable growth rate of their zones, effective public relations with the zone users, good government liaison, reputed FTZs image, and compact integration of the departmental functions of the zone authorities. Below we provide an analysis of the attitudinal responses, to the most important discriminating variables, made by the three different FTZs groups.

Table 7.6 shows only 4 out of 10 variables that are considered as the most important variables related to achieving organisational goals. These variables, in their order of importance, are: maximisation of sales (.85), maximisation of market share (.68), minimising cost of zone operations (.29), and Public Relations with zone users (.04).

By looking at Table 7.6 we observe that the first variable in this category (i.e., maximisation of sales) is rated at the lower range of extreme importance by the moderate marketing-oriented FTZs group (G2), while both the most marketing-oriented (G1), and the less marketing-oriented (G3) rated this same variable at the upper range of average importance. A possible explanation to this kind of different ratings to this variable is that there seems to be some sort of agreement among the authorities of the moderate marketing-oriented FTZs groups (G2), as indicated in their responses, that they should attach higher level of importance, in their operations, to maximise their sales. While the authorities of the most marketing-oriented FTZs group (G1) might be content at the level of their sales volume, the less marketing-oriented FTZs group (G3) seem to show tendencies to acknowledge the importance of maximising sales.

Maximisation of the market share is the second variable of importance in this category of variables. The moderate marketing-oriented FTZs group (G2) and the most marketing-oriented (G1) put this variable at the same range of importance ratings as the maximisation of sales, but the less marketing-oriented (G3) gave this same variable a lower rating (i.e., average importance) than the maximisation of sales (See Table 7.10). Naturally, both the market share and sales volume factors should represent the key objectives for the FTZs as they are for business enterprises. Moreover, maximising the market share should be of particular concern to the FTZs due to its real relevance to the competition situations.

Minimising cost of the zone operations is ranked third among the most discrimination variables related to achieving organisational goals. All the three FTZs groups (G1, G2 and G3) gave this variable ratings in the extreme importance range (See Table 7.6). As could be expected, the high responses to this variable by the majority of the FTZs reflect that FTZ authorities, at all levels of marketing adoption, realise that they should

attach high level of importance to minimise the cost of operating their FTZ, otherwise they will be out of business.

The least discriminating variable in the list of Table 7.6 is the public relations with the zone users with a discriminant weight of (.04). Meanwhile, this variable has received ratings of extreme importance by all the three FTZs groups. This might indicate that the FTZs authorities, at all levels of marketing adoption, recognise that it is vital to their existence to develop proper channels of Public Relations with the zone users including the industrial firms (MNCs and the locals) and their customers.

(iii) Integrating the Marketing Functions

The analysis, in this sub-section, focuses on the most important factors pertaining to the integration of the marketing functions. Out of 10 variables included in this category, only 4 have been found as good discriminators among the three FTZs groups being investigated. These discriminators, in order of their importance, are (See Table 7.6): marketing research activities for the zone privileges, facilities and services (.53), expanding the area available for the zone privileges (.44), updating the zone facilities (.33) and reviewing the pricing of zone facilities, privileges and services (.16).

Marketing research activities for the zone privileges, facilities, and services are considered as the first discriminating variable in this category of variables. This variable received ratings in the range of extreme importance by both the moderate marketing-oriented (G2) and the most marketing-oriented (G1). The less marketing-oriented FTZs group (G3) rated this same variable at the exact point of average importance. This is perhaps because the authorities of both the moderate marketing-oriented FTZs (G2) and the most marketing-oriented FTZs (G1) realise that performing marketing research activities for the zone privileges, facilities and services is a key task in: (a) gathering and collecting information linked to the needs and wants of their zone users in order to be able to constantly identify and meet these needs and wants as they occur, and (b) developing and updating information linked to their other marketing functions such as product development (i.e., the zone privileges, facilities and services), pricing, advertising, etc.

The last three discriminating variables in this category, in their order of the discriminant weights, are: expanding the area available for the zone privileges (.44), updating the zone facilities (.33), and reviewing the pricing of the zone privileges, facilities and services (.16) (See Table 7.6). The most marketing-oriented FTZs group (G1) gave ratings in the middle range of extreme importance to both the variables of expanding the area for the zone privileges, and to the updating the zone facilities. The most marketing-oriented FTZs (G1) put the pricing of the zone privileges, facilities and services in the lower end of extreme importance. The moderate marketing-oriented FTZs group (G2) rated the same three variables in and around the lower end of extreme importance. The less marketing-oriented group (G3), however, rated the variable of updating the zone facilities in the range of extreme importance, while giving the other two variables (i.e., expanding the area available for the privileges, and reviewing the pricing) in the range of average importance. These findings demonstrate that the most marketing-oriented and the moderate marketing-oriented FTZs groups, and to a lesser extent the less marketing-oriented FTZs group recognise the potential importance of expanding the area available for the zone privileges and updating the zone privileges, facilities and services (i.e., Product development), and the pricing policies to be employed in the actual operations of their zones.

In conclusion, this section presented the analysis and interpretation of the MDFA Computer Programme in relation to: the differentiation among the most marketing-oriented, the moderate marketing-oriented and the less marketing-oriented FTZs according to their attitudes of employing the marketing concept elements in the operations of their zones.

Summarising to this point, the MDFA technique enabled us to:

- (a) correctly classify the FTZs on the basis of their possible levels of marketing adoption into three separate groups. The discriminant function could predict 100% of the most marketing-oriented, 100% of the moderate marketing-oriented and 97% of the less marketing-oriented FTZs, and the overall hit ratio classification was 98.82%.

- (b) discriminate among the above mentioned three FTZs groups according to the attitudes of their authorities towards three key dimensions of the marketing concept (i.e., satisfying the industrial buyer needs, achieving the organisational goals, and integrating the marketing functions, and
- (c) identify the most important marketing variables which relate to the three levels of FTZs marketing adoption.

Out of the 40 marketing variables included in the survey, 19 have been found to be good discriminators among the FTZs groups being studied. These discriminating variables were found to belong to the same assumed categories of the marketing concept elements, that is, satisfying the industrial buyer needs, achieving organisational goals and integrating the marketing functions.

With regard to the first category, satisfying the industrial buyer needs there were 11 variables considered as discriminators. The most of these, as shown in Table 7.6, were the maintenance of telecommunication systems, the offering of a facsimile system, size of the area available for manufacturing and size of the work force. The discriminant coefficients of these variables lied between .91 and .31. This indicates that this set of variables are potential discriminators in this category.

As for the variables of achieving organisational goals, two key discriminators came to the top of this category, that is, maximisation of sales with a coefficient value of .85 and market share with a coefficient of .68.

Finally, marketing research activities, expanding the area available for the zone privileges and updating the zone facilities were the most discriminators pertaining to integrating the marketing functions variables. The discriminant weights of these variables were .53, .44 and .33; respectively.

Following the differentiation among the three FTZs groups, and the derivation of the best discriminators, the analysis will turn to another section, that is, the discrimination between the groupings of marketing-oriented (i.e., the most and the moderate) and the less

marketing-oriented FTZs on the basis of their authorities attitudes toward employing the marketing concept factors in the operations of their zones.

7.3.3 Discriminating between the Groupings of the Marketing-Oriented (most and moderate) and the Group of the Less Marketing-Oriented FTZs Group on the basis of their Authorities' Attitudes toward the Marketing Concept Adoption

The purpose of the analysis in this section is to develop a clearer picture of the FTZs adoption of the marketing concept. In other words, to find out whether the FTZs, according to the attitudinal responses of their authorities, could be distinguished as marketing-oriented and as less marketing-oriented. Therefore, it was decided to combine both the most and the moderate marketing-oriented FTZs (G1 and G2) to form one grouping representing the marketing-oriented FTZs on one side, and differentiate it, on the other side, from the less marketing-oriented FTZs group (G3).

This analytical approach also aims to pay attention to those marketing variables that would be considered as the cutting discriminators in differentiating between the grouping of marketing-oriented (G1 and G2) and the less marketing-oriented FTZs (G3).

Accordingly, the 40 marketing concept variables were submitted to the Two-group DFA Computer Programme in order to: (a) classify the FTZs sample (n=85) into two separate groups, namely, the marketing-oriented and the less marketing-oriented partitioning, and (b) identify the cutting discriminators between the two groups under study. The output of the Two-group DFA is shown in Tables 7.7 and 7.8.

The results of the first run Two-group DFA shows that the canonical correlation coefficient is 0.92 (see Table 7.7). This in turn indicates that there is a very strong relationship between the marketing concept variables and the partitioning of the FTZs into two groups of marketing orientation as marketing-oriented FTZs = G1 and as less marketing-oriented FTZs = G2.

The overall percent of correct classification (i.e., the hit ratio) is 97.65%. This is a slightly lower classification than the earlier classification into three FTZs groups (compare

Table 7.7: Canonical Discriminant Functions, Classifications and Group Membership, (Main Results of Classifications: DFA Output of the Marketing-Oriented Grouping vs the Less Marketing-Oriented FTZs Group)

Function	Eigenvalue	Canonical Correlation	Wilks' Lambda	Chi-squared*	d.f.
1	5.30	0.92	0.16	139.91	14
Classification Matrix					
Actual Group	No. of Cases	Predicted Group Membership			Total
		(1)	(2)		
Group 1 The Marketing-oriented (Most and Moderate, combined together)	50	49 (93.0%)	1 (6.4%)		50
Group 2 The Less Marketing-oriented (Less Marketing-oriented)	35	1 (2.9%)	34 (97.1%)		35
Total	85	50	35		85
Percent of "Grouped" cases correctly classified: 97.65%					

* Significant at 0.000

Tables 7.7 and 7.5). Figure 7.3 depicts the correct classifications of the marketing-oriented FTZs (i.e., combining the most marketing-oriented and the moderate marketing-oriented FTZs) and the less marketing-oriented FTZs into two distinguished FTZs groups G1 and G2 respectively.

The computer output of the Two-group DFA, in the first run, produced 14 variables that are considered as main discriminators between the marketing-oriented FTZs and the less marketing-oriented FTZs. With regard to the nature of these discriminating variables, different aspects can be easily noted (See Section 7.3.2 and compare Tables 7.6 and 7.8):

- Eleven of these 14 variables also appeared in the multiple DFA programme, as main discriminators between the three FTZs groups. These variables, in the order of their importance as they appear in the first run of the Two-group DFA, are the marketing research activities (.96); the maximisation of market share (.91); the maximisation of sales (.77); updating the zone facilities (.56); the maintenance of telecommunication systems (.55); extending the capacity of the zone facilities (.52); the offering of a facsimile system (.48); cleanliness of the zone area (.39); Public relations with the zone users (.39); the capacity of space for warehousing and storage (.30); and the size of the zone area (.24).
- The remaining three variables emerged as new additional discriminators between the marketing-oriented FTZs and the less marketing-oriented FTZs. These three variables, in the order of their importance, are: the quality of the work force (.77); the policies for implementing plans for marketing the zone privileges, facilities and services (.49); the FTZ image and reputation (.38).
- The near conformity in the results of the multiple DFA and the results of the first run Two-group DFA shows clear indication that the sampled FTZs tend to differ in their attitudes towards the adoption of the marketing concept in the operations of their zones.

According to the responses of the FTZs authorities, the quality of the work force appeared to be a good discriminator between the grouping of the marketing-oriented (G1 and G2) and the less marketing-oriented. This demonstrates that the quality of the work force, as a cutting variable between the two groups, may reflect a quality in a FTZ performance.

Table 7.8: Standardised Canonical Discriminant Coefficients and Group Means: DFA Output of the FTZ Marketing-Oriented Grouping vs Less Marketing-Oriented

Discriminant Variables*	Group Means		Standardised Discriminant Coefficients
	G1	G2	
(i) <u>Satisfying the industrial buyer needs:</u>			
1. The maintenance of telecommunication systems	7.9	6.9	.55
2. The offering of a facsimile system	7.2	6.2	.48
3. The quality of the work force	8.3	7.3	.47
4. Cleanliness of zone area	7.9	7.7	.39
5. Capacity of space for warehousing and storage	7.2	5.4	.30
6. Size of the zone area	7.1	5.8	.24
(ii) <u>Achieving Organisational Goals:</u>			
7. Maximisation of market share	7.2	4.9	.91
8. Maximisation of sales	7.1	6.5	.77
9. Public Relations with zone users	7.6	7.1	.39
10. Free Trade Zone image/reputation	8.2	7.8	.38
(iii) <u>Integrating the Marketing Functions:</u>			
11. Marketing Research activities for the zone privileges, facilities and services	7.3	4.9	.96
12. Updating the zone facilities	7.5	6.9	.56
13. Extending the capacity of the zone facilities	7.6	6.7	.52
14. Policies for implementing plans for marketing zone privileges, facilities and services	7.2	6.1	.49

* Significant at 0.000

The variable of the FTZ image and reputation, on the other hand, as viewed by the FTZs authorities, is another important discriminator that should be taken into consideration when differentiating between the groupings of marketing-oriented (G1 and G2) and less marketing-oriented FTZs (G3). This indicates that developing and maintaining a good FTZ image and reputation could lead to higher degrees of marketing-orientation. However, the question arises here as to how such good image and reputation can be developed. The answer to such a question seems to be easy in theory but not as easy in practice. Generally speaking, the task of building up a FTZ reputable image requires consideration of a pool of highly inter-related marketing factors, for example, public relations with the zone users; liaison with government; types and quality of the FTZ privileges, facilities and services; quality of work force; market share; and FTZ rate of growth.

Finally, the variable of policies for implementing plans for marketing the zone privileges facilities, and services is considered as one of the added variables among the marketing discriminators between the grouping of marketing-oriented (G1 and G2) and the less marketing-oriented (G3). This shows that the FTZs authorities, according to their responses, indicated that designing policies for implementing plans for marketing the zone privileges, facilities and services is a further distinguishing dimension between the marketing-oriented and less marketing-oriented FTZ grouping.

To sum up; this section presented the analysis and interpretation of the two group - DFA Computer Programme as an attempt to find the key marketing variables that would best differentiate between the grouping of marketing-oriented FTZs (most and moderate marketing-oriented) and the less marketing-oriented.

It has been found that there is a strong association between the marketing factors and the partitioning of FTZs marketing orientation (i.e., the most plus moderate vs the less marketing-oriented). About 97.65% of the FTZs sample were correctly classified into two separate groups.

By comparing the marketing discriminators obtained from the analysis of the three groups (i.e., most, moderate and less marketing-oriented) and their counterpart

discriminators obtained from the two groups (i.e., most plus moderate vs less marketing-oriented FTZs) there were (a) 11 similar variables (i.e., maintenance of telecommunication systems, offering facsimile systems, cleanliness of the zone, capacity of space for storage, maximisation of market share, maximisation of sales, public relations with zone users, marketing research activities, updating zone facilities, and extending the capacity of the zone facilities); and (b) three more discriminators added in the discrimination of the two groups. These additional discriminators were: the quality of the work force, the FTZ image/reputation; and policies for implementing plans for marketing the zone privileges, facilities and services (See Tables 7.6 and 7.8). This indicated that the three additional variables should be taken into consideration along with the 11 discriminators as a "cutting line" in differentiating between the two groups (i.e., the most plus moderate vs the less marketing-oriented FTZs. However, in this respect, the most discriminating marketing factors were: (1) the marketing research activities for the zone privileges, facilities, and services; (2) maximisation of market share; (3) maximisation of sales; (4) updating the zone facilities; (5) the maintenance of telecommunication systems; and (6) extending the capacity of the zone facilities.

7.3.4 Attitudes of FTZ Authorities, in the Developed Vs the Developing Countries, Toward the Marketing Concept Elements in the Operation of their Zones

In view of the growing number of FTZs in the developed and developing countries as well as the increasing degree of success in many FTZs, two key questions might be addressed by marketing observers and investigators. The first concerns the adoption of the marketing concept dimensions by the FTZs authorities in the operations of their zones, in both developed and developing countries. The second question concerns the identification of the most important marketing factors (variables) that would best differentiate between a given FTZ in the developed countries from another in the developing countries.

Since we are interested in exploring the differences between the two groups of FTZs (in the developed vs developing countries), as well as in identifying the most important marketing dimensions that might best discriminate between them, Two-group DFA is

believed to be the most suitable multivariate technique in this respect. Therefore, the 40 marketing variables were submitted, for a second run, to the Two-group DFA. The dependent variable was the two groups of FTZs in both the developed countries (G1 = 29 cases) and in the developing countries (G2 = 56 cases). Table 7.9 contains the main results obtained from DFA in terms of canonical discriminant function, classification matrix and overall perception of predicting group membership.

Table 7.9: Canonical Discriminant Functions, Classifications and Group Membership of the FTZs in the Developed Versus the Developing Countries

Function	Eigenvalue	Canonical Correlation	Wilks' Lambda	Chi-squared*	d.f.
1	3.15	0.87	0.24	104.66	19
Classification Matrix					
Actual Group	No. of Cases	Predicted Group Membership		Total	
		(1)	(2)		
GROUP 1 (Developed)	29	28 (96.6%)	1 (3.4%)	29	
GROUP 2 (Developing)	56	2 (3.6%)	54 (96.4%)	56	
Total	85	30	55	85	
Percent of "Grouped" cases correctly classified: 96.47%					

* Significant at 0.000

there are 10 most marketing-oriented; 23 moderate marketing-oriented; and 23 less marketing-oriented. Table 7.10 illustrates this classification.

Table 7.10: A Whole Classification of the FTZs according to their Marketing Orientation and their Geographical Locations

	The Most Marketing-Oriented FTZs	The Moderate Marketing-Oriented FTZs	The Less Marketing-Oriented FTZs	Total
Number of FTZs in the Developed Countries	4	13	13	30
Number of FTZs in the Developing Countries	10	23	22	55
Total	14	36	35	85

In addition, the analysis demonstrates that out of the 40 marketing variables 19 represent the most important discriminators between FTZs in the developed and developing countries. These discriminators are shown in Table 7.11 in order of their discriminating weights (coefficients).

All the three dimensions of the marketing concept (i.e., satisfying the industrial buyer needs, achieving organisational goals and integrating the marketing functions) are seen by the FTZs authorities in both the developed and developing countries as important factors to the operations of their FTZs. Moreover, the degree of importance attached, by members of the FTZs authorities in both the developed and developing countries, to most of the marketing concept variables seems to be not so much different (See Table 7.11).

The interpretation of the most important discriminators between the FTZs in the developed and developing countries is provided below. However, a brief discussion of six

Table 7.11: Standardised Canonical Discriminant Coefficients and Group Means: DFA Output of FTZs in the Developed vs Developing Countries

Discriminant Variables	Group Means		Standardised Discriminant Coefficients
	G1	G2	
(i) <u>Satisfying the industrial buyer needs:</u>			
1. Utilities for manufacturing activities	5.9	8.0	.96
2. Sanitation of the zone area	6.8	7.3	.93
3. The offering of processing operation	5.3	5.9	.92
4. Maintenance of equipment	5.5	5.6	.91
5. The offering of a facsimile system	7.3	6.5	.71
6. Location of the zone	8.1	8.1	.68
7. Cleanliness of zone area	7.8	7.8	.65
8. Transporting equipment	5.6	5.9	.49
9. The offering of a Telex system	6.5	7.6	.43
10. The offering of assembly operations	5.7	6.3	.31
11. Size of area available for manufacturing activities	5.7	7.1	.26
(ii) <u>Achieving Organisational Goals:</u>			
12. Integration of the departmental functions of the zone authority	5.6	6.8	.89
13. Public Relations with zone users	7.4	7.4	.64
14. Free Trade Zone image/reputation	7.7	8.3	.32

G1 = Developed Countries
G2 = Developing Countries

Table 7.11 (Continued)

Discriminant Variables	Group Means		Standardised Discriminant Coefficients
	G1	G2	
(iii) <u>Integrating the Marketing Functions:</u>			
15. Personal selling of zone privileges, facilities and services	7.3	5.3	-.52
16. Offering zone users more choice of operations inside the zone	7.4	6.3	-.38
17. Using advertising channels for zone privileges, facilities and services	5.6	6.6	.30
18. Reviewing the pricing of zone privileges, facilities and services	6.0	6.5	.26
19. Extending the capacity of the zone facilities	6.6	7.4	.22

G1 = Developed Countries
G2 = Developing Countries

of these variables, and another three differentiating variables, is provided at the end of Section 7.2.2 where it was more relevant.

(i) Satisfying the Industrial Buyer needs

In terms of satisfying the industrial buyer needs, 11 variables have been found as the key discriminators between the two-groups being studied. These discriminators, in order of their weights, are: utilities for manufacturing activities (.96), sanitation of zone area (.93), the offering of processing operations (.92), maintenance of equipment (.91), the offering of a facsimile system (.71), location of the zone (.68), cleanliness of the zone area (.65), transporting equipment (.49), the offering of a telex system (.43), the offering of assembly operations (.31) and size of area available for manufacturing activities (.26).

Of particular concern to the discrimination between the FTZs in both the developed and developing countries are the sanitation of zone area, and the offering of a facsimile system. With respect to the first variable, it should be noted that it appears for the first time to distinguish only between the FTZs in the developed and the developing countries. Most of the FTZs authorities in the developed countries and more so in the developing countries attach this variable ratings in the range between the above average and below the extreme importance. The reason is that these FTZs authorities realise that sanitation of the zone area is an important need of the industrial firms (most of whom usually come from the advanced/developed countries). The task of the sanitation of the zone area involves taking the necessary actions to minimise the noise and air pollution resulting from the operations/activities inside the zone.

As for the variable of offering of a facsimile system, the FTZs authorities in the developed countries gave this factor a higher rating than did their counterpart in the developing countries. This is perhaps because of the novelty and high cost of such a telecommunication system. The facsimile system is the latest advancement in business communication. Through the use of facsimile, business firms can communicate official documents with each other far more effectively, efficiently and at much higher speed than any other existing system.

(ii) Achieving the organisational goals

Only one marketing variable, integration of the departmental functions of the zone authority, represents a new discriminator in this study with respect to the differentiation between the FTZs in the developed and developing countries. The FTZs authorities in the developing countries gave higher rating to this factor than their counterparts in the developed countries. The reason might be because the organisational structure of the FTZs in the developing countries is more involved. There are more flaws of communication and feedback interaction. Accordingly, this factor comes in this category of variables to assure the importance of integrating the departmental functions to achieve the organisational goals and continue to exist as a competing zone. The aim of integrating the departmental functions of a FTZ organisation is to organise the flow of communication between the various functions, and to supervise the tasks, duties and responsibilities of each department.

(iii) Integrating the Marketing Functions

Under this category there are two variables of concern, these are, personal selling of the zone privileges, facilities, and services; and offering the zone users more choice of operations inside the zone. Table 7.11 shows that these two variables are among the three exceptions which received higher scores from the FTZs authorities in the developed countries than their counterparts in the developing countries. The possible explanation could be that: as for the first variable, the methods and techniques for personal selling are more advanced and widespread in the developed countries than in the developing countries and the marketing managers use the personal selling techniques more extensively in the package of promoting their products. As for the second variable, the FTZs authorities in the developed countries attach more importance to offering the zone users more choice of operations than their counterparts in the developing countries. This is perhaps because on the one hand, many governments in the developed countries impose a variety of restrictions

on manufacturing inside the FTZs, therefore the FTZs authorities had to increase the choice of operations allowed in their zones which usually include such operations as packaging, repackaging, sorting, mixing, labelling, exhibition, containerisation, refrigeration etc. On the other hand, the FTZs authorities in the developing countries are more concerned, than their counterparts in the developed countries, with the size of the area available to manufacturing activities in the hope of attracting foreign investment, transfer of technology, and a source of employment for the locals.

7.4 Profile Analysis of the Evaluative Attitudes of the Authorities in the Various FTZs' Groupings and the FTZs Experts Panel Toward the Marketing Concept Adoption

Our concern in this section is with the comparative attitudes of the FTZs' authorities of the various groupings (i.e., most/moderate/less marketing-oriented; and FTZs in developed/developing countries) and the panel of FTZs experts with regard to the key variables of the marketing concept. These variables were obtained from DFA, representing the most discriminators between/among the various FTZs groupings (See Tables 7.6 and 7.11 and the corresponding group means of the FTZs experts panel in Appendix [6]).

Therefore, the 19 marketing discriminators were profiled according to the mean responses of both the FTZs' authorities of the various groupings and the FTZs experts panel (See Figures 7.5 and 7.6). In addition, five hypotheses were generated in order to test for the significance of the similarities or differences between the authorities' attitudes of each of the five FTZs groups and the FTZs experts panel. The results of testing these five hypotheses is given in Section 7.2.3 of this chapter. And the findings of Profile Analysis for the comparative attitudes of the FTZs authorities and the FTZs experts panel are discussed in the following two subsections.

7.4.1 Comparative Attitudes Between the Authorities of the three FTZs groups (most/moderate/less marketing-oriented) and the FTZs' Expert Panel toward the Marketing Concept Adoption.

It is our intention to provide a comprehensive attitudinal profile of the authorities of the three FTZs groups (the most, the moderate and less marketing-oriented) and the FTZs experts panel with regard to the marketing concept adoption. The main reason behind this analytical procedure is to find out how far the FTZs authorities and the FTZs experts panel are different (or similar) in their evaluation of 19 key discriminating marketing variables which were obtained from the Multiple DFA run (see Table 7.6) and the corresponding responses made by the FTZs experts panel to the same set of 19 variables as they appear in Appendix [6]. In addition, three hypotheses were generated to test the significance of the similarities/differences between the authorities' attitudes of each of the three FTZs groups and the attitudes of the FTZs experts panel towards the importance of employing the 19 key discriminating variables. The results of the hypotheses testing are given in subsection 7.2.3 of this Chapter.

Thus, in the first application of Profile Analysis the 19 key discriminating variables were profiled on the bases of the means of the responses made by the FTZs' authorities of each group and the means of the responses made by the FTZs experts panel. Figure 7.5 profiles the group means of the attitudes of all the respondents under study: the most marketing-oriented (G1), the moderate marketing-oriented (G2), the less marketing-oriented (G3), and the FTZs experts panel (G4).

The overall picture of Profile Analysis in Figure 7.5 shows that the authorities' attitude of the two FTZs groups (the most and the less marketing-oriented) differ from the attitudes of the FTZs experts panel with respect to six marketing variables. These variables are: the well-being of the work force, the capacity of storage and warehousing, the maximisation of market share, the public relations with the zone users, the marketing research activities, and the updating of the zone facilities. These differences in the attitudes

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might be due to the fact that each FTZs group operates at a different level of the marketing concept adoption, and the FTZs experts panel (G4) express attitudes somewhat similar to the attitudes of the moderate marketing-oriented FTZs group (G2).

Therefore, the attitudinal differences towards the marketing variables seems to be very little between the moderate marketing-oriented FTZs (G2) and the FTZs experts panel (G4). This finding is supported by our acceptance of the fifth null hypothesis regarding the similarities in the attitudes, towards the importance of the 19 key discriminating variables, between the authorities of the moderate marketing-oriented FTZs group and the FTZs experts panel. In other words, the FTZs' authorities of G2 and the FTZs experts panel (G4) rate many of the marketing variables nearly in the same level of importance (see Figure 7.5). For example, they consider the following factors as very important for the adoption of the marketing concept by FTZs' authorities: The maintenance of telecommunication systems, the offering of facsimile systems, size of the area available for manufacturing, size of work force, well-being of work force, safety of work force, maximisation of sales, minimisation of cost operations, public relations with zone users, marketing research activities, expanding area for zone privileges, updating the zone facilities, and reviewing prices.

The above finding is consistent with the instructions provided to the members of the experts panel in the questionnaire, since we request from them to report on what they believe a marketing-oriented FTZ should score. Since the experts reported on a marketing-oriented FTZ (and not most, or less marketing-oriented), then their response should tally with a moderate marketing-oriented FTZ.

At the same time, the members of G2 and the FTZs experts panel are more likely not to be quite similar in their perceived evaluative attitudes toward some of the few marketing factors, such as size of zone area, maintenance of equipment, and offering of assembly operations. This is perhaps because the FTZs experts were evaluating the variables from a theoretical point of view, while the G2 FTZs authorities were evaluating from practice and experience. For example, the FTZs experts might have assumed, theoretically, that the size of the zone area is not so big deal as long as there is an area available for

FTZs operations. While from experience the FTZs authorities in G2 had scored a higher rating to the size of the zone area because in practice they sell their offerings typically to manufacturing firms and the size of the zone becomes of paramount importance. Because the manufacturing firms usually require an ample size of area for the variety of zone operations they get involved with, such as manufacturing, processing, storage and warehousing. As for the variable of maintenance of equipment, the FTZs experts might have believed, from a theoretical standpoint, that the maintenance of equipment is very important to the operations of FTZs. Meanwhile, the FTZs authorities of G2 might have believed, from experience, that it is not such important because in reality most of the equipment, involved in the operations of FTZs, are heavy duty and require minimum level of maintenance such as cleansing and lubrication. Similarly, the FTZs experts might have believed, theoretically, that the offering of assembly operations is one of the main activities involved in the operations of FTZs, while the G2 FTZs' authorities might have believed this is not so according to their own experience. Possibly because, as indicated earlier in Section 7.3.2 most of the FTZs authorities in G2 deal with manufacturing-oriented firms.

On the other hand, the officials of G1 (i.e., most marketing-oriented FTZs) tend to score higher, than the other two groups, on the importance of most of the marketing variables. They rate most of these variables in a higher level than do the members of the expert panel (See Figure 7.5). The former finding is not quite surprising due to the fact that the authorities of G1 are actually guided most by marketing in order to maintain the winning edge and stay above their competitors. It is worth mentioning that G1 includes - in the real world - the most successful FTZs as indicated by other studies and reports*.

* In this research, names of FTZs cannot be revealed for reasons of confidentiality.

7.4.2 Comparative Attitudes Between the FTZs' Authorities in the Developing/Developed Countries and the FTZs' Experts Panel towards the Marketing Concept Adoption

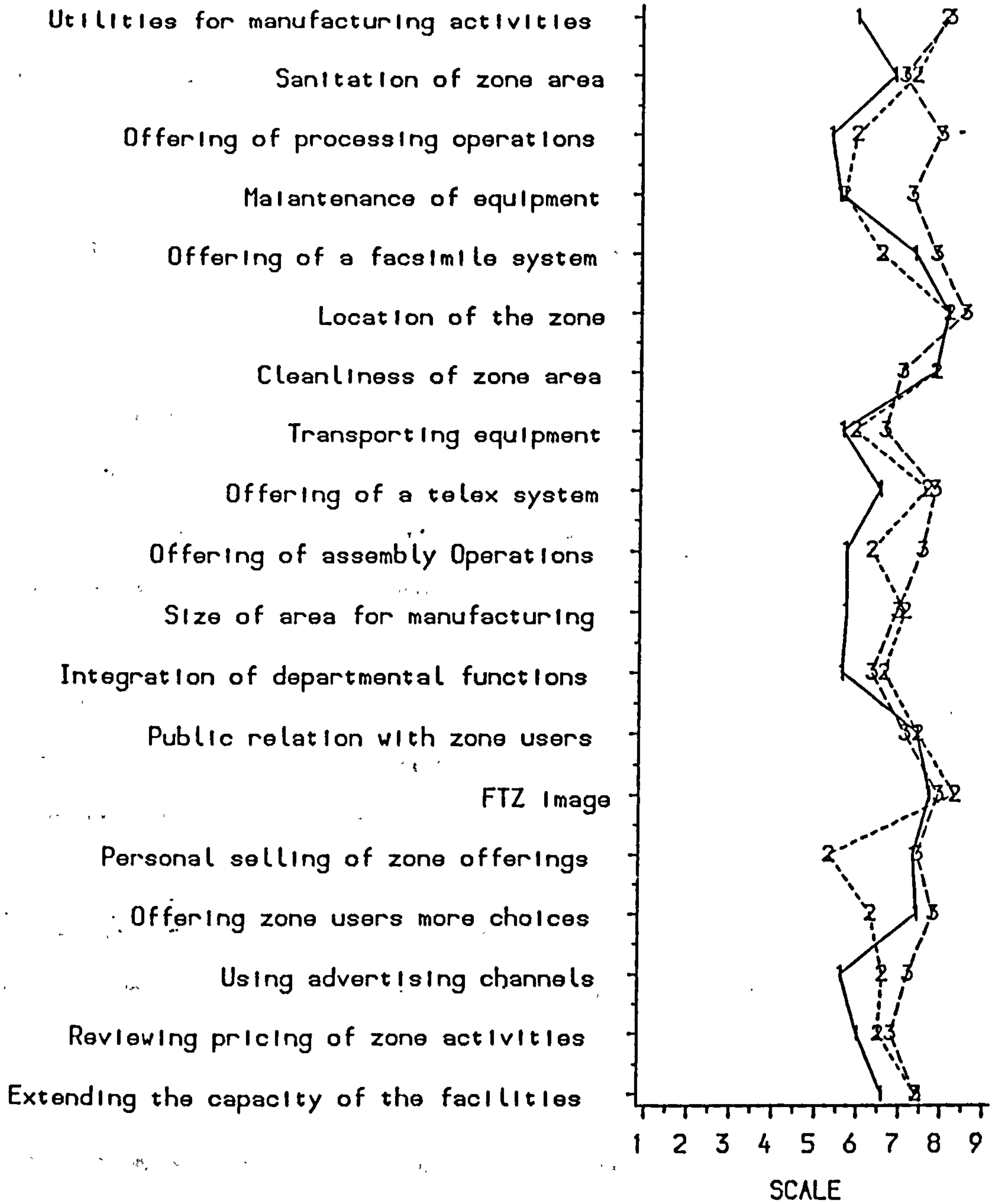
Profile Analysis (based on the mean responses) was applied again in order to find out how far the evaluative attitudes of the FTZs' authorities, in both the developed and developing countries, are different from (or similar to) the cognitive attitudes of FTZs experts panel toward the 19 key determinants of the marketing concept adoption. The 19 key marketing discriminators were obtained from the Two-group DFA second run (See Table 7.11), and the corresponding responses made by the FTZs' experts panel to the same set of the 19 variables as they appear in Appendix [6].

In addition, an hypothesis, H0(7), was generated to test the significance of the similarities/differences between the attitudes of the FTZs authorities in the developed countries and the attitudes of the FTZs experts panel. And another hypothesis, H0(8), was generated to test the significance of the similarities/differences between the attitudes of the FTZs authorities in the developing countries and the attitudes of the FTZs experts panel. Figure 7.6 illustrates a profile of the comparative attitudes of the three FTZs groupings: the group of the FTZs authorities in the developed countries = G1; the group of the FTZs authorities in the developing countries = G2; and the group of the FTZs experts panel = G3.

The overall picture of Profile Analysis in Figure 7.6 shows that the attitudinal differences, towards most of these variables, are not too big among the three groups (G1, G2, and G3). This is perhaps due to the fact that the moderate marketing-oriented FTZs make up about 43.3% of the FTZs in the developed countries and about 41.8% of the FTZs in the developing countries, and the attitudes of the FTZs experts panel express similar attitudes to the moderate marketing-oriented FTZs group. This fact was also emphasised when we tested the significance of the seventh and the eighth hypotheses (see Subsection 7.2.3).

Figure (7.6)

PROFILE OF THE COMPARATIVE ATTITUDES BETWEEN THE FTZs AUTHORITIES IN THE DEVELOPED AND DEVELOPING COUNTRIES, AND THR FTZs EXPERT PANEL TOWARD THE ADOPTION OF THE MARKETING CONCEPT



- 1 FTZs IN THE DEVELOPED COUNTRIES (G1)
- 2 FTZs IN THE DEVELOPING COUNTRIES (G2)
- 3 FTZs EXPERT PANEL (G3)

A second general observation that can be depicted from Figure 7.6 is that although the degree of similarities between G1 and G3 is nearly close to the degree of similarities between G2 and G3 on a number of variables, the degree of differences between G2 and G3 is somewhat sharper than the degree of differences between G1 and G3. This finding is supported by our acceptance of the seventh null hypothesis H0(7) and our rejection of the eighth null hypothesis H0(8).

A closer look at Figure 7.6 reveals that there is a unanimous agreement among the three groups (G1, G2, and G3) with respect to their attitudes towards the importance of five marketing variables: Public relations with the zone users, the FTZ image and reputation, the location of the zone, the cleanliness of the zone area, and the sanitation of the zone area. In addition, Figure 7.6 shows that there is somewhat agreement among these three groups with regard to the importance of other four variables: transporting equipment, the integration of the departmental functions, reviewing the prices, and extending the capacity of the zone facilities. And as for the telecommunications systems, we find that while the FTZs authorities in the developed countries (G1) gives higher rating to the offering of a facsimile system, the FTZs authorities in the developing countries gives higher rating to the offering of a telex system, and the FTZs experts panel tend to agree with both of them on the importance of each medium of telecommunication.

The above finding may demonstrate that these 11 variables could stand out as being the backbone for the adoption of the marketing concept in the operations of a FTZ. In other words, if a FTZ authority intends to be oriented by marketing it may wish considering at least these 11 variables, by effecting the following tasks in the operations of its zone: selecting a reasonable location, allocating transporting equipment, installing facsimile/telex systems, extending the capacity of its zone facilities, maintaining the zone area clean and sanitary, reviewing the prices of its zone offerings, building and maintaining good relations with its current and potential buyers, establishing favourable and respectable image in the industry, and integrating the departmental functions.

On the other hand, Figure 7.6 shows that the three compared groups (G1, G2, G3) tend to display disagreement with respect to the relative importance of three marketing variables. These variables are: the offering of processing operations, the offering of assembly operations, and using advertising channels. Looking at Figure 7.6, we can also note that the FTZs authorities of the developed countries (G1) seem to underestimate the relative importance of four variables. These variables are: the utilities for manufacturing activities, the offering of processing operations, the maintenance of equipment, and the offering of assembly operations. These results are consistent with the fact that these particular variables are associated with industrial activities which are not heavily practised in a number of FTZs in the developed countries particularly some of the free ports of Europe and few of the U.S. foreign trade zones. These FTZs of the developed countries lay more emphasis on other FTZs operations such as warehousing and offering the zone users more choice of zone operations. Furthermore, we can notice, from Figure 7.6, that both the FTZs authorities in the developed countries (G1) and the FTZs experts panel (G3) tend to agree on the relative importance of three variables: the offering of a facsimile system, the personal selling, and offering the zone users more choice of operations inside the zone. But the authorities of G2 do not show similar attitudes towards the relative importance of these three particular variables. A possible explanation as for why the FTZs authorities in the developing countries (G2) did not express similar attitudes with regard to these three variables is that employing these particular variables involves high cost and more advanced techniques which could not be available sufficiently to some zones in the developing countries. Eventually, the results of Profile Analysis emphasise the results of the last DFA application particularly with respect to the differences between the FTZs in the developed countries (G1) and the FTZs in the developing countries (G2) (see Subsection 7.3.4).

7.5 Correlation Analysis

The results of the Pearson Correlation Analysis, with regard to the 40 marketing concept variables, are shown in Appendix [8]. In interpreting the correlation coefficients (all significant at .01 level), the following scale is used (Cohen and Holliday, 1982; Hamilton, 1990):

- (I) $r \leq 0.10$ = negligible correlation
- (II) $0.11 \leq r \leq 0.30$ = very low correlation
- (III) $0.31 \leq r \leq 0.49$ = low correlation
- (IV) $0.50 \leq r \leq 0.69$ = moderate correlation
- (V) $0.70 \leq r \leq 0.89$ = high correlation
- (VI) $0.90 \leq r \leq 1.00$ = very high correlation and indicates a multicollinearity between the two correlated variables.

Looking at Appendix [8], some interesting observations can be made, these are as follows:

1. None of the variables correlates inversely with any other variable. This may indicate that each of the 40 variables (items) is positively related to each other in the assessment of the FTZs' marketing concept adoption.
2. None of the variables correlates with any other variable with $r = 0.90$ or beyond. This indicates that multicollinearity does not exist between any pair of the 40 variables. This in turn, implies that each variable measures a different aspect of the marketing concept adoption.
3. The correlation coefficients of most of the variables are in the range of negligible to low correlation. This means that most of the 40 variables are related with each other in so much as they measure related aspects of one particular concept (i.e., the marketing concept adoption).

4. There are a number of variables which are considered as moderately correlated ($0.50 \leq r \leq 0.69$). This is expected because according to Green and his associates (1988): In marketing research, it is almost always the case that the predictor variables will be correlated to some degree because one needs a large number of variables to maximise accuracy of predictors, and as more variables are added to the model their intercorrelation becomes larger.
5. An interesting observation in this category of correlated variables ($0.50 \leq r \leq 0.69$) is that each two correlated variables appear in a sequential order in the questionnaire form. This perhaps shows that the second variable of each two correlated pair of variables, although is not a cause, might be a necessity of its preceding variable. For example, the offering of a facsimile system (VII) may necessitate the maintenance of telecommunications systems (V12), where the correlation between them is $r = 0.54$.
6. There are a number of paired variables in this category of correlation ($0.50 \leq r \leq 0.69$) that follow the same pattern of interpretation, i.e., the second variable although is not a cause might be a necessity of its preceding variable. These pairs of variables and the correlation coefficients (r_s) between them are shown in Table 7.12.
7. In addition, there are few paired moderately correlated variables ($0.50 \leq r \leq 0.69$) which do not come in a sequential order but essentially follow the same pattern of interpretation, i.e., one of the variables although not a cause, might be a necessity of its paired variable. Examples are as follows:
 - a) Extending the capacity of the zone facilities (including the telecommunications systems) = V34 is correlated with V11 = the offering of a facsimile system ($r = 0.53$). And V34 is also correlated with V12 = the maintenance of telecommunications systems ($r = 0.57$). This may imply that some FTZs' authorities believe that extending the capacity of the zone facilities, including the telecommunications systems, entails the offering of a facsimile system and the maintenance of the telecommunications systems.

Table 7.12: Pearson's Correlation Coefficients for Pairs of Variables which are Moderately Correlated

<p style="text-align: center;">Pairs of Correlated Variables: $0.50 \leq r \leq 0.69$ $\alpha = 0.01$</p>	<p style="text-align: center;">Correlation Coefficient r</p>
The offering of a Telex system (V10) and the maintenance of telecommunications systems (V12)	0.53
The quality of the work force (V14) and the well-being of the work force (V15)	0.58
The quality of the work force (V14) and the safety of the work force (V16)	0.54
The well-being of the work force (V15) and the safety of the work force (V16)	0.64
The cleanliness of the zone area (V17) and the sanitation of the zone area (V18)	0.51
The maximisation of sales (V21) and the maximisation of market share (V23)	0.69
The maximisation of sales (V21) and the maximisation of the return on investment (V24)	0.60
The maximisation of profits (V22) and the maximisation of market share (V23)	0.61
The maximisation of profits (V22) and the maximisation of the return on investment (V24)	0.61
The maximisation of market share (V23) and the maximisation of the return on investment (V24)	0.53
The maximisation of market share (V23) and the growth rate of FTZ (V26)	0.53
The maximisation of the return on investment (V24) and minimising the cost of the zone operations (V25)	0.59
Public relation with the zone users (V28) and relations with the government (V29)	0.61
Expanding the area available for the zone privileges (V31) and improving the quality of the zone facilities (V32)	0.53
Updating the zone facilities (V33) and expanding the capacity of the zone facilities (V34)	0.69
Reviewing the pricing of the zone (V36) and using advertising channels for the zone offerings (V37)	0.57
Reviewing the pricing of the zone (V36) and marketing research activities (V39)	0.51
Reviewing the pricing of the zone (V36) and policies for implementing plans for marketing the zone (V40)	0.53
Using the advertising channels for the zone (V37) and marketing research activities for the zone (V39)	0.51
Personal selling of the zone (V38) and marketing research activities for the zone (V39)	0.64

- b) Updating the zone facilities, including the telecommunications systems = V33 is correlated with V12 = the maintenance of the telecommunications systems ($r = 0.57$). Again, this may reflect the attitudes of some FTZs' authority that updating the zone facilities, including the telecommunications systems, requires the maintenance of these systems.
- c) The maximisation of market share (V23) is correlated with V38 = the marketing research activities ($r = 0.58$). And V23 is also correlated with V39 = the policies for implementing plans for marketing the zone offerings ($r = 0.53$). This may imply that in the operations of their zones, the attitudes of some FTZs' authorities reveal that the maximisation of the market share can be accomplished through both the marketing research activities and through the policies for implementing plans for marketing the zone offerings.
- d) Similar type of interpretation can be made with respect to V26 = growth rate of FTZ which correlated with both V38 = the marketing research activities ($r = 0.59$) and with V39 = the policies for implementing plans for marketing the zone offerings ($r = 0.52$).

8. Finally, there are only three pairs of variables which are considered as highly correlated ($0.70 \leq r \leq .89$). Each of the three correlated pairs also appear in a sequential order in the questionnaire form. The possible interpretation with such highly correlated and ordered pairs of variables is that the FTZs authorities might have felt that the employment of one variable oblige them to employ its succeeding paired variable. For example; the FTZs authorities might have felt that employing V8 = transporting equipment, in the operations of their zones, oblige them to offer V9 = the maintenance of equipment, where the correlation between them ($r = .84$). Similarly, to maximise profits = V22, the FTZs' authorities might have felt they had to maximise sales (V21) where the correlations between them ($r = .77$). And in order to employ marketing research activities (V39) they might have felt they had to design plans for implementing plans for marketing the zones (V40), where the correlation between them ($r = .82$).

7.6 Reliability and Validity Assessment

At the beginning of this study we had to assess the reliability and validity of the measuring instruments used (i.e., the attitudinal measures). This has been done in order to put faith in the results obtained and the conclusions drawn from these results. While the concern for reliability comes from the necessity for dependability in measurement, validity is concerned with what is being measured. In this section we present the results of both the reliability and validity.

7.6.1 Testing the Internal Consistency Reliability: Application of Cronbach's Alpha

In this study, the SPSSX computer package was used in order to compute the Cronbach's Alpha coefficients of the internal consistency reliability on the attitudinal measures being studied. Since our measures of attitudes are mainly intended to measure three dimensions relating to the adoption of the marketing concept in FTZs operations (i.e., satisfying the industrial buyer needs, achieving organisational goals, and integrating the marketing functions), we had to compute the Alpha coefficients, for the variables contained in each of the three dimensions, first by considering if all the variables were retained and then by considering if each variable was systematically removed from the particular dimension. In addition, the Alpha Coefficients were computed when all the three dimensions retained, and when each dimension is systematically removed from the scale. In other words, four runs of reliability analysis were performed by the computer programme. The final results of the reliability analysis for all the attitudinal measures, being studied, are presented in Tables 7.13, 7.14, 7.15, and 7.16.

Table 7.13 contains the results of the Cronbach's Alpha coefficients for the first dimension of the marketing concept (i.e., satisfying the industrial buyer needs). The table shows that if all the twenty variables were retained, the reliability coefficient is very high ($\alpha = .856$), and with the exception of the first variable (the location of the zone), if each of the remaining 19 variables was systematically removed, the reliability is marginally reduced because the values of the Cronbach's Alpha coefficients range from .843 to .854. But if the

first variable was removed, the reliability is increased from .856 to .885 which is still marginal. Hence, this particular variable should not be eliminated because it still measures one of the main subconstruct of satisfying the industrial buyer needs. Therefore, the values of the Alpha coefficients reflect a high degree of reliability of the twenty measures, under study, when all the variables are retained, and when each variable is systematically eliminated. Thus, all the variables were retained as good indicators of satisfying the industrial buyer needs.

Table 7.13: Reliability Coefficients for the Variables of Satisfying Industrial Buyer Needs

VARIABLES	CRONBACH'S ALPHA IF VARIABLE DELETED
1. Location of the zone	.885
2. Size of the zone area	.853
3. Capacity of space for warehousing and storage	.853
4. The offering of processing operations	.846
5. The offering of assembly operations	.846
6. Size of area available for manufacturing	.851
7. Utilities for manufacturing activities	.853
8. Transporting equipment	.843
9. Maintenance of equipment	.844
10. The offering of a telex system	.851
11. The offering of a facsimile system	.848
12. The maintenance of telecommunication systems	.849
13. The size of the work force	.851
14. Quality of the work force	.846
15. The well-being of the work force	.844
16. Safety of the work force	.846
17. Cleanliness of the zone area	.850
18. Sanitation of the zone area	.847
19. Security of the zone area	.853
20. Supervisory manoeuvring of the zone activities	.854
Cronbach's Alpha with all the 20 variables retained	.856

Table 7.14 contains the results of reliability analysis with regard to the second dimension of the marketing concept (i.e., achieving the organisational goals). The table shows that if all the ten variables were retained, the value of Cronbach's Alpha is also high ($\alpha = .835$). And with the exception of two variables, if each of the remaining 8 variables was systematically eliminated, the reliability of the entire dimension is marginally reduced because the values of the Alpha coefficients are in the range of .805 to .829. As for the two variables (the public relations with the zone users, and the FTZ image and reputation), if each of these two variables was systematically removed, the reliability of the entire dimension is increased from .835 to .838 which is still a very marginal increase. This indicates that neither of these two variables should be eliminated because each measures a specific subconstruct of this particular dimension. Accordingly, all the variables are considered as reliable measures and thus are retained as good indicators of achieving the organisational goals.

Table 7.14: Reliability Coefficients for the Variables of Achieving the Organisational Goals

VARIABLES	CRONBACH'S ALPHA IF VARIABLE DELETED
21. Maximisation of sales	.805
22. Maximisation of profits	.811
23. Maximisation of market share	.805
24. Maximisation of return on investment	.806
25. Minimising cost of the zone operations	.822
26. Growth rate of free trade zone	.820
27. Integration of the departmental functions of the zone	.819
28. Public relations with the zone users	.838
29. Relations with government	.829
30. Free trade zone image and reputation	.838
Cronbach's Alpha with all the 10 variables retained	.835

Table 7.15 contains the results of reliability analysis with regard to the last dimension of the marketing concept (i.e., integrating the marketing functions). The table shows that if all the ten variables were retained, the value of Cronbach's Alpha of the dimension is still high ($\alpha = .835$). And if each of 9 of the variables was systematically eliminated, the reliability of the entire dimension is marginally reduced because the values of the Alpha coefficients are in the range of .792 to .834. As for variable 33 (i.e., updating the zone facilities) if it was systematically removed from this set of variables the reliability of the entire dimension will be increased from .835 to .836 which is still a very minimal change. Thus, variable 34 should not be deleted because it measures a specific subconstruct of this dimension. Accordingly, all the variables are considered as reliable measures and thus are retained as good indicators of integrating the marketing functions.

Table 7.15: Reliability Coefficients for the Variables of Integrating the Marketing Functions

VARIABLES	CRONBACH'S ALPHA IF VARIABLE DELETED
31. Expanding the area available for the zone privileges	.834
32. Improving the quality of the zone facilities	.814
33. Updating the zone facilities	.836
34. Extending the capacity of the zone facilities	.831
35. Offering the zone users more choice of operations	.826
36. Reviewing the prices of the zone privileges, facilities and services	.817
37. Using advertising channels for the zone	.817
38. Personal selling of the zone privileges, facilities, and services	.815
39. Marketing Research activities for the zone	.792
40. Policies for implementing plans for the zone	.808
Cronbach's Alpha with all the 10 variables retained	.835

Table 7.16 summarises the total results of the reliability analysis for the three dimensions comprising the 40 marketing concept variables. The table shows that if all the three dimensions are retained, the reliability of the measuring scale has a very high value of Cronbach's Alpha ($\alpha = .926$). And if each of the three dimensions was systematically removed, the reliability of the entire scale, in each case, will be reduced because the values of the Alpha Coefficients are .835, .835, and .856 which are lower than $\alpha = .926$ of the entire scale. This indicates that each of the 40 variables is very reliable in measuring a specific subconstruct of the particular dimension of the measuring scale, and that each of the three dimensions measures a certain construct related to one concept which is the marketing concept adoption. In retrospect, we may conclude that all the variables developed for this investigation, to measure the attitudes of the FTZs' authorities towards the marketing concept adoption, are strongly reliable in terms of their ability to reduce the random (or variant) error of measurement in the process of data collection.

Table 7.16: Summary of the Reliability Analysis for the Entire Dimensions of the Marketing Concept*

Dimensions	No. of measures per dimension	Cronbach's Alpha if dimension deleted
(i) Satisfying the industrial buyer needs	20	0.856
(ii) Achieving the Organisational goals	10	0.835
(iii) Integrating the marketing functions	10	0.835
Cronbach's Alpha with all the 3 dimensions retained	40	0.926

* The SPSS Computer programme of reliability analysis was performed on each market dimension separately, and also on all the dimensions combined together.

7.6.2 Examining the Content (face) Validity

As we have pointed out earlier, (in section 6.7.2, Chapter 6), it was our intention in this investigation to check on the face (or content) validity of all the attitudinal measures generated to measure the adoption of the marketing concept by the FTZs' authorities.

Content validity is concerned with whether a measure actually does measure the concept being studied. In content validity, not only should the items contain the common thread of the attitude under study, but between them they should also cover the full range of the attitude, and cover it in a balanced way. In other words, these items should be a representative sample of items from the universe of content. The assessment of content validity is essentially a matter of judgement; the judgement may be made by the supervisor(s) or by colleagues working in the same field, or by a panel of experts on the field being studied (Moser and Kalton, 1989).

The content validity procedures followed in this study were adopted from the approach* recommended by: Carmines and Zeller, 1979; Rubin, 1983; Kerlinger, 1986. Based upon this approach, the content validity for the attitudes measured by our study, was established as follows:

- The domain of content of the study was specified as: Free trade zones adoption of the marketing concept.
- The available literature on the marketing concept and on FTZs were thoroughly explored in parallel.
- The review on the marketing concept literature revealed that the marketing concept has three main dimensions: (a) satisfying the customers needs; (b) achieving organisational goals and (c) integrating the marketing functions.
- The review on the FTZs literature revealed that, with respect to FTZs operations, the first dimension (i.e., satisfying the industrial buyer needs) can be further

* The procedures for establishing a content-valid measure of attitudes is discussed in Chapter Six (6.7.2).

- subdivided into 20 subdimensions (items). And each of the remaining two dimensions can be subdivided into ten subdimensions (items).
- Thus, we ended up with 40 items (variables) as a representative sample of the three main dimensions of the marketing concept in relation to FTZs operations.
 - In order to develop a measuring scale to measure the FTZs marketing concept adoption, the 40 variables were put in a questionnaire form, using a 9-point itemised rating scale, requesting each FTZ authority to circle the appropriate number from (1) "Not important at all" to (9) "Extremely Important" reflecting the attitudes the authority attaches towards the importance of employing each of these variables in the operations of their zones.
 - After construction of the questionnaire form was completed, its content (face) validity was assessed by six people specialised in marketing including: the supervisor, two other staff members, and three colleagues. Their comments were taken into full consideration in refining and improving the structure and presentation of the questionnaire (the questionnaire form is provided in Appendix [4]).
 - Before sending the questionnaire to the FTZs authorities, it was sent to a 34 FTZs panel of experts* requesting each member of the panel to circle the appropriate number from (1) "Not important at all" to (9) "Extremely Important" reflecting what each believe that a marketing-oriented FTZ should score to best indicate the level of importance it attaches to the employment of each of these variables in the operations of their zones. Moreover, the FTZs experts panel were requested to provide their comments and remarks, thus, re-inforcing the validity of the content of the questionnaire before initiating our main survey and sending the questionnaire package to the FTZs authorities around the world (The questionnaire package sent to each expert panel is available in Appendix [2]).

*The selection of the FTZs panel of experts is discussed in Chapter 5 (5.5.1).

- The questionnaire approval gained a consensus among 20 of the 24 experts panel who returned answered questionnaires. The approval of the questionnaire was implied by those majority who returned answered questionnaires with positive comments and encouragement, suggestions, and those few who returned answered questionnaires with critical comments and suggestions.
- However, a constructive criticism was made regarding the presentation of the 40 variables. The researcher was advised by one of the FTZs experts to present the 40 variables sequentially as they appear in the questionnaire but without reference to the three dimensions of the marketing concept (i.e., satisfying the industrial buyer needs, achieving the organisation goals, and integrating the marketing functions). Accordingly, the comments made by the FTZs experts have been taken into consideration when we were revising the questionnaire.
- Two members of the FTZs panel suggested that one further variable (i.e., the rate of tax incentive) should be included in the questionnaire. Although this suggested variable is important, it was found that, for this type of global study, it is not valid to include the variable of tax incentives among the other variables generated for this research.
- The reason the variable of tax-incentives was not included in this research is due to the fact that in the real world of FTZs operations, there are two types of FTZs with respect to the control of the tax-incentives package. The first group are those zones which are run by government authorities and thus exercise from relatively direct to full control over the tax-incentives. This first group mainly includes FTZs in the developing countries. The second group are those which are run and operated by private companies or by semi-government firms and thus have very limited control, if any, over the tax-incentives. This second group includes FTZs in the developed countries. In order to avoid the possibility of sampling error, therefore, the variable of tax-incentives was excluded in this study.

- In addition, two other experts reported that the questionnaire does not include any variables relating to the investment and legislative dimensions. As we explained in Chapter 5 (5.5.1), we should not take such suggestions into account because the suggested variables are out of the subject matter of our study, which is concerned solely with the marketing aspects of FTZs.
- The researcher sent his reply to the four FTZs experts who criticised the questionnaire for not including additional variables unrelated to marketing. In the letter, the researcher expressed a great deal of appreciation for their co-operation, and emphasised that the focus of the study is solely on the marketing aspects of FTZs operations. At a later stage, copies of the modified questionnaire were mailed to the FTZs' authorities members of the domains of the study.
- According to Rubin (1983), "to ensure content validity in an operational measure you find out what others have to say about which subconcepts are agreed upon of the overall concept". Thus, the substantial agreement (83%) reached by the FTZs panel members on the content of the survey as well as on the measures employed confirms the content validity of our attitudinal variables. Eventually, for a measure to be valid it must be reliable (Kinnear and Taylor, 1983).

7.7 Summary

In Chapter Seven, we presented the findings of our investigation. First, testing the eight research hypotheses using three statistical tests: the Wilks' Lambda, the Univariate F-ratio, and the Hotelling's T^2 statistic. Second, reporting on the main results of the three applications of Discriminant Function Analysis (DFA). The first application was the Multiple DFA for discriminating among the three FTZs groups (i.e., the most, the moderate, and the less marketing-oriented FTZs). The second application was the Two-group DFA for discriminating between two FTZs grouping (i.e., the most and the moderate marketing oriented, combined versus the less marketing-oriented). And the third DFA application was

also the Two-group DFA to discriminate between the FTZs in the developed countries and the FTZs in the developing countries. Third, reporting the findings on Profile Analysis which was used to compare the attitudinal responses of the various FTZs groupings (i.e., the most, the moderate and the less marketing-oriented; and in the developed and in the developing countries) versus the FTZs experts panel towards the marketing concept variables. Fourth, reporting and interpreting the results of the Pearson correlation coefficients. Finally, the results of the reliability and validity assessments of the variables developed for this study.

The research design was guided by eight key hypotheses. Each hypothesis is concerned with discriminating (differentiating or comparing) among/between the attitudinal responses of the various FTZs groups towards the importance attached to the employment of the marketing concept variables in the operations of the FTZs: (1) discriminating among the three FTZs groups (i.e., the most, the moderate, and the less marketing-oriented); (2) discriminating between two FTZs groupings (i.e., the most and the moderate were combined to represent the marketing-oriented group on one side, and the less marketing-oriented on the other side); (3) differentiating between the FTZs operating in the developed countries from those FTZs operating in the developing countries. Each of the remaining five hypotheses is concerned with comparing the authorities' attitudinal responses of each of the five FTZs groups (i.e., the most, the moderate, and the less marketing-oriented; and the FTZs in the developed countries and the FTZs in the developing countries) with the attitudinal responses of the FTZs experts panel towards the importance of key discriminating marketing concept variables. The Wilks' Lambda statistic was used to test for the significance of the first three hypotheses when all the forty variables were considered in aggregate. The Univariate F-ratio was used to test for the significance of the first three hypotheses when each variable was considered separately. And the Hotelling's T^2 statistic was used to test for the significance of each of the last five hypotheses.

When testing the significance of the first three hypotheses, all the results of Wilks' Lambda indicated that the discrimination among and between each of the three different groupings of FTZs under investigation were statistically significant at $\alpha = 0.05$. Therefore,

the decision was to retain each of the first three null hypotheses and conclude that each set of the three FTZs groupings do differ in terms of their authorities' attitudinal responses towards the importance attached to the employment of the forty marketing concept variables. And when the Univariate F-ratio was employed to test the significance of the first two null hypotheses, and each of the forty marketing concept variables was considered separately, it was shown that all the forty variables were significant at least at $\alpha = 0.01$ in discriminating respectively; among the three different FTZs groups (i.e., the most, the moderate, and the less marketing-oriented), and between the grouping of marketing-oriented FTZs (the most and the moderate, combined) and the less marketing-oriented FTZs.

However, when the Univariate F-ratio was employed to test the significance of the third null hypothesis, and each of the same forty marketing concept variables was considered separately in discriminating between the FTZs in the developed countries and the FTZs in the developing countries, it was found that only nine variables were significant at $\alpha = 0.05$ in discriminating between the FTZs in the two typologies. The possible explanation was that these nine variables are related to the differences in the nature of the FTZs operations in both the developed and the developing countries. These marketing variables include: the capacity of space for warehousing and storage, the size of the area available for manufacturing activities, the utilities for manufacturing activities, the offering of a telex system, the size of the work force, the integration of the departmental functions of the zone authority, the extending of the capacity of the zone facilities, offering the zone users more choice of operations, and the personal selling of the zone offerings. However, the FTZs authorities in the two typologies did not indicate differences in their attitudes towards the importance of 31 variables. The possible explanation was that each typology contains a mixture of the three FTZs groups (i.e., the most, the moderate, and the less marketing-oriented).

As for testing the significance of the last five null hypotheses, the results of the Hotelling's T^2 statistic indicated that we should reject the fourth, the sixth, and the eight null hypotheses at $\alpha = 0.05$. Therefore, we had to conclude, with respect to each of the three

hypotheses, that the authorities' attitudes of each of the three FTZs groups (i.e., the most marketing-oriented, the less marketing-oriented, and the FTZs operating in the developing countries) are not similar to the attitudes of the FTZs experts panel towards the importance attached to the employment of the 19 key discriminating marketing variables in the operations of FTZs. The possible explanation for these attitudinal discrepancies was that while the attitudes of the FTZs experts panel, towards these marketing variables, are more or less similar to the attitudes of the moderate marketing-oriented FTZs, the authorities of each of the three compared FTZs groups operated at a different level of the marketing concept adoption. However, the results of the Hotelling's T^2 statistic indicated that we should also accept the seventh null hypothesis at $\alpha = 0.05$, and conclude that the authorities' attitudes of the FTZs, operating in the developed countries, are similar to the attitudes of the FTZs experts panel towards the importance of the 19 key discriminating variables. The possible explanation for this similarity in the attitudes was that the moderate marketing-oriented FTZs group constitutes about 43.3% of the total number of the FTZs operating in the developed countries.

We started the section on the DFA findings with a report on the jackknife validation of each of the three discriminant functions. The three jackknife applications indicated that each of the three jackknife hit ratios is very high but still lower than each of the three corresponding percentages obtained from the DFA three functions. Accordingly, we have strong evidence that each of our three DFA functions is a valid model for differentiating and predicting the group membership of each set of FTZs groupings.

The multiple DFA was employed to predict group membership of the FTZs' marketing behaviour, as well as to identify the best discriminators among the FTZs' groups. The results of the multiple DFA indicated that the canonical correlation coefficient is 0.96 which means there is a very strong relation between the marketing concept variables and the partitioning of the FTZs into three groups according to the authorities' marketing orientation. And about 98.82% of the sampled FTZs were correctly classified and identified as most, moderate and less marketing-oriented. The analysis revealed that there are 19 marketing

discriminators among these three FTZs groups. A full description and interpretation of these variables were elaborated upon in Subsection 7.3.2. Among the marketing discriminators, for instance, are: maintenance of telecommunication systems, offering facsimile systems, size of area available for manufacturing, maximisation of sales and marketing share, marketing research activities for the zone, and expanding the area available for the zone privileges.

Next, the same 40 marketing concept variables were submitted to the Two-group DFA Computer Programme in order to accomplish two main jobs of concern in our study; (a) to correctly classify the FTZs sample ($n = 85$) into two separate groups, namely, the grouping of the marketing-oriented FTZs including the most and moderate marketing-oriented, and the second group includes the less marketing-oriented FTZs group.

The second job was: (b) to identify the marketing discriminators between these two FTZs groups (i.e., the marketing-oriented and the less marketing-oriented). The results of the DFA indicated that there is a strong relationship between the marketing concept factors and the partitioning of FTZs according to the marketing orientation (i.e., canonical correlation coefficient is 0.92). About 97.65% of the FTZs were correctly classified into the two partitionings; the marketing-oriented FTZs group and the less marketing-oriented FTZs. The Two-group DFA also provided us with the most important marketing factors that would best differentiate between the two different FTZs groups, in terms of satisfying the industrial buyer needs, achieving organisational goals, and integrating the marketing functions. The two FTZs groups were profiled accordingly. The marketing-oriented FTZs group attached greater importance to all the 14 marketing discriminators than the less marketing-oriented FTZs group. Two factors appeared to be strong discriminators, these were; the maximisation of market share and the marketing research activities for the zone privileges, facilities and services.

The DFA allowed us to identify those FTZs which belong to either the developed or the developing countries in relation to marketing orientation. This was done by extracting, through the application of the Two-group DFA, 19 main variables as discriminators between the two typologies of FTZs. Among these marketing discriminators are utilities for

manufacturing activities, sanitation of the zone, offering processing operations, offering of facsimile systems, maintenance of equipment, integration of the departmental functions, public relations with the zone users, personal selling and offering zone users more choice of operations (See Subsection 7.3.4).

Later on, it was our intention to find out how the responses of the FTZs' authorities, of each of the five various groupings, to the marketing concept variables are compared to the responses obtained from the FTZs' experts panel to the same set of variables. Profile Analysis was found as an appropriate method for delineating the picture of the evaluative attitudes of the authorities of the five FTZs groups and the FTZs experts panel towards the relative importance of 19 key discriminating variables.

First, when Profile Analysis was applied to compare the attitudes of the three FTZs' authorities (i.e., the most, the moderate and the less marketing-oriented) and the attitudes of the FTZs' experts panel, towards 19 key discriminating variables, there were obvious differences among the most and the less marketing-oriented FTZs groups, and the FTZs experts panel with respect to six variables. But the differences in the attitudes between the moderate marketing-oriented and the FTZs experts panel, towards these variables were very little. The possible explanation is that while each of the three FTZs groups operates at a different level of the marketing concept adoption, the attitudes of the FTZs experts panel are somewhat similar to the authorities' attitudes of the moderate marketing-oriented FTZs group. These variables are: the well-being of the work force, the capacity of storage and warehousing, the maximisation of the market share, the public relations with the zone users, the marketing research activities, and the updating of the zone facilities. The first application of Profile Analysis also showed that the authorities' attitudes of the most and the less marketing-oriented FTZs groups, towards most of these variables, tend to be respectively above and below the similar responses of the FTZs authorities of the moderate marketing-oriented group and the FTZs experts panel.

Second, Profile Analysis was applied to depict the comparative attitudes between the FTZs authorities in the two typologies (the developed and developing countries) and the

FTZs experts panel towards another set of 19 key discriminating variables. It was found that, the attitudinal differences, towards most of these variables, are not too big among the three compared groups. The possible explanation was that it was due to the fact that the moderate marketing-oriented FTZs make up high and nearly equal proportions of the FTZs operating in the two typologies, and the attitudes of the FTZs experts panel express similar attitudes to the moderate marketing-oriented FTZs towards most of the marketing concept variables. Another important observation is that the authorities' attitudes of the FTZs operating in the developed countries are similar to the attitudes of the FTZs experts panel towards the relative importance of three particular variables: the offering of a facsimile system, the personal selling, and offering the zone users more choice of operations inside the zone. But the authorities of the FTZs operating in the developing countries did not share similar attitudes towards the importance of these three variables. A possible explanation was that employing these particular three variables involves high cost and more advanced techniques which could not be made available sufficiently to some zones of the developing countries.

At a later stage, we presented the findings of Correlation Analysis which though we conducted early in the research, presented its findings later on for reasons of convenience and importance of the findings. Here it was emphasised that the Pearson Correlation was employed for two main purposes. First, to identify those marketing variables that are related and how this can be interpreted in light of the research context. Second, to check for multicollinearity between any pair of variables. The initial finding was that multicollinearity does not exist between any pair of the forty variables. This implies that each variable measures a different aspect of the marketing concept adoption. In addition, the results of the correlation matrix indicated that the correlation coefficients of most of the marketing variables are in the range negligible to low correlation. This means that most of the forty variables are related in so much as they measure related aspects of one particular concept (i.e., the marketing concept adoption). Furthermore, it was found that a number of variables are considered as moderately correlated. This was expected because we had to employ

a relatively large number of variables, (i.e., forty) in order to maximise accuracy of predictors, and as more variables are added to the model, their intercorrelation becomes larger. It is also observed here that most of these moderately correlated pairs of variables appear in a sequential order in the questionnaire form. A possible explanation was that the second variable of any two correlated variables, although is not a cause of, could be a necessity of its preceding variable. For example, the offering of a facsimile system (V11) may necessitate the maintenance of telecommunication systems (V12).

Finally, the Cronbach's Alpha and the Content (face) Validity were employed to assess, respectively, the reliability and validity of our scale in measuring the marketing concept adoption in the operations of FTZs. The results of the Cronbach's Alpha showed that all the measures (variables) developed in the scale are strongly reliable in terms of their ability to reduce the random (or variant) error of measurement in the process of data collection. In addition, when the content validity was assessed, through some experts in marketing and FTZs, a unanimous agreement was reached among these judges with respect to the questionnaire structure, the variables, and the scale of measurement.

CHAPTER EIGHT

CONCLUSIONS AND RECOMMENDATIONS

	Page No
8.1 Summary	307
8.2 Main Conclusions of the Research Findings	311
8.3 Contributions of the Research	323
8.3.1 The Methodological Contributions	324
8.3.2 The Theoretical Contributions	325
8.3.3 The Practical Contributions	326
8.4 Recommendations	327
8.4.1 Recommendations for the FTZs Authorities	327
8.4.2 Recommendations for the World Export Processing Zones Associations (WEPZA)	333
8.5 Research Limitations	335
8.6 Areas for further Research	336

8.1 Summary

The FTZ Phenomenon encompasses multifacet perspectives, for example, there are views drawn from such disciplines as economics, political science, international law, trade and finance, management and administration, and marketing. This empirical study focuses upon the marketing aspects of the FTZs operations throughout the world.

This empirical research aims primarily to study the adoption of the marketing concept in the operations of FTZs. More specifically, the main objectives of this research are: (1) to classify and identify the FTZs into three groups, according to the authorities' attitude towards the employment of the marketing concept in the operations of their zones, as: most, moderate, and less marketing-oriented FTZs; (2) to identify the key marketing variables that would best profile and discriminate between/among the various groupings of FTZs; (3) to investigate whether there are any differences between the FTZs in the developed and developing countries with respect to their authorities' attitudes towards the adoption of the marketing concept in the operations of the zones; and (4) to examine to what extent the attitudes of the authorities in all the FTZs groupings, under study, are different from the attitudes of the FTZs' experts panel towards the adoption of the marketing concept in the operations of the zones.

The research design is based upon eight hypotheses regarding the differences (variations) among/between the various groupings of FTZs with respect to the authorities' attitudes towards the adoption of the marketing concept in the operations of the zones. The discrimination among/between the above mentioned FTZs groupings is based upon a set of 40 variables of the marketing concept representing three key dimensions: (a) satisfying the industrial buyer needs (20 variables), (b) achieving the organisational goals (10 variables), and (c) integrating marketing functions (10 variables).

The data for this research was collected via international mail survey using a questionnaire form. The responses on the questionnaire form were measured on a 9-point itemised rating scale where the respondent is instructed to circle the appropriate number

reflecting his/her attitude towards the importance of employing each item (variable) in the operations of a FTZ. This type of scale is considered by many authorities, in research methodology, as an interval scale. The questionnaire form was put into eight different languages (Arabic, Chinese, English, French, German, Malaysian, Spanish and Turkish). The questionnaire forms were addressed to: (a) 159 FTZs authorities in 67 countries around the world, of which 85 completed questionnaires were returned from 48 countries (i.e., 53% response rate); (b) thirty four people who are considered as experts in FTZs in America and Europe, of which twenty four completed questionnaires were returned (i.e., 71% response rate).

The primary data collected from the above two sources were analysed by means of a variety of multivariate statistical techniques including: Multiple Discriminant Function Analysis (MDFA); Two-group DFA (for two runs); the Jackknife method for validating the three DFA functions, Profile Analysis (twice); Correlation Analysis (using the Pearson's Correlation); the Wilks' Lambda test statistic; the Univariate F-ratio test; the Hotelling's T^2 test statistic; the Reliability Assessment (using the Alpha Correlation); and the Validity Assessment (using the Content Validity approach).

Prior to gathering the required data from the FTZs authorities, a survey research was conducted on 34 selected FTZs experts, of whom 24 responded, in order to: (a) pretest the data collection method used (i.e., the questionnaire, and using the mail survey), (b) check on the content validity of the measures employed in the survey, (c) help the researcher establish a criteria for 'a priori' classification of the marketing concept adoption levels in the operations of FTZs, and (d) analyse how far different (or similar) the authorities' attitudes of the various FTZs grouping and the attitudes of the FTZs experts panel towards the relative importance of employing key discriminating variables, of the marketing concept, in the operations of FTZs. Then, the questionnaire was reviewed and revised by taking into account the feedback (comments and remarks) of the FTZs experts panel. At a later stage, copies of the modified questionnaire were mailed to the FTZs' authorities members of the domains of the study.

One of the most important results of the experts panel survey is the establishment of 'a priori' classification of the FTZs according to their marketing orientation using a 'confidence limits' ranging from 6.75 to 7.93. These limits are based upon the FTZs' experts responses to the 40 variables of the marketing concept, and accordingly stand for the category of marketing-oriented FTZs.² Thus, any FTZ authority response falling below these limits should be considered as less marketing-oriented, and if the response falls above the limits, it should be regarded as most marketing-oriented FTZs. There are two main reasons for proposing a triple classification in studying the marketing orientation of FTZs operations, these two reasons are: first, there is no viable method(s) to classify FTZs into more than three groups; second, if the classification was assigned as two groups, then there will be two extremes, and one can not see to what extent there are transitional FTZs that can be regarded as marketing-oriented.

The domains of study include 85 FTZs representing 48 countries around the globe (i.e., North America, Central America and the Caribbean, South America, Europe, Middle East, Africa, Asia and Far East). The responses made to the 40 marketing items included in the main survey (i.e., the returned answered questionnaire forms of the FTZs authorities) were carefully reviewed and prepared for the stage of data analysis.

Since the aspects of reliability and validity have become prerequisite for any empirical study to be conducted in the spirit of scientific research, we decided to test the reliability and validity of all the variables generated for our investigation. Therefore, the internal consistency reliability and content (face) validity of the variables included in the survey were tested via the correlation alpha method and the judgements of a FTZs' experts panel, respectively.

First, the reliability test was performed on the three dimensions of the marketing concept variables, taken each dimension separately and then combined all the three dimensions together. The final results of the correlation alpha reliability show that the alpha coefficients were: 0.86 for satisfying the industrial buyers needs (20 variables); 0.84 for achieving the organisational goals (10 variables); and 0.86 for integrating the marketing

functions (10 variables). At the same time, the alpha correlation coefficient for all the three marketing concept dimensions (40 variables, taken together) was 0.93. These results of the reliability analysis demonstrates that all the marketing variables are able to measure the construct under investigation (i.e., the marketing concept adoption). Eventually, this is due to the high degree of reliability produced by the variables generated for this research.

Furthermore, the content (face) validity was assessed by: (a) six people specialised in marketing including the supervisor, two other staff members and three colleagues; and (b) a panel of 24 experts on FTZs. The comments and suggestions received from the six marketing specialised people were taken into full consideration in refining and improving the structure and presentation of the questionnaire. And a relatively high consensus (83%) was reached among the FTZs panel of experts with regard to the questionnaire structure, the variables, and the scale of measurement employed.

The data analysis for this study was performed through the application of multivariate methods. Two versions of Discriminant Function Analysis (i.e., Multiple and two-groups DFA) were chosen, as appropriate techniques to handle the data in question. While the multiple DFA version of the three groups was employed to classify and discriminate among the first FTZs grouping (i.e., the most vs the moderate vs the less marketing-oriented), the two-group DFA version was used twice in order to classify and differentiate between the other two sets of FTZs groupings. In the first run, the discrimination was performed between the marketing-oriented FTZs (i.e., the most and the moderate were combined as one group) and the less marketing-oriented FTZs. And in the second run, the discrimination was performed between the FTZs in the developed countries and the FTZs in the developing countries. In addition, Profile Analysis was used two times to compare the evaluative attitudes of the FTZs' experts panel towards the marketing concept variables: first, versus the authorities' evaluative attitudes of the three FTZs groups (i.e., the FTZs experts panel vs the most vs the moderate vs the less marketing-oriented), then versus the authorities evaluative attitudes of the FTZs in the two typologies (i.e., the FTZs experts panel vs the FTZs in the developed countries vs the FTZs in the developing countries).

Furthermore, Correlation Analysis (using Pearson's Correlation) was employed for two main reasons. First, to identify those marketing variables that are related and how this can be interpreted in light of the research context. Second, to check for multicollinearity between any pair of variables.

8.2 Main Conclusions of the Research Findings

The main conclusions that can be drawn from the findings of our empirical study can be reported as follows:

- (I) The survey conducted on the FTZs panel of experts enabled us to establish a criterion through which FTZs authorities were classified into three distinct groups: most marketing-oriented; moderate marketing-oriented; and less marketing-oriented. This step was necessary so that meaningful investigation can be conducted on the Marketing orientation of FTZs operations.
- (II) Before we presented the interpretation of the findings of the three DFA computer output, we reported the results obtained from the jackknife applications for validating the percentage of correct classification of each of the three DFA functions. The results, of the jackknife applications, show that the percentage of correct classification (i.e., the hit ratio) for each of the three sets of the FTZs grouping, respectively were: 94.10%; 92.90%; and 88.20%. These are indeed very high ratios but are still slightly lower than the corresponding hit ratios obtained in each of our three DFA models of the same set of FTZs groupings, which respectively were: 98.82%; 97.65%; and 96.47%. These results provide a strong evidence that each of the three discriminant functions is a strong model in predicting the group membership classification of its respective FTZs groupings.

(III) Discrimination Among the Three FTZs Groups: The Most, The Moderate and The Less Marketing-Oriented

1. The application of the multiple DFA (three-group version) indicates that there is a strong relationship between the 40 marketing concept variables, employed on the survey, and the three classification levels of FTZs marketing concept adoption. The analysis shows that the marketing concept variables were able to correctly classify 99% of the sampled FTZs into their "a priori" respective groups. This finding is of a particular importance to FTZs professionals in the sense that one can predict the group membership of any further FTZs on the basis of their marketing orientation as being most, or moderate, or less. This can be done by the help of the linear discriminant function derived by the multiple DFA as illustrated in Appendix [8].
2. The multiple DFA approximate classification percentage of the sampled FTZs is: the most marketing-oriented (17%); the moderate marketing-oriented (42%); and the less marketing-oriented (41%). Although the true classification could be slightly higher or lower, the virtue of this finding is that it provides an estimate of the likely percentage of the marketing orientation of the entire population of the FTZs representative of the domains of our study.
3. The analysis of the multiple DFA also shows that, 19 variables, out of 40 marketing concept variables, could be considered as significant discriminators among the most, the moderate, and the less marketing-oriented FTZs. This finding implies that the authorities' attitudes, of the three differentiated FTZs groups, do attach varying degrees of importance towards the employment of these 19 particular variables in the operations of their zones. These variables belong to the three key dimensions of the marketing concept: (a) satisfying the industrial buyers needs (11 variables); (b) achieving the organisational goals (4 variables); and (c) integrating the marketing functions (4 variables).

4. With regard to the marketing variables related to the dimension of satisfying the industrial buyers needs, the 11 principal discriminators, in their order of importance are: the maintenance of telecommunications systems; the offering of a facsimile system; the size of area available for manufacturing activities; the size of the work force; cleanliness of the zone area; the well-being of the work force; the capacity of space for warehousing and storage; the size of the zone area; safety of the work force; the maintenance of equipment; and the offering of assembly operations.
5. With respect to the marketing variables related to the dimension of achieving the organisational goals, the 4 main discriminators, in their order of importance are: the maximisation of sales; the maximisation of market share; minimising the cost of the zone operations; and the public relations with the zone users.
6. As for the marketing variables related to the integration of the marketing functions, the 4 key discriminators, in their order of importance are: marketing research activities for the zone privileges, facilities and services; expanding the area available for the zone privileges; updating the zone facilities; and reviewing the pricing of the zone privileges, facilities and services.
7. The authorities' attitudes of the moderate marketing-oriented FTZs group attach higher importance, than the other two FTZs groups, towards the employment of three key variables: the maximisation of sales, the maximisation of market share, and the marketing research activities. This may be due to the relevance of a fierce competitive environment in which the moderate marketing-oriented FTZs group operates.
8. The authorities' attitudes, of the three FTZs groups, towards most of the marketing concept variables tend to display a pattern of descending order of importance: the most marketing-oriented FTZs attach higher importance; the moderate FTZs group attach medium importance; and the less FTZs

group attach lower importance. Here, it is inferred that the relevance of the competitive nature in which each of the three FTZs groups operates could be a possible explanation behind the variation in their authorities' attitudes towards these 19 marketing variables. To illustrate this conclusion, we provide two examples as follows:

- (a) The variable of the maintenance of telecommunication systems (which is one of the variables related to the dimension of satisfying the industrial buyers needs) is regarded as extremely important by the most marketing-oriented FTZs, and in the range of higher average importance and lower extreme importance by the moderate marketing-oriented FTZs, while the less marketing-oriented considered this particular variable in the range of high average importance.
- (b) The authorities' attitudes of the most, the moderate, and the less marketing-oriented FTZs groups, tend to attach a respective, descending order of importance towards minimising the cost of the zone operations. This attitude of cost conscience is also maintained across all those variables that are directly related to expenditure such as the maintenance of equipment, the maintenance of telecommunications systems, the offering of a facsimile system, the well-being of the work force.

(IV) Discriminating between the Marketing-Oriented (the Most and the Moderate Combined) and the Less Marketing-Oriented FTZs

1. Next, the analysis turned into combining the most and the moderate marketing-oriented FTZs to form one group representing the marketing-

oriented FTZs on one side, and on the other side the less marketing-oriented represents a second group. The analysis of the computer programme, of the first run Two-group DFA, indicates that there is a strong relationship between the 40 marketing concept variables and the two classification levels of FTZs' marketing orientation (marketing-oriented vs less marketing-oriented). The purpose here is to identify those marketing concept variables that could be considered as main discriminators between those group of FTZs who are marketing-oriented and those FTZs group who are less marketing-oriented.

2. The analysis also indicates that the discriminating variables were able to classify 97% of the sampled FTZs into their 'a priori' respective groups. The two FTZs classifications are: the marketing-oriented FTZs group (59%), and the less marketing-oriented group (41%). This percentage division is the same as the one obtained by the multiple DFA computer programme. Again, this classification percentage should provide a rough estimate of the marketing orientation classification of the true FTZs population representative of the domains of our study.
3. The computer output, of the first run Two-group DFA, identifies 14 variables as main discriminators between the most marketing-oriented FTZs and the less marketing-oriented FTZs. The significance here is that if any FTZ authority wishes to become marketing-oriented, it may wish considering the employment of these 14 variables in its zone operations.
4. Eleven of these variables also appeared, in the multiple DFA programme, as main discriminators between the three FTZs groups. These 11 variables in the order of importance are: the marketing research activities; the maximisation of market share; the maximisation of sales; updating the zone facilities; the maintenance of telecommunications systems; extending the capacity of the zone facilities; the offering of a facsimile system; public relations with the zone users; cleanliness of the zone area; capacity of space

for warehousing and storage; and the size of the zone area. The significance of this finding is that the appearance of these 11 variables in the two runs of the discriminant analysis makes them not merely the main discriminators but rather the 11 potential discriminators in the marketing orientation of FTZs operations.

5. The analysis has also brought forth three additional variables as being further discriminators between the marketing-oriented FTZs group and the less marketing-oriented FTZs group. These three discriminating variables, in the order of their importance, are: the quality of the work force; the policies for implementing plans for marketing the zone's privileges, facilities, and services; the FTZs image and reputation. These variables might have emerged as a result of combining the most and moderate marketing-oriented FTZs groups in differentiating them from the less marketing-oriented FTZs group. This in turn may indicate that for any FTZ intending to fully embrace the marketing concept, it may wish to consider, in addition to the 11 variables, these three new variables in the operations of its zone.
6. The approximate conformity in the discriminating variables and in the classification percentage, reached by the results of the multiple DFA and the first run Two-group DFA, shows a clear indication that the sampled FTZs authorities tend to attach differing attitudes towards the marketing concept adoption in the operations of their zones.

(M) Discriminating between the Attitudes of the FTZs Authorities in the Developed and the Developing Countries towards the Adoption of the Marketing Concept

1. The second run of the Two-group DFA computer programme shows that the FTZs authorities in the developed and in the developing countries tend to be different in their attitudes towards the importance of employing the marketing concept variables in the operations of their zones. The analysis

indicates that there is a strong relationship between the FTZs classification, into the two typologies and the marketing concept adoption.

2. The analysis also shows that these 19 variables, out of the original forty, could be considered as significant discriminators between these two typologies. These marketing discriminators were able to correctly classify 96.5% of the samples FTZs into their 'a priori' respective groups. The 19 marketing discriminators between the two typologies, in the order of their importance, are: (a) the category of satisfying the industrial buyer needs includes 11 variables, these are: the utilities for manufacturing activities; the sanitation of the zone area; the offering of processing operations; the maintenance of equipment; the offering of a facsimile system; the location of the zone; the cleanliness of the zone; the transporting equipment; the offering of a telex system; the offering of assembly operations; and the size of area available for manufacturing, (b) as for the category of achieving the organisational goals, there are 3 variables: the integration of the departmental functions of the zone; the public relations with the zone users; and the FTZ image/reputation, (c) and the category of integrating the marketing functions includes five variables; personal selling of the zone privileges, facilities and services; offering the zone users more choice of operations inside the zone; using advertising channels for the zone privileges, facilities and services; reviewing the prices of the zone privileges, facilities and services; and extending the capacity of the zone facilities.
3. For the most part of the analysis, the FTZs authorities in the developing countries tend to be more marketing-oriented than the FTZs authorities in the developed countries in terms of satisfying the industrial buyers needs; achieving the organisational needs and integrating the marketing functions. This seems surprising, however; it might be due to the fact that the number of the marketing-oriented FTZs, (i.e., the most and the moderate, combined)

in the developing countries is almost twice as much as those in the developed countries. According to our analysis there are 33 marketing-oriented FTZs in the developing countries while there are only 17 of them in the developed countries. Also, it might be because the number of known successful FTZs in the developing countries is more than in the developed countries (Currie, 1985; and Diamond, 1989).

4. The FTZs authorities in the developing countries were found to be more oriented to satisfying the industrial buyers needs particularly by the utilities for manufacturing activities; the size of area available for manufacturing activities; the offering of processing operations; the offering of assembly operations; and the sanitation of the zone area. Meanwhile, the FTZs authorities in the developed countries attach higher importance, than the developing countries' FTZs, towards the capacity of space for warehousing and space. These differences might be because the FTZs in the developing countries are more oriented towards attracting manufacturing firms, while the FTZs in the developed countries are inclined to attract those firms with warehousing and storage intention and perhaps with some light industry. As a matter of fact, we observe that most of the FTZs who attach higher importance to the 5 variables related to the manufacturing activities, mentioned above, are those zones constructed for the purpose of export processing. And the majority of these type of zones are located in the developing countries.
5. The analysis also revealed that the FTZs operating in the developing countries attach higher importance, than their counterpart in the developed countries, towards the employment of 5 additional variables. the first two belong to the category of achieving the organisational goals, and the last three belong to the category of integrating the marketing functions, these 5 variables are: the integrations of the departmental functions; the FTZ image

and reputation; using the advertising channels for the zone privileges, facilities and services; extending the capacity of the zone facilities. This finding may give clear indication that the FTZs authorities in the developing countries operate in a much fiercer competitive environment than their counterpart FTZs of the developed countries.

6. Finally, the analysis shows that the authorities of the FTZs in the developed countries attach higher importance, than the FTZs' authorities of the developing countries, to the employment of only 3, of the 19, marketing discriminators. These 3 variables and the possible explanation were as follows:

(a) The offering of a facsimile system - the novelty and the high cost of installing and operating this system is still retarding the spread and use of this modern medium of communication in the developing countries. And probably that is why we find the FTZs authorities in the developing countries attach higher importance, than their counterpart in the developed countries, towards the employment of a Telex system.

(b) Personal selling of the zone privileges, facilities and services - the method and techniques of personal selling, at the industrial level, are more advanced in the developed than in the developing countries.

(c) Offering the zone users more choice of operations inside the zone - which most of the FTZs authorities in the developing countries concentrate their efforts on the manufacturing activities of FTZs, as indicated earlier; some governments of the developed countries impose certain restrictions on manufacturing in order to protect local/regional industries or for some reasons of concern to the particular governments. Therefore, the FTZs authorities in the developed countries might have felt, as part of integrating their

marketing functions, they had to exert more efforts on diversifying their products (i.e., by offering their zone users more choice of operations inside the zone).

(VI) Comparing the Authorities' Attitudes of the Various FTZs' Groupings with the Attitudes of the FTZs Experts Panel Towards the Importance of Key Discriminating Variables of the Marketing Concept

Profile Analysis was applied twice in order to depict and display the attitudinal differences or similarities. First, between the authorities' attitudes of the three FTZs groups (i.e., the most, the moderate, and the less marketing-oriented) and the attitudes of the FTZs experts panel towards the relative importance of a set of 19 key discriminating variables which were obtained from the results of the Multiple DFA and the corresponding responses made by the FTZs experts panel to the same set of the 19 variables as they appear in Appendix [6]. Second, between the authorities' attitudes of the FTZs in the two typologies (i.e., the developed and the developing countries) and the attitudes of the FTZs experts panel towards the relative importance of 19 key discriminating variables which were obtained from the results of the second run of the Two-group DFA and the corresponding responses made by the FTZs experts panel to the same set of the 19 variables as they appear in Appendix [6]. The main findings of the two applications of Profile Analysis can be summarised as follows:

1. The first application of Profile Analysis indicated that there were obvious differences among the authorities' attitudes of the most marketing-oriented, the less marketing-oriented and the attitudes of the FTZs experts panel with respect to six variables. These variables are: the well-being of the work force, the capacity of storage and warehousing; the maximisation of the market share, the public relations with the zone users, the marketing research activities, and the updating of the zone facilities. However, the

attitudinal differences between the authorities of the moderate marketing-oriented FTZs group and the FTZs experts panel, towards these same six variables, were very little. The possible explanation is that while each of the three FTZs groups operates at a different level of the marketing concept adoption, the attitudes of the FTZs experts panel are similar to the authorities' attitudes of the moderate marketing-oriented group. The first application of Profile Analysis also showed that the authorities' attitudes of the most and the less marketing-oriented FTZs groups, towards most of the 19 variables, tend to be respectively above and below the similar responses of the FTZs authorities of the moderate marketing-oriented group and the FTZs experts panel.

2. The second application of Profile Analysis indicated that the attitudinal differences, towards most of the 19 variables, are not too big among the three compared groups (i.e., the FTZs in the developed countries, the FTZs in the developing countries, and the FTZs experts panel). The possible explanation was that it was due to the fact that the moderate marketing-oriented FTZs make up high and nearly equal proportions of the FTZs operating in the two typologies, and the attitudes of the FTZs experts panel express similar attitudes to the moderate marketing-oriented FTZs towards most of the marketing concept variables. Another observation is that the authorities' attitudes of the FTZs operating in the developed countries are similar to the attitudes of the FTZs experts panel towards the relative importance of three particular variables: the offering of a facsimile system, the personal selling, the offering the zone users more choice of operations inside the zone. But the authorities of the FTZs operating in the developing countries did not exhibit similar attitudes towards the importance of these three variables. A possible explanation was that employing these particular three variables involves high cost and advanced techniques which could not be made available sufficiently to some zones of the developing countries.

(VII) Analysing Relations Among the Forty Marketing Concept Variables

The Pearson's Correlation Analysis was employed for two main reasons. First, to identify those marketing concept variables that are related and how this can be interpreted in light of the research context. Second, to check for multicollinearity between any pair of variables. The main findings of the Pearson's Correlation coefficients can be summarised as follows:

1. The initial finding was that multicollinearity does not exist between any pair of the forty variables. This implies that each variable measures a different aspect of the marketing concept adoption.
2. Most of the marketing concept variables are weakly correlated. This means that most of the forty variables are related in so much as they measure related aspects of one particular concept, that is the marketing concept.
3. A number of variables are considered as moderately correlated. This was expected because we had to employ a relatively large number of variables (i.e., forty) in order to maximise accuracy of predictors, and as more variables added to the model, their intercorrelation became larger.
4. The moderately correlated pairs of variables appear in a sequential order in the questionnaire form. A possible explanation was that the second variable of any two correlated variables, although is not the cause of, could be a necessity of its preceding variable. For example, the offering of a facsimile system (V11) may necessitate the maintenance of telecommunication systems (V12).
5. There are only three pairs of variables which are considered as highly correlated. Each of the three correlated pairs also appear in a sequential order in the questionnaire form. The possible interpretation with such highly correlated and ordered pairs of variables was that the FTZs authorities might have felt that the employment of one variable oblige them to employ its succeeding paired variable. For example, the FTZs authorities might have

felt that employing transporting equipment (V8), in the operations of their zones, might oblige them to offer the maintenance of equipment (V9). Similarly, to maximise profits (V22), the FTZs' authorities might have felt they had to maximise sales (V21). And in order to employ marketing research activities (V39) they might have felt they had to design plans for implementing plans for marketing the zone offerings (V40).

8.3 Contributions of the Research

This research is an empirical investigation on the adoption of the marketing concept in the FTZs operations. As such, the study attempts to quantify the attitudes, of selected FTZs authorities, towards the importance of employing 40 variables pertaining to the philosophy of the modern marketing orientation, in terms of three key dimensions: satisfying the industrial buyers needs, achieving the organisational goals, and integrating the marketing functions. To the best of the researcher's knowledge, this investigation is the first of its kind to investigate the marketing aspects of FTZs.

The findings of a scientific research usually entail certain contribution(s). The most common forms of contributions are the methodological, the theoretical, and the practical contributions. The methodological contributions refer to the type of conclusions that are made on the procedures employed to achieve the research objectives. The theoretical contributions refer to the type of contributions that are made to enhance the conceptualisation and to further the understanding of the issue(s) being studied. The practical contributions refer to the type of contributions that can be made useful for present and future practical purposes.

This study has some contributions to marketing research and to the literature of FTZs. These contributions can be reported as follows:

8.3.1 The Methodological Contributions

1. This study is based on a global scale research involving data collection from 85 FTZs authorities and 24 FTZs experts.
2. In order to study the marketing orientation in the operations of FTZs, forty marketing variables were generated from textbooks on marketing management and from the literature of FTZs. These forty variables were grouped under three distinct headings representing the three key components of the marketing concept: (i) satisfying the consumer (industrial buyers) needs (20 variables); (ii) achieving the organisational goals (10 variables); and (iii) integrating the marketing functions (10 variables).
3. A criterion was developed in order to assess the marketing orientation of the FTZs authorities in the operations of their zones. The criteria was constructed relying on: (a) the responses made by the FTZs experts panel to the marketing concept variables; and (b) the use of a statistical concept called "Confidence Limits".
4. A key methodological contribution of this research is that, for the first time, a multivariate statistical technique was applied to study the marketing adoption of selected FTZs. The Discriminant Function analysis (DFA) with its two versions the multiple DFA (for one run) and the two-groups DFA (for two runs) were carefully applied for the purpose of analysing multivariate data reflecting the FTZs authorities' attitudes towards the adoption of the marketing concept in the operations of their zones.
5. Another important contribution is that it has been for the first time as an objective, to classify the marketing orientation of FTZs into three distinct segments as: most marketing-oriented FTZs; moderate marketing-oriented FTZs; and less marketing-oriented FTZs.
6. A further key methodological contribution of this research is that this has been the first study to present a comparative analysis, of the marketing orientation, between the FTZs in the developed countries and the FTZs in the developing countries.

8.3.2 The Theoretical Contributions

1. The study provides a host of theoretical bases and information about FTZs in terms of their historical development; definitions; types; contrasting with other related concepts; characteristics; advantages; recent development, spread, and status; and their future. There is no single source in the literature that has been written or published to contain, in one volume, all this basic and valuable information on FTZs.
2. A totally new theoretical model of the Free Trade Phenomenon is developed in this study. This model describes all the various concepts and components of the Phenomenon of Free Trade in which FTZs are but a small part of the overall of this economic structure. A main virtue of this model is to provide a clear picture of FTZs with respect to other related, and sometimes confusing, constructs.
3. The study contains a further new theoretical model depicting the flow of transactions involved in the FTZs operations. The main virtue of this model is to show the circular flow of FTZs transactions which starts from the FTZs authorities (acting as industrial sellers) through the foreign investors (acting two roles as industrial buyers and as international marketers) to the ultimate international customers and goes back to the FTZs authorities through the foreign investors.
4. Different kinds of FTZs' granting and accommodation were, for the first time, identified and classified under three distinct groups of offerings: (a) privileges including all the permitted operations such as warehousing, processing, assembly, manufacturing; (b) facilities including the infrastructural resources, human and material, for example, land, manpower, transporting equipment, utilities for manufacturing activities; and (c) services including all the necessary measures taken to ensure proper zone operations, for example, safety and well-being of the work force, security of the zone premises, cleanliness and sanitation of the zone area, minimisation of the noise and air pollution.

8.3.3 The Practical Contributions

1. A major practical contribution of this empirical investigation is that our efforts facilitated the generation of a host of forty marketing variables related to the operations of FTZs. These marketing variables have been implemented, tested for its reliability, and approved for its validity in studying the marketing orientation of FTZs operation at the global level. The virtue of this finding is that this list of the forty marketing variables are now made available for FTZs authorities to consider them in the operations of their zones.
2. An important contribution to this study is our attempt, as an objective, to identify marketing variables that are considered as potential discriminators between a marketing-oriented FTZ and a less marketing-oriented FTZ. The virtue of this finding is that any FTZ authority which intends to seriously embrace the marketing concept in its zone operations may wish to think about all the forty marketing variables meanwhile paying particular attention to the list of these significant discriminating variables.
3. A further practical contribution is that the application of the multiple DFA made possible for any FTZ authority to assess its own marketing orientation as being: most, or moderate, or less marketing-oriented. The instruction (steps to follow) for the assessment of a FTZ marketing orientation is given in Appendix [8].
4. This research provides, for the first time, an up-to-date list of the FTZs, which allow manufacturing activities in addition to the basic zone operations. The list includes their names and addresses. This list is given in Appendix [3]. In addition, the efforts of this research rendered a list of the names, addresses and telephone numbers of people from around the world, with a keen interest in FTZs. This list is given in Appendix [1]. A practical benefit of these two lists is to facilitate future correspondence of any individual interested in establishing contact with a particular FTZ authority or a FTZ expert.

8.4 Recommendations

The various analysis carried out in this research have provided detailed information about the attitudes of 85 FTZs, from 48 countries around the world, towards employing the marketing concept in the operations of their zones. Drawing on the key findings obtained from this empirical study, on the adoption of the marketing concept in the operations of FTZs, two types of recommendations can be addressed: (a) recommendations for the FTZs authorities, and (b) recommendations for the World Export Processing Zones Association (WEPZA). It is hoped that the FTZs authorities will find the following recommendations useful in planning the marketing strategies for the operations of their zones.

8.4.1 Recommendations for the FTZs Authorities

1. Mark Frazier and Joyce Erony, in their report (1983), expressed the belief that "one of the major influences upon zone development is the quality and breadth of the zone marketing efforts. In the broadest sense, the marketing and promotion efforts can be broken down into provision of information to suitable clients (i.e., industrial buyers) in a way that will stimulate their interests, and the efforts to convince interested clients to invest in the zone". In addition, in this study, forty variables, comprising three main components of the marketing concept in relation to FTZs operations, were assessed for the validity of their importance to the operations of FTZs and gained nearly unanimous approval by (20 out of 24) FTZs experts. Furthermore, the multiple DFA computer output shows that the 85 sampled FTZs authorities attach favourable attitudes, ranging from average importance (5) to extremely important (9), towards the employment of all the 40 variables in the operations of their zones. On this account, we suggest that FTZs should realise that marketing, as a philosophy and application, can play a crucial role in the strategic planning of their zone operations. When a FTZ authority adopts the marketing

concept it will be in a proper mode to accomplish three basic objectives: (a) satisfying the industrial buyers needs; (b) achieving the organisational goals; and (c) integrating the marketing functions.

2. The adoption of the marketing concept in FTZs operations requires special emphasis on a number of marketing functions. The multiple DFA identifies 19 out of the 40 variables as being significant discriminators among the most, the moderate, and the less marketing-oriented. In addition; the first run, two-group DFA identifies 14 out of the 40 variables as being significant discriminators between those FTZs who are marketing-oriented and those who are less marketing-oriented. Furthermore, we found that there are eleven variables appear as significant discriminators among and between the FTZs in these two sets of classifications. On this ground, we recommend that if any FTZ authority intends to adopt the marketing concept may wish to pay special attention, at least, to these 11 variables: the marketing research activities; the maximisation of market share; the maximisation of sales; updating the zone facilities; the maintenance of telecommunications systems; extending the capacity of the zone facilities; the offering of a facsimile system; the public relations with the zone users; the cleanliness of the zone area; the capacity of space for warehousing and; the size of the zone area.

We stated earlier in Chapter Two (Section 2.6.1), that the future forebodes fierce competition among FTZs authorities throughout the world. According to Philip Kotler (1986): "marketers must constantly adapt their strategies to the rapidly changing competitive environment. To succeed, marketers must formulate strategies that strongly position their offerings against competitors' offerings in the minds of consumers". In the light of this, we recommend that any FTZ authority which intends to be oriented by marketing, in its zone operations, should design a marketing programme as part of its overall business strategy. In line with the three key components of the marketing concept, such a programme should incorporate, if not all the tested 40 variables, at least the above 11 variables, as follows:

3. **Satisfying the Industrial Buyers Needs.** The FTZ authority should make certain that the following are in effect:
- (a) The telecommunications systems are always in a good working condition.
 - (b) Facilities are available for installing a facsimile system.
 - (c) The industrial wastes are dumped and the zone area is always clean.
 - (d) The capacity of space for warehousing and storage meets the demands of the zone users.
 - (e) The size of the zone area can be enlarged to accommodate future zone expansion.
4. **Achieving the Organisational Goals.** While satisfying the needs of the industrial buyers, a FTZ authority should achieve, at least, the following three goals:
- (a) The maximisation of its sales by increasing sales transactions through other marketing efforts, for example, by conducting marketing research in order to identify the number and character of potential industrial buyers, and using promotion techniques such as advertising and personal selling in order to convince future prospects to invest in its FTZ.
 - (b) The maximisation of its market share. There are five key strategies of importance for gaining market share in an industrial market (Fogg, 1974): lowering the prices below the competitive levels; introducing product modifications or significant innovations that meet customers needs; offering more services; improving the strength and quality of the sales force targeted at customers who are not getting adequate quality or quantity of attention from the competitors; increasing the advertising and sales promotion of the products, services, facilities, or any offerings beneficial to untapped customers.
 - (c) Public relations with the zone users. Public relations can be accomplished by a set of communications activities to create and maintain favourable relations between the organisation (the FTZ authority) and its public

[customers (industrial buyers), employees, stockholders, the locals, and government officials]. For example, the FTZ authority should create and maintain a systematic, continuous public relation programme and assign a single individual or department, within its organisation, to handle the responsibilities for managing the programme. The objectives of such public relations programme may include, and is not necessarily limited to, obtaining favourable publicity for the company, building up a good corporate image for the company, dealing with public complaints, and handling adverse rumours and stories as they break out.

5. Integrating the marketing functions. A FTZ authority, hoping to satisfy the needs of the industrial buyers and achieve its own goals, should, at least, integrate the following three variables (out of 10 in this category) in the operations of its zone:
 - (a) Marketing research activities. It is established in this research that marketing research activities are regarded in the high range of importance by those FTZs who are oriented by marketing. Marketing research activities about target markets provide vital input in planning the marketing mix and in developing successful marketing strategies. Marketing research activities provide the insight for carrying out the marketing concept (Parasuraman, 1981). Thus, a FTZ authority should conduct marketing research activities in order, for example: to identify the needs and wants of its industrial buyers, the nature of its competitors, the size and the nature of the existing and potential markets for its offerings; and to evaluate the attitudes of the existing or potential industrial buyers towards its current (and future) privileges, facilities, and services.
 - (b) Updating the zone facilities and (c) Extending the capacity of the zone facilities. Updating and extending the capacity of the telecommunications systems, the transporting equipment, the manufacturing utilities, and any other medium devices that are linked directly to the product development

of the marketing mix in the operations of FTZs. A product cannot indefinitely continue to satisfy target market customers and contribute to achieving an organisation's overall goals. Therefore, in order to stay in business, the management of an organisation (e.g., a FTZ authority) must maintain an effective product mix (i.e., total group of products that an organisation makes available, e.g., the different FTZ offerings). The adjustments in the product mix may make it necessary to modify existing products, introduce new products, or eliminate products that were successful, perhaps only a few years ago (Pride and Ferrell, 1985). Through the use of product development tactics, an organisation should be in a better position to launch a deeper market penetration, maintain customers loyalties, and consequently maximise sales volume. Thus, a marketing-oriented FTZ authority, in its efforts of employing product development tactics, for example, can do any or a combination of the following: replace the obsolete telegram system and the outdated telex system with the modern and most common facsimile system; substitute any manual transporting equipment or manufacturing utilities with mechanical equipment and utilities; remove any operating devices which are inferior in quality and introduce superior quality devices. In addition, the FTZ authority, should install more cables for the telecommunication systems and increase the capacity of the energy and water supplies, to satisfy the needs of the zone users.

6. In this research, the computer results of the second run two-groups DFA indicates that the FTZs authorities in the developing countries scored lower than the FTZs authorities in the developed countries in their attitudes towards the importance they attach to the employment of three variables in the operations of their zones. These particular variables and our recommendations are as follows:
 - (a) the offering of a facsimile system. The telecommunications systems are the persuasive vessel in any business communication. As established in this

study, the facsimile system is highly regarded among the marketing-oriented FTZs authorities. Therefore, we recommend that the other FTZs authorities, particularly those in the developing countries, to set up the facsimile system facilities and make it available for installation to the industrial buyers. Although it is costly to employ such a system, the FTZs authorities should weight this cost of the more effective and efficient facsimile against the poorer and outdated existing systems. It is possible that the availability of such a powerful communication system can play a critical role in attracting more industrial firms to establish themselves in the zone. It can also aid the FTZ authority to communicate with the potential industrial buyers at much higher speed.

- (b) The personal selling of the zone privileges, facilities, and services. In this study, personal selling is acknowledged to be of high importance in the zone operations of the FTZs authorities in the developed countries. Therefore, we recommend that the FTZs authorities, particularly those in the developing countries, to employ more personal selling in their marketing plan. The function of personal selling, if properly applied, can be a highly efficient means to increase their sales volumes and market share. We suggest that the FTZs personal selling efforts should be aimed at inducing favourable thoughts, among potential buyers, towards the organisation of the particular FTZ; its people; and the privileges, facilities and services being offered by the zone authority in such a way as to convey an image of being different and better vis-a-vis the competing FTZs. This task could be accomplished, for example, by employing any one or a combination of the following tactics:
- (i) sending a sales representative to interested industrial buyers;
 - (ii) hunting for forthcoming industrial conferences and apply to be represented in the congregation; and
 - (iii) requesting from the ministry of trade/industry of the host country to co-operate with the ministry of foreign affairs to appoint and

despatch a trade and industrial sales force representative acting for all the local trade and industry particularly the FTZs if they were of great importance to the national economy. Or else, this task of the industrial sales representative could be assigned to an economic attaché affiliated with the diplomatic corps in the countries of potential capital investment.

- (c) Offering the zone users more choice inside the zone. The FTZs authorities, particularly those in the developing countries, should realise that a key objective in the operations of their zones is satisfying the industrial buyers needs and that providing manufacturing facilities is not the only means to this end. Industrial firms are also looking for other operations they can perform inside a zone premises. Therefore, we recommend that those particular FTZs authorities should pay special attention to diversify the permitted operations to include, for example, such offerings as: packaging, repackaging, sorting, mixing, labelling, warehousing, exhibition, containerisation, refrigeration.

8.4.2 Recommendations for the World Export Processing Zones Association (WEPZA)

Our survey indicates that the number of the manufacturing FTZs (i.e., the domains of our study) in the developing countries is almost twice as much as in the developed countries. The same ratio holds true for the less marketing oriented FTZs (see Section 7.4.4). And in order for these segments of FTZs authorities to become marketing oriented in the operations of their zones, first, they should: know what marketing is all about; understand the basic principles and techniques of modern marketing; acquire marketing skills; and be aware of new development in marketing. Therefore, our recommendation to WEPZA authorities is to add a marketing function along with their

already established five functions^{*}. Among the tasks that this marketing function should include are:

- (1) To patronise rigorous campaigns to stimulate and to promote marketing awareness among operators of EPZs. This can be accomplished, for example, by circulating articles, through their publications, stressing the importance of the role of marketing in EPZs/FTZs operations.
- (2) To sponsor seminars and marketing management training programmes. The objectives of these seminars and programmes should be to educate the operators of the EPZs members about the principles of marketing management and teach them the marketing skills needed to successfully operate an EPZ.
- (3) To conduct conferences aiming at discussing immediate marketing related issues/problems confronting EPZs operations.
- (4) To design tailor-made marketing plans to help the operators of certain EPZs to solve their particular marketing problem(s) in operating their zones.
- (5) To organise industrial exhibitions, set at international levels, where leaders of potential industries, from around the world, are invited to meet representatives of EPZs. Thus providing an excellent environment for promoting the privileges, facilities, and services of the participating EPZs.
- (6) Efforts should also be made to create a FTZ public awareness at large. This task can be accomplished by requesting the co-operation of a world leading television network station to produce a documentary film about FTZs in general, including historic background until recent development, the different forms of FTZs and their advantages, types of industries involved in FTZ operations, and other relevant aspects of FTZs. Then, this T.V. documentary should be dubbed or interpreted into other leading languages so that the film can be distributed to many countries and beamed to larger audiences

* A discussion on WEPZA is provided in Chapter two (Section 2.5).

around the world. Thus, future business people can be motivated to invest in FTZs operations.

8.5 Research Limitations

This investigation has three basic limitations regarding sampling and data analysis:

1. Although a pilot study (pretest) is an important procedure for testing the appropriateness of the data collection method and for assessing the reliability and validity of the measuring scale, in this research it was not possible to conduct such a study. This is due to the fact that the identified grand population of the FTZs, intended for this research, was only 159 FTZs. This size, of the domains of our study of FTZs, is relatively small particularly when considering that the returned usable questionnaires were only 85. Therefore, all these returned questionnaires were put to use solely for the purpose of data analysis.
2. A key advantage of this research is that it is a pioneer study to investigate marketing aspects of FTZs operations. However, as with any pioneering work, it suffers from the lack of previous studies so that objective comparison can be based.
3. Early in the research, it was decided to include as an objective the identification of the marketing variables that are most important in the operations of FTZs as indicated by the group means of the 85 sampled FTZs authorities. It was thought that Principle Component Analysis (PCA) is the most appropriate statistical technique to accomplish such an objective. However, after reviewing the literature on Factor Analysis (of which PCA is a version) it was found that PCA should not be applied with smaller sample research settings and that there should be four or five times as many observations as there are variables to be analysed (Hair, et al., 1987). To double check, the Department of Statistics and Probability, at the University of Sheffield was consulted. And the advisory staff warned against using the PCA in our case (85 observations and 40 variables) because we could end up with misleading results. Therefore, the whole objective was abandoned altogether.

8.6 Areas for Further Research

In this research, we investigated the marketing orientation in the operations of FTZs around the world. The investigation focused on analysing the attitudes of selected FTZs authorities towards the importance they attach to some 40 marketing variables in the operations of their zones. However, several areas remain either unexplained or in need of further study. Examples of these areas are as follows:

1. This research has identified a number of variables (40) that are discriminatory in relation to the marketing orientation in the operations of FTZs. Further research is needed to establish the possible impact and/or roles of these marketing variables on the operations of FTZs.
2. Any one of the three elements of the marketing concept dimension, investigated in this research, or any group of the 40 variables could be further expanded for more detailed study of one or more zones of interest.
3. A study can be launched to investigate what can be done about those less marketing-oriented FTZs in order to become marketing-oriented.
4. A research might be required to determine whether the adoption of the marketing concept, in the operations of FTZs, can be asserted with certain quantitative indicators such as profitability, sales volume, market share, return in investment.
5. There might also be a need for an attitudinal study of random users of FTZs around the world. A possible key objective of such a study is to investigate the attitudes of the zone users towards the overall offerings of the different FTZs authorities and find out what type of customer satisfaction package they need or look for in selecting a FTZ.

REFERENCES

- Aaker, D. A. and Day, G. S. (1990), Marketing Research, John Wiley & sons, New York.
- Anderson, A. B., Basilevsky, A., and Hum, D. P. J., (1983), "Measurement: Theory and Techniques", in Rossi, P. H., Wright, J. D., and Anderson, A. B. (eds.), Handbook of Survey Research, pp. 231-281, Academic Press, Orlando, Florida.
- Assael, H. (1985), Marketing Management: Strategy and Action, Kent Publishing Company, Boston, Massachusetts, U.S.A.
- Babbie, E. R. (1973), Survey Research Methods, Wadsworth, Belmont, California.
- Bailey, K. D. (1987), Methods of Social Research, The Free Press, New York.
- Basile, A. and Germidis, D. (1984), Investing in Free Export Processing Zones, Organisation for Economic Co-operation and Development, Paris.
- Bell, M. L. and Emory, C. W. (1971), "The Faltering Marketing Concept", Journal of Marketing, Vol. 35 (October), pp. 37-42.
- Bennett, R. C. and Cooper, R. G. (1981), "The Misuse of Marketing: An American Tragedy", Business Horizons, November-December, pp. 51-60.
- Bhagwati, J. N. (1973), "The Theory of Immiserizing Growth: Further Applications", in M. Connolly and A. Swoboda (eds.), International Trade and Money, (University of Toronto, Toronto), pp. 45-54.
- Bia, Y., ed. (1989), The Best 'N' Most in DFS, Generation Publication, Stockholm.
- Blalock, H. (1981), Social Statistics, McGraw-Hill, New York.
- Bohrnstedt, G. W. (1970), "Reliability and Validity Assessment", in Summers, G. F. (ed.), Attitude Measurement, pp. 81-99, Rand McNally, Chicago, Illinois, U.S.A.
- Bohrnstedt, G. W. (1983), "Measurement", in Rossi, P. H., Wright, J. D., and Anderson, A. B. (Eds.), Handbook of Survey Research, pp. 70-115, The Academic Press, Orlando, Florida, U.S.A.
- Boyd, H. W., Westfall, R., and Stasch, S. F. (1985), Marketing Research - Text and Cases, Irwin Inc., Homewood, Illinois.

- Bradley, J. V. (1968), Distribution-Free Statistical Tests, Prentice-Hall, Inc., Englewood Cliffs, New Jersey.
- Bray, J. H. and Maxwell, S. E. (1985), Multivariate Analysis of Variance, Sage Publications, Beverly Hills, California, U.S.A.
- Brody, R. and Cunningham, S. (1968), "Personality and The Consumer Decision Process", Journal of Marketing Research, (Feb 5th) pp. 50-57.
- Brown, F. E. (1980), Marketing Research: A Structure for Decision Making, Addison-Wesley, Reading-Massachusetts, U.S.A.
- Business Week (1974), "Kansas City: Foreign Trade Zone on the Prairie", Business Week Magazine, May 11th, p. 143.
- Calkin, G. T., Dibblee, D. H. W., Haites, E. F. (1980), Nova Scotia Free Trade Zone Concept Study, a project report prepared by Stevenson & Kellogg, Ltd. for the Department of Regional Economic Expansion, Government of Canada.
- Canadian Customs (1977), A Report on Free Zones prepared by the Canadian Customs to assist the Federal Government in establishing a basis for a policy respecting free zones, and to examine the need, if any, for changes in customs procedures to accommodate the new proposed Montreal Mirabel International Airport.
- Carmines, E. G. and Zeller, R. A., (1979), Reliability and Validity Assessment, Sage Publications, Beverley Hills, California, and London, England.
- Chen, T. Jy. (1983), Foreign Investment, Duty-Free Zones and National Welfare, Ph.D. Thesis, The Pennsylvania State University, University Park, Pennsylvania.
- Churchill, G. (1979), "A Paradigm for Developing Better Measures of Marketing Constructs", Journal of Marketing Research, 16 February, pp. 64-73.
- Churchill, G. A., Jr., and Peter, J. P. (1984), "Research Design Effects on the Reliability of Rating Scales", Journal of Marketing Research, November, pp. 360-375.
- Churchill, G. A., Jr. (1987), Marketing Research - Methodological Foundations, The Dryden Press, New York.
- Churchill, G. A., Jr. (1988), Basic Marketing Research, The Dryden Press, New York.

- Claycamp, H. (1965), "Characteristics of Owner Thrift Deposits in Commercial Banks and Savings and Loan Institution", Journal of Marketing Research, V. 2 (May), pp. 163-170.
- Cochran, W. (1977), Sampling Techniques, John Wiley & Sons, New York.
- Cohen, L. and Holliday, M. (1982), Statistics For Social Scientists, Harper & Row Ltd., London.
- Cooper, J. C. B. (1984), "Discriminant Analysis - An Overview", The Investment Analyst, 72, April, pp. 12-17.
- Crask, M. and Perreault, W. (1977), "Validation of Discriminant Analysis in Marketing Research", Journal of Marketing Research, February 16th, pp. 60-68.
- Crimp, M. (1985), The Marketing Research Process, Prentice-Hall, Englewood Cliffs, New Jersey.
- Currie, J. (1985), Export Processing Zones in the 1980's, The Economist Publications Ltd., London.
- DaPonte, J. (1980), "U.S. Foreign-Trade Zones: A Look Back, A Glance Ahead", American Import Export Bulletin, May.
- Davis, E. J. (1985) in Appendix 2 of Crimp, M. (1985), The Marketing Research Process, Prentice-Hall, Englewood Cliffs.
- Dewey, J. (1933), How We Think, Heath Publications, Boston, Massachusetts.
- Diamond, W. H. (1989), Tax-Free Trade Zones of the World, Mathew-Bender, Albany, New York.
- Dillman, D. A. (1978), Mail and Telephone Surveys: The Total Design Method, John Wiley and Sons, New York.
- Dillon, W. R. and Goldstein, M. (1984), Multivariate Analysis: Methods and Applications, John Wiley and Sons, New York.
- Douglas, S. P. (1977), "Do Working Wives Read Different Magazines from Non-Working Wives", Journal of Advertising, 6 (Winter), pp.42.

- Douglas, S. and Craig, C. (1983), International Marketing Research, Prentice-Hall, Englewood Cliffs, New Jersey.
- Dowdy, S. and Wearden, S. (1983), Statistics For Research, John Wiley & Sons, New York.
- Edris, T. (1989), "Consumers' Response to Nutrition Labelling in Food Choice: A Methodological Approach Using Multivariate Analysis Techniques", A Ph. D. Thesis, The University of Sheffield.
- Edris, T. and Meidan, A. (1990), "On the Reliability of Psychographic Research: Encouraging Signs for Measurement Accuracy and Methodology in Consumer Research", European Journal of Marketing, Volume 24, No. 3, pp. 23-41.
- Eisenbeis, R. A. (1977), "Pitfalls in the Application of Discriminant Analysis in Business, Finance, and Economic", Journal of Finance, June, pp. 875-901.
- Evans, F. B. (1959), "Psychological and Objective Factors in the Prediction of Brand Choice: Ford versus Chevrolet", Journal of Business, Vol. 32, October, pp. 304-369.
- Feldmann, E. G. (1983), "The Marketing Concept and its Role in Successful Free Trade Zone Development", Economic Development Review, Inaugural Issue.
- Felton, A. (1959), "Making the Marketing Concept Work", Harvard Business Review, Vol. 37, No. 4 (July-August), pp. 55-65.
- Ferber, R. (1966), "The Reliability of Consumer Reports of Financial Assets", Studies in Consumer Savings, No. 6, Bureau of Economic and Business Research, University of Illinois, Urbana, Illinois, U.S.A.
- Ferber, R. C. and DeSa, E. D. (1977), "Modelling One Company's International Marketing Locations", Columbia Journal of World Business, 12 (Winter), pp. 44-52.
- Fisher, R. A. (1936), "The Use of Multiple Measurements in Taxonomics Problems", Ann. Eugenics, 7, pp. 179-188.
- Fogg, C. D. (1974), "Planning Gains in Market Share", Journal of Marketing, Vol. 38 (July), pp. 30-38.
- Folks, L. J. (1981), Ideas of Statistics, John Wiley and Sons, New York.

- Frank, R. and Massy, W. (1964), Innovation and Brand Choice: The Folger's Innovation, American Marketing Association, Chicago.
- Frank, R. E., Massy, W. F. and Morrison, D. G. (1965), "Bias in Multiple Discriminant Analysis", Journal of Marketing Research, Volume 2 (August), pp. 250-8.
- Frank, R. E., Massy, W. F. and Morrison, D. G. (1965), "The Determination of Innovative Behaviour with Respect to a Branded, Frequently Purchased Food Product", in Smith, G. L. (ed.), Reflections on Progress in Marketing, pp. 312-323, American Marketing Association, Chicago, Illinois, U.S.A.
- Frazier, M. and Erony, J. (1983), "Free Zones in Developing Countries: Expanding Opportunities for the Private Sector", a report published by the Sabre Foundation for the U. S. Agency for International Development, Discussion Paper No. 18.
- Globerman, S. (1979), "Foreign Direct Investment and 'Spillover' Efficiency Benefits in Canadian Manufacturing Industries", Canadian Journal of Economics, V. 12, pp. 42-56.
- Green, J. and D'Oliveira, M. (1982), Learning to Use Statistical Tests in Psychology, The Open University Press, Milton Keynes, U.K.
- Green, P. E.; and Tull, D. S. (1978), Research For Marketing Decisions, Prentice -Hall, Englewood Cliffs, New Jersey, U.S.A.
- Green, P. E.; Tull, D. S.; and Albaum, G. (1988), Research For Marketing Decisions, Prentice -Hall, Englewood Cliffs.
- Grimm, J. W. and Wozniak, P. R. (1990), Basic Social Statistics and Quantitative Research Methods, Wadsworth, Belmont, California.
- Grubel, H. (1982), "Towards a Theory of Free Economic Zones", Weltwirtschaftliches Archiv, V. 118, pp. 39-61.
- Grubel, H. G. (1983), "Free Market Zones: Deregulating Canadian Enterprise, The Fraser Institute, Vancouver, Canada.
- Grubel, H. G. (1984), "Free Economic Zones: Good or Bad", Aussenuthschaft, Vol. 39, pp. 43-56.

- Gulliksen, H. (1950), "Theory of Mental Tests", in Peter, J. P. (1979), "Reliability: A Review of Psychometric Basics and Recent Marketing Practices", Journal of Marketing Research (February), pp. 6-17.
- Hair, J. F., Jr., Anderson, R. E., and Tatham, R. L. (1987), Multivariate Data Analysis - With Readings, Macmillan, New York.
- Hamada, K. (1974), "An Economic Analysis of the Duty Free Zone", Journal of International Economics, V. 4, pp. 225-241.
- Hamilton, C. and Svensson, L. E. O. (1982), "On the Welfare Effect of a Duty-Free Zone", Journal of International Economics, Aug, Vol. 13, pp. 45-64.
- Hamilton, L. C. (1990), Modern Data Analysis, Brooks/Cole, Pacific Grove, California, U.S.A.
- Hand, D. J. and Taylor, C. C. (1987), Multivariate Analysis of Variance and Repeated Measures - A Practical Approach for Behavioral Scientists, Chapman and Hall, London.
- Haywood, R. (1990), "The Future of Export Processing Zones as Instruments of Public Policy", The WEPZA Newsletter, Number 1990-3, Published quarterly by the World Export Processing Zones Association (WEPZA), Flagstaff, Arizona, U.S.A.
- Heise, D. R. (1969), "Separating Reliability and Stability in Test-Retest Correlations", American Sociological Review, Vol. 34 (February), pp. 93-101.
- Henkel, R. E. (1976), Tests of Significance, Sage Publications, Beverley Hills and London.
- Her Majesty's Customs and Excise, R5-6, Feb (1985), Free Zones: Guidance Notes for Users, H. M. Customs and Excise, Dorset House, Stamford Street, London, SE1 9PS.
- Jéquier, N. (1988), Economic and Social Effects of Multinational Enterprises in Export Processing Zones, a report co-ordinated by the joint efforts of Paul Bailey of the International Labour Office (ILO), and Manuel Agosin of the United Nations Centre On Transnational Corporations (UNCTC), Published by the ILO, Geneva.
- John, G. and Roeder, D. (1981), "Reliability Assessment: Coefficients Alpha and Beta", in Berhardt et al. (eds.), The Changing Marketing Environment: New Theories and Applications, American Marketing Association, Chicago, Illinois, U.S.A.

- Johnson, H. (1967), "The Possibility of Income Losses from Increased Efficiency of Factor Accumulation in the Presence of Tariffs", Economic Journal, V. 77, pp. 557-572.
- Jolson, M. A.; Anderson, R. E., and Leber, N. J. (1981), "Profiles of Signature Goods Consumers and Avoiders", Journal of Retailing, Winter, pp. 19-38.
- Kanuk, L. and Berenson, C. (1975), "Mail Surveys and Response Rates: A Literature Review", Journal of Marketing Research, November, pp. 440-453.
- Kelleher, T. (1976), Handbook On Export Free Zones, United Nations Industrial Development Organisation, UNIDO/IOD.31, Vienna.
- Kerlinger, F. (1986), Foundations of Behavioral Research, CBS Publishing Company, New York.
- Kidder, L. and Judd, C. (1986), Research Methods In Social Relations, Holt, Rinehart and Winston, New York.
- King, C. W. (1965), "The Innovator in the Fashion Adoption Process", in Smith, G. L. (ed.), Reflections on Progress in Marketing, pp. 324-339, American Marketing Association, Chicago, Illinois, U.S.A.
- King, R. L. (1965), "The Marketing Concept" in Schwartz, G. (ed.), Science in Marketing, pp. 70-91, John Wiley & Sons, Inc., New York.
- Kinnear, T. C. and Taylor, J. R. (1971), "Multivariate Methods in Marketing Research", Journal of Marketing, Vol. 35, Oct, pp. 56-59.
- Kinnear, T. and Taylor, J. (1987), Marketing Research - An Applied Approach, McGraw-Hill, New York.
- Kinnear, T. C. and Bernhardt, K. L. (1986), Principles of Marketing, Scott, Foresman and Company, Glenview, Illinois, U.S.A.
- Klecka, W. R. (1980), Discriminant Analysis, Sage Publications, Beverley Hills, California, U.S.A.
- Kollat, D. T., Blackwell, R. D. and Robeson, J. F. (1972), Strategic Marketing, Holt, Rinehart and Winston, Inc., New York.

- Kotler, P. (1984), Marketing Management: Analysis, Planning and Control, Prentice-Hall, Inc., Englewood Cliffs, New Jersey.
- Kotler, P. (1986), Principles of Marketing, Prentice-Hall, Englewood Cliffs, New Jersey.
- Kotler, P. and Armstrong, G. (1987), Marketing: An Introduction, Prentice-Hall, Englewood Cliffs, N.J., U.S.A.
- Kress, G. (1988), Marketing Research, Prentice-Hall, Englewood Cliffs, New Jersey.
- Kreye, O.; Heinrichs, J.; and Frobel, F. (1987), Export Processing Zones in Developing Countries: Results of a New Survey, Working Paper No. 43, International Labour Office, Geneva.
- Lachenbruch, P. A.; and Mickey, M. R. (1968), "Estimation of Error Rates in Discriminant Analysis", Technometrics, Volume 10 (February), pp. 1-11.
- Lehman, R.S. (1991), Statistics and Research Design in the Behavioral Sciences, Wadsworth Publishing Company, Belmont, California, U.S.A.
- Lehmann, D. R. (1989), Market Research and Analysis, Irwin, Homewood, Illinois, U.S.A.
- Levitt, T. (1960), "Marketing Myopia", Harvard Business Review, Vol. 38, July-August, pp. 24-47.
- Long, F. (1986), Employment effects of multinational enterprises in export processing zones in the Caribbean, Working Paper No. 42, International Labour Office, Geneva.
- Lomax, A. L. (1947), The Foreign-Trade Zone, Bureau of Business Research Pamphlets.
- Lota, G. P. (1981), "How to Use Free and Foreign Trade Zones", Credit and Financial Management, January.
- Lovelock, C.; Stiff, R.; Culwick, D.; and Kaufman, I. (1976), "An Evaluation of the Effectiveness of Drop-off Questionnaire Delivery", Journal of Marketing Research, Vol. 12, November, pp. 358-364.
- Luck, D. J. and Rubin, R. S. (1987), Marketing Research, Prentice-Hall, Englewood Cliffs, New Jersey.
- Maex, R. (1983), Employment and Multinationals in Asian Export Processing Zones, a report published by International Labour Office (ILO), Geneva, Working Paper No. 26.

- Manly, B. F. J. (1986), Multivariate Statistical Methods - A Primer, Chapman and Hall, London.
- Mason, R. D. (1986), Statistical Techniques in Business and Economics, Irwin, Homewood, Illinois, U.S.A.
- Massy, W. F. (1965), "On Methods: Discriminant Analysis of Audience Characteristics", Journal of Advertising Research, Vol. 5, March, pp. 39-48.
- Miller, S. (1974), Experimental Design and Statistics, Methuen and Company Ltd., London.
- Miyagiwa, K. (1985), Essays On International Capital Mobility and Commercial Policies, Ph.D. Thesis, The University of Texas at Austin, Austin, Texas.
- Montgomery, D. B. (1975), "New Product Distribution: An Analysis of Supermarket Buyer Decisions", Journal of Marketing Research, August, pp. 255-264.
- Morrison, D. F. (1969), "On the Interpretation of Discriminant Analysis", Journal of Marketing Research, May, pp. 156-166.
- Morrison, D. F. (1990), Multivariate Statistical Methods, McGraw-Hill, New York.
- Moser, C. and Kalton, G. (1989), Survey Methods in Social Investigation, Gower Publishing Company.
- McCall, R. B. (1990), Fundamental Statistics for Behavioral Sciences, Harcourt Brace Jovanovich, International Edition, London.
- MacElwee, R. S. (1926), Port Development, McGraw-Hill Book Company, New York.
- MacGovern, E. (1986), International Trade Regulation, Globefield Press, Globefield, Exeter, U.K.
- Neave, H. R. and Worthington, P. L. (1988), Distribution-Free Tests, Unwin Hyman, London.
- Nie, N. H.; Hull, C. H.; Jenkins, J. G.; Steinbrenner, K.; and Bent, D. H. (1986), "SPSS: Statistical Package for the Social Sciences", Second Edition, McGraw-Hill, New York.
- Norusis, M. J. (1988), SPSS/PC+ Advanced Statistics, The SPSS Inc., Chicago.
- Nunnally, J. (1967), Psychometric Methods, McGraw-Hill Book Co., New York.

- Official Journal of the European Communities (1988), "Council Regulation (EEC) No. 2504/88 of July 1988 on Free Zones and Free Warehouses", Vol. 31, Aug 15th, General Provision, Article 1 Item 4(a), pp. No. 1. 225/9, Office for Official Publications of the European Communities, L-2985 Luxembourg.
- Oppenheim, A. N. (1986), Questionnaire Design and Attitude Measurement, Gower Publishing Company Limited, London.
- Papadopoulos, N. (1985), "The Free Trade Zone as a Strategic Element in International Business", The Canadian Business Review, Spring 1985, pp. 51-55.
- Parasuraman, A. (1981), "Hang on to the Marketing Concept", Business Horizons, Sept/Oct, p.40.
- Parasuraman, A. (1986), Marketing Research, Addison-Wesley, Publishing Company, Reading, Massachusetts.
- Pena, T. O. (1986), "The World Export Processing Zones Association", Journal of the Flagstaff Institute, Flagstaff, Arizona, U.S.A.
- Perreault, W. D., Jr.; and Darden, W.R. (1975), "Unequal Cell Sizes in Marketing Experiments: Use of General Linear Hypothesis", Journal of Marketing Research, Nov., Vol. 12, pp. 333-342.
- Perreault, W. D., Jr.; French, W.A.; and Harris, C. E., Jr., (1977), "Use of Multiple Discriminant Analysis to Improve the Salesman Selection Process", Journal of Business, Vol. 50, Jan., pp. 50-62.
- Perreault, W. D., Jr.; Behrman, D. N.; and Armstrong, G. M. (1979), "Alternative Approaches for Interpretation of Multiple Discriminant Analysis in Marketing Research", Journal of Business Research, pp. 151-173.
- Pessemier, E. A., Burger, P. C. and Tigert, D. J. (1967), "Can New Product Buyers Be Identified?", Journal of Marketing Research, Vol. 4, November, pp. 349-354.
- Peter, P. (1979), "Reliability: A Review of Psychographic Basics and Recent Marketing", Journal of Marketing Research, 16 (February), pp. 6-17.

- Pfeiffer, K. and Olson, J. (1981), Basic Statistics for the Behavioral Sciences, Holt-Rinehart and Winston, New York.
- Price, C. K. K. Fawcett (1984), Explaining Adoption of Foreign Trade Zones Among Sunbelt Cities, Ph.D. Thesis, University of Alabama, Birmingham, Alabama.
- Pride, W. M. and Ferrell, O. C. (1985), Marketing: Basic Concepts and Decisions, Houghton Mifflin Company, Boston, Massachusetts.
- Ray, M. (1979), "Introduction to the Special Section: Measurement and Marketing Research - Is the Flirtation Going to Lead to A Romance?", Journal of Marketing Research, Volume 16 (February), pp. 1-6.
- Ring, L. J., (1979), "Retail Positioning: A Multiple Discriminant Analysis Approach", Journal of Retailing, Vol. 55, No. 1, Spring, pp. 25-36.
- Robertson, T. S., and Kennedy, J. N. (1968), "Prediction of Consumer Innovators: Application of Multiple Discriminant Analysis", Journal of Marketing Research, Vol. 5, February, pp. 64-69.
- Robinson, J. (1983), "Next Best Thing to Haven: The Lure of Foreign Trade Zones", Barron, June 20th, pp. 16, 18, 19.
- Rodriguez, D. (1976), "A Note on the Economics of the Duty-Free Zone", Journal of International Economics, V. 6, pp. 385-388.
- Rossi, P. H.; Wright, J. D.; and Anderson, A. B. (1983) "Sampling Surveys: History, Current Practice, and Future Prospects", in Rossi, P. H.; Wright, J. D.; and Anderson, A. B. (eds.), Handbook of Survey Research, pp. 1-19, Academic Press, Orlando, Florida.
- Rubin, H. (1983), Applied Social Research, Merrill Publishing Company, Columbus, Ohio.
- Sands, S. (1981), "Store Site Selection by Discriminant Analysis", Journal of Market Research Society, Vol. 23, No. 1, pp. 40-51.
- Sheatsley, P. (1983), "Questionnaire Construction and Item Writing", in Rossi, P. H., Wright, J. D.; and Anderson, A. B. (eds.), Handbook of Survey Research, pp. 195-230, Academic Press, Orlando, Florida.

- Sheth, J. N. (1971), "The Multivariate Revolution in Marketing Research", Journal of Marketing, Vol. 35, Jan, pp. 13-19.
- Shuchman, A. and Riesz, P. C. (1975), "Correlates of Personality: The Crest Case", Journal of Marketing Research, February, pp. 7-11.
- Sodersten, B. (1981), International Economics, Macmillan Press, New York.
- Spetrini, J. A. (1985), 47th Annual Report of the Foreign-Trade Zones Board to the Congress of the United States, for the fiscal year ended Sept 30th, 1985, Foreign-Trade Zones Board, Department of Commerce, Washington, D.C. 20230.
- Sprent, P. (1989), Applied Non-Parametric Statistical Methods, Chapman and Hall, London.
- Stuart, A. (1984), The Ideas of Sampling, Macmillan Publishing Company, New York.
- Tabachnick, B. and Fidell, L. (1989), Using Multivariate Statistics, Harper & Row Publishers, New York.
- Thoman, R. S. (1956), Free Port and Foreign Trade Zones, Cornell Maritime Press.
- Tull, D. and Hawkins, D. (1987), Marketing Research - Measurement and Methods, McGraw Hill, New York.
- Turnbull, N. Jr. (1981), "Marketing Opportunities Abound for Free Trade Zones", American Import Export Bulletin, March 18th, pp. 26, 28.
- UNCTAD (1985), "Export Processing Free Zones in Developing Countries: Implications for Trade and Industrialization Policies", a report by United Nations Conference on Trade and Development (UNCTAD), United Nations Publications (DC2-853), New York.
- UNIDO (1978), "Establishment of a World Export Processing Zone Association (WEPZA)", A document by United Nations Industrial Development Organization (UNIDO), document No. ID/205 (ID/WG 266/8), Vienna, Austria.
- Uslaner, E. M. (1976) editor in Henkel, R. E. (1976), Tests of Significance, Sage Publications, Beverley Hills, California, U.S.A.
- Van Meerhaeghe, M. A. G. (1972), International Economics, Longman Group Ltd., London.
- Viner, J. (1937), Studies in the Theory of International Trade, Harper and Brothers Publishers, New York.

- Weiers, R. M. (1988), Marketing Research, Prentice-Hall, Englewood Cliffs, New Jersey.
- Weinberg, E. (1983), "Data Collection: Planning and Management", in Rossi, P. H., Wright, J. D., and Anderson, A. B. (eds.), Handbook of Survey Research, pp. 329-357, Academic Press, Orlando, Florida.
- The WEPZA News, 1979, Global Zones Monitor, Vol.I. No. 3, p.9, July-Sept, Manila, The Philippines.
- Widdifield, J. (1983), "U.S. Businesses are Still Neglecting to Take Advantage of Foreign Trade Zones", Marketing News, December 23rd, p.7.
- Wind, Y.; and Denny, J. (1974), "Multivariate Analysis of Variance in Research on Effectiveness of T.V. Commercials", Journal of Marketing Research, May, Vol. 11, pp. 136-142.
- Winer, B. J. (1971), Statistical Principles in Experimental Design, McGraw-Hill, New York.
- Wright, G. and Fowler, C. (1986), Investigative Design and Statistics, Penguin Books, London.
- Yabuuchi, S. (1982), "A Note on Tariff-Induced Capital Inflow and Immiserization in the Presence of Taxation of Foreign Profits", Journal of International Economics, V. 15, pp. 387-388.
- Zikmund, W. G. (1988), Business Research Methods, The Dryden Press, New York.
- Zikmund, W. G. (1989), Exploring Marketing Research, The Dryden Press, New York.

BIBLIOGRAPHY

- Alreck, P. L. and Settle, R. B. (1985), The Survey Research Handbook, Irwin Inc., Homewood, Illinois.
- American Import and Export Bulletin (1983), "What Makes an FTZ Work Right?", American Import and Export Bulletin Magazine, March, pp.16-20.
- Aumann, A. (1984), "Would Free Trade Zones Help Protect Jobs", The Toronto Star, Dec 9th, P.B2.
- Balasubramanyam, V. N. and Rothschild, R. (1985), "Free Port Zones in the United Kingdom", Lloyds Bank Review, Oct, pp. 20-31.
- Barovick, R. (1980), "U.S. Foreign-Trade Zone Grow in Scope and Number", Business America, June 2nd, pp. 12-15.
- Borch, F. J. (1957), "The Marketing Philosophy as a Way of Business Life", in Marting, E. and Newgarden, A., (Eds.), The Marketing Concept: Its Meaning to Management Thinking, American Management Association, Marketing Series No. 99, pp. 3-10.
- British Business (1985) "Freeport Aids Efficient Re-Exporting", British Business (Magazine), Feb 15th, pp. 322-323.
- Bureau of International Commerce (1973), "Free Trade Zones Abroad Can Aid U.S. Exporters As Competition Mounts", Commerce Today, Feb 5th, pp. 13-16.
- Business Abroad (1967), "How Foreign Trade Zones Help to Cut Costs on Manufacturing Goods For Overseas Sale", Business Abroad (Magazine), Dec 11th, pp. 27-30.
- Business International (1973), "How Free Trade Zones Facilitate Global Marketing", Business International (Magazine), Oct 26th, p.339.
- Business International (1974), "How U.S. Free Trade Zones Help to Cut Costs", Business International (Magazine), Jan 4th, pp. 5-8.
- Business Week (1976), "Mexico New Duty-Free Zones that Aids U.S. Industry", Business Week (Magazine), Feb, p. 42.

- Business Week (1979), "Bankers Are Split Over Free Trade Zones in the U.S.", Business Week (Magazine), March 12th, pp. 110-111.
- Business Week (1980), "The U.S. Lags in Trade Zones", Business Week (Magazine), Nov 17th, pp. 82 + 87.
- Caribbean Basin Business Information Center (CBIC), U.S. Department of Commerce (1983), "Operating Costs For Free Zones in the Caribbean Basin", Business America, July, 25th, pp. 11-15.
- Clasen, T. F. (1981), "U.S. Foreign Trade Zones Manufacturing and Assembly: Overview and Update", Law and Policy in International Business, Vol. 13, pp. 339-380.
- Container News (1973), "Panama - Free Zones Thrives On Boxes", Container News Magazine, Oct 26th, pp. 25-27.
- Credit and Financial Management (1981), "United States Foreign Trade Zones", Credit and Financial Management (Magazine), Jan, p. 30 + 40.
- Cummings, F. J., and Ruhter, W. E. (1980), "Recent Developments in Foreign Trade Zone Activity", Baylor Business Studies, Feb/Mar/Apr, pp. 7-23.
- Daniel, W. W. (1990), Applied Non-parametric Statistics, Houghton Mifflin Company, Boston, Massachusetts.
- Da Ponte, J. J., Jr. (1977), "Foreign Trade Zones: An Update", American Import and Export Bulletin, April, p. 12.
- Da Ponte, J. J., Jr. (1978), "Foreign-Trade Zones and Exports", American Import and Export Bulletin, April.
- Da Ponte, J. J., Jr. (1979), "Foreign-Trade Zones Appraisal Procedure Under Review", American Import and Export Bulletin, April, p.12.
- Da Ponte, J. J., Jr. (1980), "United States Foreign-Trade Zones: Adapting to Time and Space", The Maritime Lawyer, Fall, pp. 197-220.
- Da Ponte, J. J., Jr. (1981), "A Change in Law Makes Zones Even More Attractive", American Import and Export Bulletin, March, pp. 32-34.

- Dam, K. W. (1970), The GATT: Law and International Economic Organisation, The University of Chicago Press, Chicago, Illinois.
- Davison, C. (1962), "Foreign-Trade Zones: An Aid to Those Doing Business Abroad", Business Lawyer, Vol. 17, pp. 960-979.
- Dominic, M. P. (1978), "Sri Lanka: Free Trade Zone", Bulletin for International Fiscal Documentation, p. 181.
- The Economist (1980), "Going About As Far As You Can: Foreign Trade Zones", The Economist Magazine, Nov. 22-28, pp. 97-98.
- Ehrenberg, A. (1982), A Primer in Data Reduction, John Wiley & Sons, New York.
- El-Agraa, A. (1983), The Theory of International Trade, Croom Helm, Ltd.
- Felton, A. P. (1965), "Management Attitude and the Marketing Concept", in Webster, F. E. (edt.), New Directions in Marketing, Article D15, pp. S191 - S200. N.B. The basic ideas and arguments in this article are drawn from an earlier article by the same author (1959), "Making the Marketing Concept Work", Harvard Business Review, pp. 55-65. See Chapter Three.
- Ferber, R. (1974), Handbook of Marketing Research, MacGraw-Hill, New York.
- Fox, S. (1983), "Free Trade Zones", International Insurance Monitor, Sept, pp. 16-17.
- Gerstel, M. (1981), "Free Trade Zones: A Duty Free Shop for Industry", Electronics Business, Feb, p.124.
- Govoni, N., Eng, R., and Galper, M. (1988), Promotional Management: Issues and Perspectives, Prentice-Hall, Englewood Cliffs, New Jersey.
- Greenaway, D., (1983), International Trade Policy, The Macmillan Press Ltd., London.
- Heller, H. R. (1968), International Trade, Prentice-Hall, Inc.
- Hise, R. T. (1965), "Have Manufacturing Firms Adopted The Marketing Concept?", Journal of Marketing, Vol. 29, pp. 9-12.
- Hoel, P. and Jessen, R. (1982), Basic Statistics for Business and Economics, John Wiley & Sons, New York.

- Hunt, S. D. (1976), "The Nature and Scope of Marketing", Journal of Marketing, July, Vol. 40, pp.17-28.
- Industrial Marketing Digest (1987), "The Benefits of a Free Trade Zone", Industry Marketing Digest Magazine, Part 1, pp. 31-37.
- Jain, A. K.; Pinson, C.; and Ratchford, B. T. (eds.) (1982), Marketing Research-Applications and Problems; John Wiley & Sons, New York.
- Jain, S. C. (1984), "International Marketing Management", Kent Publishing Company.
- Jayawardena, D. L. U. (1983), "Free Trade Zones", Journal of World Trade Law, Sept/Oct, pp. 427-444.
- Jenkins, G. (1979), "Taxes and Tariffs and the Evaluation of the Benefit from Foreign Investment", Canadian Journal of Economics, V. 12, pp. 410-425.
- Keegan, W. J. (1984), Multinational Marketing Management, Prentice-Hall, Englewood-Cliffs, New Jersey.
- Keith, R. J. (1960); "The Marketing Revolution", Journal of Marketing, Vol. 24, Jan, pp.35-38.
- Key, S. J. (1984), "International Banking Facilities as a Free Economic Zone", Aussenwirtschaft, May, pp. 57-74.
- King, R., Jr. (1983), "Import Quota Zones", American Shipper, January, pp. 12-13.
- Kotler, P. and Levy, S. J. (1969), "Broadening the Concept of Marketing", Journal of Marketing, Vol. 33, Jan, pp. 10-15.
- Kotler, P. and Levy, S. J. (1969), "A New Form of Marketing Myopia: Rejoinder to Professor Luck", Journal of Marketing, Vol. 33, July, pp. 55-57.
- Kotler, P. (1972), "A Generic Concept of Marketing", Journal of Marketing, Vol. 36, April, pp. 46-54.
- Lachenbruch, P. A. (1975), Discriminant Analysis, Hafner Press, New York.
- Lancaster, G. and Jobber, D. (1985), Sales: Techniques and Management, Pitman Publishing, London.
- Luck, D. J. (1969), "Broadening the Concept of Marketing - Too Far?", Journal of Marketing, Vol. 33, July, pp. 53-55.

- Lusch, R. F.; and Lusch, V. N. (1987), Principles of Marketing, Kent Publishing Company, Boston, Massachusetts, U.S.A.
- Lyons, T. E. (1943), "Foreign Trade Zones Versus Bonded Warehouse", Foreign Commerce Weekly, May 8th, p.18.
- Miller, M. V. (1969), "Foreign Trade Zone Manufacturing: The Emergence of a Free Trade Instrument", Virginia Journal of International Law, Vol. 9, pp. 454-461.
- Miller, M. V. (1981), "Foreign Trade Zones Will Come of Age in the '80s", American Import and Export Bulletin, March 20, pp. 24 + 73.
- Miller, M. V. (1981), "Economic Analysis of Hypothetical Foreign-Trade Zones Operation", American Import and Export Bulletin, March, p.30.
- Machlup, F. (ed.), (1976), Economic Integration: Worldwide Regional, Sectoral, Macmillan, London.
- Mahalanobis, P. C. (1936), "On the Generalised Distance in Statistics", Proc. Nat. Inst. Sci., India, 12, pp. 49-55.
- McCurdy, G. L. (1983), "Turkey Plans Free Trade Zones: Benefit to Investors would be Proximity to Middle-East Markets", Business America, Sept 19th.
- McDaniel, W. R. and Kossack, E. W. (1983), "The Financial Benefits to Users of Foreign -Trade Zones", Columbia Journal of World Business, Fall, pp. 33-40.
- McKitteric, J. B. (1958), "What is the Marketing Management Concept?", in Bass, F. M. (ed.), The Frontiers of Marketing Thought and Science, pp. 71-82, The American Marketing Association, Chicago, Illinois, U.S.A.
- McNamara, C. P. (1972), "The Present Status of the Marketing Concept", Journal of Marketing, Vol. 36, Jan, pp. 50-57.
- Nation's Business (1979), "Free Trade Zone Sought for Banks", Nation's Business (Magazine), Jan, p.17.
- New York Times (1978), "Free Trade Zone for New York Banking is supported by several State Officials", New York Times (Newspaper), March 3rd.

- O'Donnell, T. C. (1979), "The Bankers are Split over Free Trade Zones in the U.S.", Business Week, March 12th, pp. 110-111.
- Pridmore, J. (1985), "China Smiles on the West with New Free Trade Zone, Less Red Tape", Cashflow Magazine, April, p. 20.
- Richardson, S. C. (1982), "Assessing the Performance of Discriminant Analysis", Journal of Market Research Society, Vol. 24, No. 1, pp. 65-67.
- Robinson, P. J. (1967), "Whither the Marketing Concept?: The Continuing Evolution of Marketing and the Emergence of Marketing Science", in Mayer, M. S. and Vosburgh, R. E., (eds.); Marketing for Tomorrow ... Today, American Marketing Association, The 50th Conference Proceedings Held on June 21-24 in Toronto, Canada, Series No. 25.
- Ross, D. (1984), "Foreign-Trade Zones: They Are Not Just For Exporting Anymore", Handling and Shipping Management, Feb., pp. 44-50.
- Saunders, C. B. (1965), "Inappropriate Uses of the Market Concept", Business Horizons, Fall, pp. 76-82.
- Sawyer, A. G. and Peter, J. P. (1983), "The Significance of Statistical Significance Tests in Marketing Research", Journal of Marketing Research, May, pp. 122-133.
- Scott, J. D.; Warshaw, M. R.; and Taylor, J. R. (1985), Introduction to Marketing Management: Text and cases, Irwin, Homewood, Illinois, U.S.A.
- Sheppard, B. (1977), "Foreign Trade Zones: International Business Incentives", Georgia Journal of International and Comparative Law, Vol. 2, pp. 669-677.
- Siegel, S. and Castellan, Jr. J. N. (1988), Nonparametric Statistics for the Behavioral Sciences, McGraw-Hill, New York.
- Summers, G. (1970), ed., Attitude Measurement, Kershaw Publishing Company, Ltd., a division of Academic Book Publishers, London.
- Terpstra, V. (1983), International Marketing, The Dryden Press, New York.
- Tozzini, S. (1983), "Brazil: Investment Incentives in the Free Zone of Manaus", Tax Management International Journal, May, pp. 22-23.

- Trustrum, L. B. (1989), "Marketing: Concept and Function", European Journal of Marketing, Vol. 23, No. 3, pp. 48-56.
- Wall, D. (1976), "Export Processing Zones", Journal of World Trade Law, Sept/Oct, pp. 478-489.
- Warr, P. G. (1984), "Korea Masan Free Export Zone: Benefits and Costs", Developing Economies, pp. 169-184.
- Worcester, R. and Downham, J. (ed.) (1986), Consumer Market Research Handbook, MacGraw-Hill, London.
- World Business Weekly (1981), "A Free Trade Zone Near Hong Kong?", World Business Weekly Magazine, Sept 7th, p. 41.
- Zaris, L. (1982), "Free Trade Zone is Viewed as a Vital Excess Surplus Lines Market", Journal of Commerce, March 31.

APPENDICES

Page No

APPENDIX [1]	An Alphabetical List of the Names, Addresses and Telephone Numbers of the Identified FTZs Panel of Experts	358
APPENDIX [2]	Questionnaire Package sent to the FTZs Experts Panel	363
APPENDIX [3]	A List of Free Trade Zones Around the World	370
APPENDIX [4]	Questionnaire Package sent to Free Trade Zones Authorities	384
APPENDIX [5]	Translations of Questionnaire Package:	390
	APPENDIX [5a] Arabic Translation	391
	APPENDIX [5b] Chinese Translation	396
	APPENDIX [5c] French Translation	401
	APPENDIX [5d] German Translation	406
	APPENDIX [5e] Malaysian Translation	412
	APPENDIX [5f] Spanish Translation	417
	APPENDIX [5g] Turkish Translation	423
APPENDIX [6]	Group Means Profile	429
APPENDIX [7]	The lower half matrix of Pearson Correlation Coefficients Among the Forty Marketing Concept Variables.	434
APPENDIX [8]	How a FTZ Authority can assess its Marketing Orientation.	436

APPENDIX [1]

An alphabetical list of the names, addresses and telephone numbers of identified FTZs expert Panel members. The Panel members were selected on the basis of keen interest on free trade zones as demonstrated by professional/academic experience, publications and/or recommendations by their peers. Those who did not return answered questionnaires, and thus were not included in the study, are indicated by the (*) sign.

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New York
New York 10003
U.S.A.
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Two United Nations Plaza
DC.2, Room: 1324
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New York 10017
U.S.A.
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11-12 Sir William Newton
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Mauritius
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P.O. Box 986
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Arizona 86002
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Development Centre
Organisation for Economic
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94 Rue Chardon-Lagache
75016 Paris
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Tel: (33) 45 24 9615

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400 Renaissance Centre
Suite: 2500
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Michigan 48243
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Dr Otto Kreye*
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Starnberg
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Tel: (49) 8151-8713

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President
National Association of Foreign
Trade Zones
C/o Port Authority of New York
and New Jersey
One World Trade Centre
64 West New York
New York 10048
U.S.A.
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Mr K Kwasny
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and Development
Manufacturers Division
Palais des Nations
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Geneva 10
Switzerland
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BFSH 1
University of Lausanne
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Tel: (21) 47-4294 195

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Austria
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Delegacion Benito Juarez
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250-1110

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2320 Commerce Tower
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Missouri 64105
U.S.A.
Tel: (816) 221-1777

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13.100 - Campinas SP
Brazil
Tel: (55) 192-392-667

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Trade Zones
1101 Connecticut Avenue, NW
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U.S.A.
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UNCTC/ECE Joint Unit
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CH-1211 Geneva 20
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C/o ILO Office in San Jose
Apartado Postal 10170
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Tel: (506) 245 305

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Australia
Tel: (61) 62-492-183

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Department of Economics
Simon Fraser University
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Canada
Tel: (604) 291-4603

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Warren Weil Communications
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U.S.A.
Tel: (212) 286-0323

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National Association of Foreign
Trade Zones
1825 I Street, NW
Suite 400
Washington DC
DC 20006
U.S.A.
Tel: (202) 429-2020

APPENDIX [2]

Questionnaire package sent to the FTZs' expert panel members. The package includes a cover letter addressed by the researcher's supervisor, an invitation letter addressed by the researcher, and a questionnaire form.



The University of Sheffield

School of Management and Economic Studies

Arthur Meidan, BSc(Econ), MBA, PhD
Professor of Marketing

Crookesmoor Building
Conduit Road
Sheffield S10 1FL
Tel: (0742) 768555

Our Ref: AM/JK

Dear Sir,

I am writing to ask for your co-operation in connection with a research work currently being undertaken on Free Trade Zone Operations around the world by Mr Abdul Al-Sanie, who is a doctoral student at this University.

Mr Al-Sanie is collecting data from a carefully selected sample of Free Trade Zone Authorities around the world. He would like to obtain some data from you and the selected Zone Directors, via the enclosed questionnaire, which will take just a few minutes to complete.

The data collected will be treated in the strictest confidence and analysed in aggregate. In this way the sources of information will not be revealed. The accuracy of your response on the items of this questionnaire is of extreme importance to the validity of the findings of this research.

I shall be grateful for your co-operation by completing the enclosed questionnaire and return it in the self-addressed envelope provided.

Please accept our thanks for your co-operation and assistance.

Yours sincerely,

Professor A Meidan
Director of Doctoral Programme
(Supervisor to Mr Al-Sanie)

Enc.

The letter of invitation addressed to each FTZ Expert Panel

Dear

I wish to invite you to participate in a survey on the attitudes of a panel of experts, in the field of Free Trade Zones (FTZs), towards the importance of the employment of certain marketing variables in the operations of FTZs. I am conducting this survey as part of my Ph.D. research. The title of my thesis is: "The Adoption of the Marketing Concept in the Operations of Free Trade Zones: A Comparative Global Study".

In this research I am primarily concerned with the study and analysis of the attitudes of selected FTZs authorities towards the importance they attach to the employment, in the operations of their zones, of 40 variables related to the marketing concept. The selected FTZs include only those zones who, in addition to offering basic zone privileges, facilities and services; provide manufacturing/industrial facilities to their zone users. Members of the FTZs' Panel of experts were selected on the basis of keen interest of FTZs as demonstrated by professional and/or academic experience, publications, and/or recommendations by their peers. You were selected on the basis of:...

In this respect, I would like to request your co-operation in completing the enclosed questionnaire. I would welcome any comments you wish to make on the content of the questionnaire and any remarks you deem relevant to this study. If you wish to recommend other persons whom you believe would qualify to participate in this panel survey, please send me a list of their names and addresses for correspondence (if possible). Please make sure that the names for your nominees do not include current FTZs operators. An alphabetical list of the names and addresses of the panel members of the survey, thus far collected, is enclosed.

I appreciate very much your participation and co-operation in this study.

Yours sincerely,

Abdulrahman I Al-Sanie

Dear Sir

We wish to assure you that all the information you provide in this questionnaire shall be kept strictly confidential. For this reason, every expert panel member and Free Trade Zone Authority is given a numerical code known only to the researcher. In addition, the data collected from all sampled Free Trade Zones shall be analysed collectively rather than individually. Therefore, the accuracy of your responses to the items of this questionnaire is of extreme importance to the findings of this research.

Q. Please circle the appropriate number [from (1) to (9)] that you believe a marketing-oriented Free Trade Zone Authority should score to best indicate the level of importance it attaches to the employment of each of the factors/activities in the operations of its FTZ. Please circle number (1) to all factors/activities you believe should not be included in the operations of a Free Trade Zone.

	Not Important At All				Average Importance				Extremely Important
1. <u>Factors related to the Satisfaction of Industrial Buyers' Needs:</u>									
1. Location of the zone.	1	2	3	4	5	6	7	8	9
2. Size of the zone area.	1	2	3	4	5	6	7	8	9
3. Capacity of space for warehousing and storage.	1	2	3	4	5	6	7	8	9
4. The offering of processing operations.	1	2	3	4	5	6	7	8	9
5. The offering of assembly operations.	1	2	3	4	5	6	7	8	9
6. Size of area available for manufacturing activities.	1	2	3	4	5	6	7	8	9
7. Utilities for manufacturing activities (e.g., Energy sources, water supplies, sites for machinery, control devices, ventilation, etc.)	1	2	3	4	5	6	7	8	9
8. Transporting equipment (e.g., cranes, shafts, carts, trolleys, dollies, etc.)	1	2	3	4	5	6	7	8	9
9. Maintenance of equipment (e.g., cranes, machines, tools, devices, factory utilities etc.)	1	2	3	4	5	6	7	8	9
10. The offering of a Telex system.	1	2	3	4	5	6	7	8	9
11. The offering of a Facsimile system.	1	2	3	4	5	6	7	8	9

	Not Important At All				Average Importance				Extremely Important
12. The maintenance of telecommunication systems (e.g., telephones, telex, facsimile, computers, teleprocessors, etc.)	1	2	3	4	5	6	7	8	9
13. The size of the work force (e.g., Managers, staff, technicians and labour).	1	2	3	4	5	6	7	8	9
14. Quality of the work force.	1	2	3	4	5	6	7	8	9
15. The well-being of the work force (e.g., cafeteria, recreation, social activities etc.)	1	2	3	4	5	6	7	8	9
16. Safety of the work force.	1	2	3	4	5	6	7	8	9
17. Cleanliness of zone area.	1	2	3	4	5	6	7	8	9
18. Sanitation of zone area (e.g., minimizing noise and air pollution).	1	2	3	4	5	6	7	8	9
19. Security of zone premises.	1	2	3	4	5	6	7	8	9
20. Supervisory manoeuvring of the zone privileges, facilities, services and activities.	1	2	3	4	5	6	7	8	9
II. <u>Factors Related to Achieving the Goals of the FTZ Authority:</u>									
21. Maximisation of sales.	1	2	3	4	5	6	7	8	9
22. Maximisation of profits.	1	2	3	4	5	6	7	8	9
23. Maximisation of market share.	1	2	3	4	5	6	7	8	9
24. Maximisation of return on investment.	1	2	3	4	5	6	7	8	9
25. Minimising cost of zone operations.	1	2	3	4	5	6	7	8	9
26. Growth rate of Free Trade Zone.	1	2	3	4	5	6	7	8	9

	Not Important At All		Average Importance					Extremely Important	
27. Integration of the departmental functions of the zone authority.	1	2	3	4	5	6	7	8	9
28. Public relations with zone users.	1	2	3	4	5	6	7	8	9
29. Relations with the Government.	1	2	3	4	5	6	7	8	9
30. Free Trade Zone image/reputation.	1	2	3	4	5	6	7	8	9
III. <u>Factors Related to the Integration of the Marketing Functions:</u>									
31. Expanding the area available for the zone privileges (e.g., spaces of warehousing and storage, sites of processing, assembly and manufacturing, cargo docks, etc.).	1	2	3	4	5	6	7	8	9
32. Improving the quality of the zone privileges (e.g., spaces of warehousing and storage; sites of processing, assembly and manufacturing; cargo docks etc.).	1	2	3	4	5	6	7	8	9
33. Updating the zone facilities (e.g., telecommunications systems, transporting equipment, manufacturing utilities, etc.)	1	2	3	4	5	6	7	8	9
34. Extending the capacity of the zone facilities (e.g., telecommunication systems, transporting equipment, manufacturing utilities, etc.).	1	2	3	4	5	6	7	8	9
35. Offering zone users more choice of operations inside the zone (e.g., packaging, repackaging, sorting, mixing, labelling, exhibition, containerisation, refrigeration, etc.).	1	2	3	4	5	6	7	8	9
36. Reviewing the pricing of the zone privileges, facilities, and services.	1	2	3	4	5	6	7	8	9

	Not Important At All		Average Importance					Extremely Important	
37. Using advertising channels for the zone privileges, facilities, and services.	1	2	3	4	5	6	7	8	9
38. Personal selling of zone privileges, facilities, and services.	1	2	3	4	5	6	7	8	9
39. Marketing research activities for the zone privileges, facilities, and services.	1	2	3	4	5	6	7	8	9
40. Policies for implementing plans for marketing the zone privileges, facilities, and services.	1	2	3	4	5	6	7	8	9

APPENDIX [3]

List of Free Trade Zones (geographical listing), including their updated addresses. The list includes all those FTZs, who in addition to providing basic zone operations, offer manufacturing facilities to their zone users. This list was collected from two different sources, but mainly from: Diamond, W. (1989), Tax-Free Trade Zones of the World. The second source was: Currie, J. (1986), Export Processing Zones in the 1980's. However, many of the addresses had to be either corrected or updated. These new addresses were obtained through frequent waves of either telephone calls and/or telex messages to the zone authorities.

This list includes 159 zones in 67 countries. Eighty five zones returned answered and usable questionnaires from 48 countries. The zones who returned the answered questionnaire and thus became members of the research sample are indicated by the asterix (*) sign.

NORTH AMERICA: Total = 46

In the United States: Total = 45

1. San Francisco Foreign Trade Zone No.3
Foreign Trade Zone Services
Pier #23
Port of San Francisco
World Trade Center
San Francisco
California 94111
U.S.A.
- 2.* Mayaguez Foreign Trade Zone No. 7
P.O. Box 2350
San Juan
Puerto Rico
00936
U.S.A.
3. Toledo Foreign Trade Zone No. 8
3332 St. Lawrence Drive
Toledo
Hawaii 96813
U.S.A.
- 4.* Honolulu Foreign Trade Zone No. 9
Pier # 2
521 Ala Moano
Honolulu
Hawaii 96813
U.S.A.
5. Kansas City Foreign Trade Zone No.15
Greater Kansas City Foreign Trade Zone, Inc.
920 Main Street, Suite 230
Kansas City
Missouri 64105
U.S.A.
6. Kansas City Foreign Trade Zone No.17
Greater Kansas City Foreign Trade Zone, Inc.
920 Main Street
600 Charter Bank Center
Kansas City
Missouri 64105
U.S.A.
7. San Jose Foreign Trade Zone No.18
International Business Parks, Inc.
2001 Fortune Drive
San Jose
California 95131
U.S.A.
8. Dorchester County Foreign Trade Zone No.21
Carolina Trade Zone
2725 W. 5th North Street
Summerville
South Carolina 29483
U.S.A.
9. Chicago Foreign Trade Zone No.22
Chicago Regional Port District
12800 South Butler Drive
Lake Calumet Harbor
Chicago
Illinois 60633
U.S.A.
- 10.* Buffalo Foreign Trade Zone No.23
Western New York Foreign Trade Zones Operations Inc.
1951 Humburg Turnpike
Buffalo
New York 14218
U.S.A.
- 11.* Shenandoah, Coweta County Foreign Trade Zone No.26
Wilma Foreign Trade Zone Inc.
c/o Wilma Southeast, Inc.
2100 Riveredge Parkway, Suite 600
Atlanta
Georgia 30328
U.S.A.
12. Boston Foreign Trade Zone No.27
Massachusetts Port Authority
Ten Park Plaza
Development Department
Boston
Massachusetts 02116-3971
U.S.A.

13. **Louisville and Jefferson County Foreign Trade Zone No.29**
Kentucky Stevedoring
P.O. Box 58579
Louisville
Kentucky 40258
U.S.A.
14. **Granite City Foreign Trade Zone No.31**
Fox Industries Inc.
1603 State Street
Granite City
Illinois 62040
U.S.A.
15. **Pittsburgh Foreign Trade Zone No.33**
RIDC of Southwest Pennsylvania
534 Union Trust Building
Pittsburgh
Pennsylvania 19219
U.S.A.
- 16.* **Philadelphia Foreign Trade Zone No.35**
Envoy Warehousing Inc.
8415 Envoy Avenue
Philadelphia
Pennsylvania 19153
U.S.A.
17. **Orange County Foreign Trade Zone No.37**
P.O. Box 5147
Stewart Airport
Newburgh
New York 12550
U.S.A.
- 18.* **Cleveland/Cuyahoga County Foreign Trade Zone No.40**
Cleveland Port Authority
101 Erieside Avenue
Cleveland
Ohio 44114
U.S.A.
- 19.* **Milwaukee Foreign Trade Zone No. 41**
FTZ of Wisconsin, Ltd
2150 E. College Avenue
Cudahy
Wisconsin 53110
U.S.A.
- 20.* **Battle Creek Foreign Trade Zone No.43**
BC/Cal/Kal Inland Port
Development Corporation
4950 Dickman Road
Battle Creek
Michigan 49015
U.S.A.
21. **Portland Foreign Trade Zone No.45**
Port of Portland
P.O. Box 3529
Portland
Oregon 97208
U.S.A.
22. **The Greater Cincinnati Foreign Trade Zone No.46**
Greater Cincinnati FTZ Inc.
120 West 5th Street
Cincinnati
Ohio 45202
U.S.A.
- 23.* **Newark/Port Elizabeth Foreign Trade Zone No. 49**
Port Authority of New York and
New Jersey
One World Trade Center
Room 64 West
New York
New York 10048
U.S.A.
24. **Long Beach Foreign Trade Zone No.50**
Cal Cartage Enterprises
1500 West Dominguez Street
Long Beach
California 90810
U.S.A.
- 25.* **Tulsa Port of Catoosa FTZ No.53**
Foreign Trade Zone Services, Co.
5555 Bird Creek Drive
Catoosa
Oklahoma 74015
U.S.A.
26. **Greater Burlington FTZ No.55**
Greater Burlington Industrial
Corporation
P.O. Box 786
Burlington
Vermont 05402
U.S.A.

- 27.* Mecklenburg County FTZ No. 57
Distribution Technology Inc.
Charlotte Foreign Trade Zone, Inc.
P.O. Box 7123
Charlotte,
North Carolina 28217
28. Lincoln Foreign Trade Zone No.59
Lincoln Foreign Trade Zone, Inc.
c/o Lincoln Chamber of Commerce
122 North Street
Suite 606
Lincoln
Nebraska 68508
U.S.A.
29. Detroit Foreign Trade Zone No. 70
Greater Detroit Foreign Trade Zone
100 Renaissance Centre, Suite 2020
Detroit
Michigan 48243
U.S.A.
30. Greater Indianapolis FTZ No.72
Greater Indianapolis Foreign Trade
Zone Inc.
1910 Girl School Road
Indianapolis
Indiana 46231
U.S.A.
31. Baltimore Foreign Trade Zone No.74
McCormick Properties, Inc.
Baltimore Freeport Center
11011 McCormick Road
Hunt Valley
Maryland 21031
U.S.A.
32. Memphis Foreign Trade Zone No.77
Mid South Terminal Corp.
1145 Channel Avenue
Memphis
Tennessee 38113
U.S.A.
33. Nashville Foreign Trade Zone No.78
Ozburn Hesse Storage Co.
402 Murfreesboro road
P.O. Box 7154
Nashville
Tennessee 37210
U.S.A.
- 34.* Portsmouth Foreign Trade Zone No.81
New Hampshire State Port Authority
555 Market Street
Portsmouth
New Hampshire 03801
U.S.A.
- 35.* Clark County Foreign Trade Zone
No.89
Nevada International Trade Corporation
The Courtyard
3920 South Eastern, Suite 450
Las Vegas
Nevada 89103
U.S.A.
36. Greater Syracuse Foreign Trade Zone
No.90
Paul-Jeffrey Company, Inc.
P.O. Box 512
Liverpool
New York 13088
U.S.A.
37. Wilmington/Wyoming FTZ No.99
Delaware Development Office
99 Kings Highway
Dover
Delaware 19903
U.S.A.
- 38.* St. Louis County FTZ No.102
St. Louis Port Authority
130 South Emiston
Suite 800
Clayton
Missouri 63105
39. Des Moines/Palk County Foreign Trade
Zone No.107
IOW Foreign Trade Zone Corporation
10400 Hickman Road
Des Moines
Iowa 50322
U.S.A.
40. Jefferson County Foreign Trade Zone
No.109
Jefferson Industrial Development
County Office Building
175 Arsenal Street
Watertown
New York 13601
U.S.A.

41. Albuquerque Foreign Trade Zone
No.110
FTZ Operators, Inc. of New Mexico
1617 Broadway North East
Albuquerque
New Mexico 87125

42. JFK International Airport Foreign Trade
Zone No.111
Port Authority of New York & New
Jersey
JFK International Airport
Business Administration Division
Building 141
Jamaica
New York 11430
U.S.A.

43. Peoria Foreign Trade Zone No.114
Economic Development Council Inc.
124 Southwest Adams Street
Suite 300
Peoria
Illinois 61602
U.S.A.

44. Corpus Christi Foreign Trade Zone
No.122
Port Authority of Corpus Christi
222 Power Street
Corpus Christi
Texas 78403
U.S.A.

45. Flint Foreign Trade Zone No.140
Bishop International Airport
G-3425 West Bristol Road
Flint
Michigan 48507
U.S.A.

- 46.* Sydport International Trade Zone Ltd
Cape Breton Development Corporation
P.O. Box # 1445
Sydney
B1P 6R7
Nova Scotia
Canada

CENTRAL AND SOUTH AMERICA : Total = 23 zones

- 47.* Moin Export Processing Zone
48.* Cartago Export Processing Zone
Corporation de la Zona Franca
de Exportacion SA
P.O. Box 96
Montes de OCA
San Jose
Costa Rica
- 49.* San Bartolo Free Zone
Instituto Salvadoreneo de Comercio
Exterior (ISCE)
Alameda Roosevelt # 3130
San Salvador
El Salvador
- 50.* Santo Tomas de Castilla Free
Industrial and Trade Zone
6a-Avenue 1027
Second Floor, Zone #4
Guatemala City
Guatemala
- 51.* Zona Libre de Puerto Cortes
Puerto Cortes
Honduras
52. Zone Libre de San Pedro Sula
P.O. Box # 584
San Pedro Sula
Honduras
53. The Free Trade Zone of
Coatzacoalcos
Superintendencia del Puerto Libre
Zona Franca Apartado Postal 496
Coatzacoalcos
Veracruz
Mexico
- 54.* The Free Trade Zone of Salina Cruz
Superintendencia del Puerto Libre
Zona Franca Apartado Postal 245
Salina Cruz
Oaxaxo
Mexico
- 55.* The Free Trade Zone of Baja
California
Direccion General de Aduanas
Secretaria de Hacienda ya Credito
Publico
Avenue 20 de Noviembre 5ºPiso
Mexico 1
D.F. Mexico
56. The Free Trade Zone of Sonora
Subdireccion de la Industria
Fronteriza y Maquiladora
Secretaria del Patrimonio y Fomento
Industrial
Avenida Cuauhternoc No.80-5º Piso
Mexico 7, D.F.
57. Las Mercedes Export
Processing Zone
APEX
P.O. Box # 2252
Managua
Nicaragua
58. Colon Free Zone Company
P.O. Box # 1118
Colon
Republic of Panama
59. Rosario Free Port
Administracion Nacional de Aduanas
Azopardo 350
Buenos Aires
Argentina
60. SUFRAMA
Rua Ministro Joao
Goncalves De Souza - s/nº
Distrito Industrial
Marechal Castello Branco
69000 Manaus - AM
Brazil
- 61.* Iquique Free Zone
Free Trade Zone Administration
P.O. Box # 1517
Iquique
Chile
- 62.* Zona Franca Industrial y Comercial de
Barranquilla
Edificio de Adminstracion
Frente Darsena
Sur del Terminal Maritime
Barranquilla
Colombia
- 63.* Zone Franca Industrial y Comercial
Manuel Carvajal
Edificio Residencias Arisi, Piso 9
Apartado Aereo 2629
Cali
Colombia

- 64.* Industrial Free Zone of Cartagena
Mamonel
P.O. Box # 1158
411 La Matuna
Cartagena
Colombia
- 65.* Zona Franca Santa Marta
Cr. 314-21
Edificio Los bancas Piso 10
Oficina 1008
Santa Marta
Colombia
66. Zona Franca de Colonia
Comision Administradora de la Zonas
Francas
Avenida Agraciada 1623, Piso 11
Montevideo
Uruguay
- 67.* Zona Franca de Nueva Palmira
Direccion de Zonas Francas
Lord Ponsonby 2550
Montevideo
Uruguay
68. Zona Franca Industrial del Estado
Neuva Esparta
Puerta Libre el Guamache
Isla de Margarita
Venezuela
- 69.* CONFIPCA
Distrito Carirubana
Estado Falcon
Venezuela

THE CARIBBEAN AND THE WEST INDIES: Total = 16

- 70.* Freeport Free Trade Zone
Freeport Commercial & Industrial Ltd
P.O. Box # F-2666
Freeport
Grand Bahamas Island
71. Grand Bahamas Industrial Free Zone
International Industry and
Management Co.
P.O. Box # F-2692
Freeport
Grand Bahamas Island
72. Nassau Free Trade Zone
The Bahamas Agricultural & Industrial
Corporation
East Bay Street
Levy Building
Nassau
The Bahamas
73. New Providence Industrial Free Zone
Ramcorp Investment, Ltd.
P.O. Box # F-5738
Freeport
The Bahamas
74. Freeport on Ireland Island
The West End DVLMT Corporation
P.O. Box # MA 145
Mangrove Bay Post Office
Somerset, MA BX
Bermuda
- 75.* Operadora Zona Franca de la
Romana, S.A.
P.O. Box # 135
La Romana
Dominican Republic
- 76.* Corporacion Zona Franca
Industrial de Santiago, Inc.
Apartado 266
Santiago
Dominican Republic
77. Zona France San Pedro
Corporacion de Fomento Industrial
P.O. Box # 1471
Santo Domingo
Dominican Republic
- 78.* Zona France San Isidro, S.A. (SIFZ)
Maximo Gomez 31
P.O. Box # 916
Santo Domingo
Dominican Republic
- 79.* Zona Franca San Cristobal
Parque Industrial Itabo, S.A. (SCIFZ)
P.O. Box # 275-2
Santo Domingo
Dominican Republic
- 80.* Free Trade of the Park Industrial
Metropolitain Societe National
Des Parcs Industrial
P.O. Box 2345
Port-au-Prince
Haiti
- 81.* Kingston Free Zone (KEFZ)
Kingston Free Zone Company Limited
27 Shannon Drive
P.O. Box 16
Kingston 15
Jamaica
- 82.* Aruba Free Trade Zone
Department of Economic Development
76 Lloyd G. Smith Boulevard
Oranjestad
Aruba
Netherlands Antilles
- 83.* Curacao Free Trade Zone
Bureau of Industrial and Economic
Development
Abraham de Veerstrat 12
Willemstad
Curacao
Netherlands Antilles
- 84.* Vieux Fort Free Trade Zone
St. Lucia National Development
Corporation
P.O. Box # 495
27 Brazil Castries
St. Lucia
West Indies
85. Grande Cul-de-Sac Bay Free Trade
Zone
St. Lucia National Development
Corporation
P.O. Box # 495
27 Brazil Castries
St. Lucia

EUROPE: Total = 22 Zones

- 86.* Vienna Free Trade Zone Wiener Hafen
Betriebsgesellschaft m.b.h.
Seitenhafenstrasse 15
1923 Vienna
Austria
- 87.* Linz Free Trade Zone Oesterreichische Zollfreizonen-betriebs-A.G.
Stadthagen, Industrie Zeile 35
A-4020 Linz
Austria
- 88.* The Copenhagen Free Port Company Ltd
Kobenhavens Frihavns-Aktieselskab
6 Hovedvej
DK 2100 Copenhagen O
Denmark
- 89.* Helsingin Kaupungin Vapaavarasto Satamalaitos
Etelaranta 10
Helsinki
Finland
- 90.* Turku Free Port Ltd
Managing Director
Turku Vapaavarasto OY
Turku
Finland
91. Port of Le Havre Free Trade Zone
Port of Le Havre Authority
Terre-Plein de La Barre
76067 Le Havre Cedex
France
- 92.* Hamburg Free Trade Zone
Hamburg Hafen-und Lagerhaus A.G.
2 Hamburg 11
Bei St. Annen 1
West Germany
- 93.* Shannon Free Zone Marketing Manager
Shannon
County Clare
Republic of Ireland
- 94.* Isle of Man Free Port
Free Port Centre
Douglas
Isle of Man
95. Punto Franca Industriali di Zauli
Ente del Porto
Via S. e G. Caboto, 14
Trieste
Italy
96. Venice Free Trade Zone
Provveditorato del Porto di Venezia
1401 Zattere
Venezia
Italy
- 97.* Zone Franca do Funchal-Madeira
Director General
Sociedade de Desenvolvimento da Madeira S.A.
Rua Imperatriz Da Amelia
P.O. Box # 4164
9052 Funchal Codex
Madeira
Portugal
- 98.* Sulina Free Trade Zone
202 Deitei Street
8829 Sulina
Tulcea County
Romania
99. Consorcio de la Zone France de Cadiz
Caseta Bascula-Puerta
Cadiz
Spain
- 100.* Consorcio de la Zone France de Vigo
Muelle Transversal
Vigo
Spain
- 101.* Stockholms Frihamns AB
Sanhamnsgatan 57
S-11528 Stockholm
Sweden
- 102.* Liverpool Freeport
Freeport Manager
Liverpool
L21 1JD
England, United Kingdom
103. Cardiff Freeport Limited
15/16 Herbert Street
Cardiff
CF1 5QS
South Glamorgan County
Wales, United Kingdom

104. The Belgrade Free Trade Zone
Preduzece Luka i Skladista
Knezopoljska 1
Belgrade
Yugoslavia 11000

105. Koper Free Trade Zone
Podjetje Luka i OZD
JM Ia
Koper
Yugoslavia 66000

106. Rijeka Free Trade Zone
Poduzece Luka I Skladista
Obala Judoslavenske
Mornarice No.1
Rijake
Yugoslavia 51000

107. Bar Free Trade Zone
"Luka" Bar
8500 Bar Toplica 66
Bar
Yugoslavia 81350

MIDDLE EAST AND AFRICA: Total = 24 Zones

- 108.* Larnaka Industrial Free Zone
109. Limasol Industrial Free Zone
Cyprus Zone Authority
Director General
Ministry of Commerce and Industry
Nicosia
Cyprus
110. Djibouti Free Zone
Directeur du Port
Port de Djibouti
Djibouti
- 111.* Mina Jebel Ali Free Zone
Department of Trade Development
Port Authority of Jebel Ali
P.O. Box # 3258
Dubai
United Arab Emirates
- 112.* Alexandria Public Free Zone
Head of Central Department
P.O. Box # 790
Alexandria
Arab Republic of Egypt
113. Nasr City Public Free Zone
Head of Central Department
P.O. Box # 8044
Nasr City Blocks
Cairo
Arab Republic of Egypt
- 114.* Port Said Public Free Zone
Head of Central Department
P.O. Box # 342
Port Said
Arab Republic of Egypt
115. Suez Public Free Zone
Head of Central Department
P.O. Box # 110
Suez
Arab Republic of Egypt
116. Haifa Freeport
Haifa Port Authority
P.O. Box # 539
Haifa
Israel
- 117.* The Zarka Free Zone
Free Zone Corporation (Zarka)
P.O. Box 20036
Amman
Jordan
118. La Zone France de Beyrouth
Compagnie de Gestion et
d'Exploitation du Port de Beyrouth
Rue du Port
P.O. Box # 11190
Beirut
Lebanon
119. La Zone France de Tripoli
Societe Nationale de la Zone
France de Tripoli
Tripoli
Lebanon
- 120.* Damascus Free Zone
121.* Adra Free Zone
122.* Aleppo Free Zone
123.* Tartous Free Zone
124.* Latakia Free Zone
General Establishment for Free Zones
P.O. Box # 2790
Damascus
Syrian Arab Republic
- 125.* Gouvernorate de Sfax
Agence de Promotion des
Investissements
Les Zones Franches de Sfax
27 Rue Larbi Zarrouk
3000 Sfax Bab El-Bahr
Sfax
Tunisia
- 126.* State Planning Organization
Free Trade Zones Directorate
Yumutalik Free Trade Zone
Necatibey Cadessi, No. 108
Ankara
Turkey
- 127.* State Planning Organization
Free Trade Zones Directorate
Numrul Free Trade Zone
Necatibey Cadessi, No. 108
Ankara
Turkey
- 128.* Liberia Industrial Free Zone Authority
Att: The General Manager
Post Office Mail Bag No. 9047
Monrovia
Liberia

129.* Mauritius Export Processing Zone
Association (MEPZA)
The General Manager
42 Sir William Newton Street
Port Louis
Mauritius

130.* La Zeone Franche Industrie
Ile de Dakar
P.O. Box # 3298
Dakar
Senegal

131. Port Autonome de Lome
Zone Franche de Lome
B.P. 1255
Lome
Togo

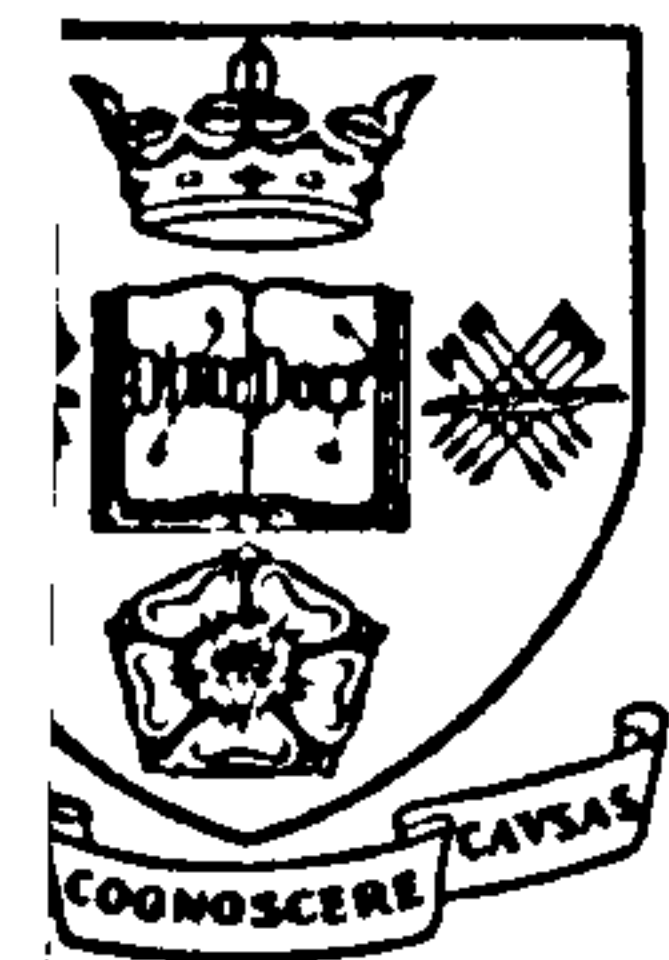
- 132.* Northern Territory Trade
Development Zone at Darwin
The Chairman
Northern Territory Development
Corporation
Development House
76 The Esplanade
G.P.O. Box 2245
Darwin, N.T.
Australia 5794
- 133.* Chittagong Export Processing Zone
(CEPZ)
Jiban Bima Sadan (Ground Floor)
103 Agrabad Commercial Area
P.O. Box # 500106-7
Chittagong
Bangladesh
134. Sekou Industrial Zone (SKIZ)
China Merchants Shekou
Industrial Zone Co. Ltd
Shekou, Shenzhen
Guangdong Province
Peoples Republic of China
135. Zhuhai Special Economic Zone
General Directorate
Foreign Department of Zhuhai
Zhuhai, Guangdong Province
Peoples Republic of China
- 136.* Shantou Special Economic Zone
General Directorate
Foreign Department of Shantou
Shantou, Guangdong Province
Peoples Republic of China
137. Xiamen Special Economic Zone
General Directorate
Foreign Department of Xiamen
Xiamen, Fukien Province
Peoples Republic of China
- 138.* Kandla Free Trade Zone
The Development Commissioner
Ganhidham (Kutch)
Gujarat
India
139. Santa Cruz Electronics
Export Processing Zone
The Development Commissioner
Ministry of Commerce
Government of India
Andheri (East)
Bombay 400096
India
140. Falta Export Processing Zone
The Development Commissioner
Ministry of Commerce
Government of India
7 Camat Street
Calcutta 700017
India
141. Madras Export Processing Zone
The Development Commissioner
Ministry of Commerce
"Rosy Tower"
7 Nungambakkam High Road
Madras 600034
India
- 142.* Cochin Export Processing Zone
The Development Commissioner
Ministry of Commerce
KSHB Office Complex (6th Floor)
Panampilly Nagar
Cochin 682016
Kerala
India
143. P.T. (Persero) Bonded Warehouses
Export Processing Zone
J1 Pelabuhan Nusantara
Tanjung Priok
Jakarta
Indonesia
- 144.* Batam Industrial Development
Authority
Pertamina Chandra Building
6th Floor
J1 M.H. Thamrin 20
Jakarta
Indonesia

- 145.* Masan Export Processing Zone
Office of the Masan Export Processing Administration
Room No.803, Ssan Yong Building
24, 2-Ka, Su-dong
Seoul
South Korea
146. IRI Free Export Processing Zone
Industrial Estate Administration
17th Floor
Ssang Yong Building
2-GA, Jo Dong
Jung-Gu
Seoul
South Korea
147. Macau Free Trade Zone
Macau Economic Department
Rua da Praia Grande
Macau
- 148.* Penang State Department Corporation
Tingkat 9, Bangunan
Tuanku Syed Putra
Peti Surat 967
Pulau Pinang
Malaysia
149. The Karachi Export Processing Zone Authority
Landhi Industrial Area Extension
Mehran Highway
P.O. Box # 2022
Karachi 54
Pakistan
- 150.* Bataan Export Processing Zone
Attn: Zone Manager
Bataan
Philippines
- 151.* Mactan Export Processing Zone
Attn: Zone Manager
Lapu-Lapu City
Mactan CEBU
Philippines
- 152.* Baguio City Export Processing Zone
Attn: Zone Manager
Loakan Road
Baguio City
Philippines
153. Okinawa Free Trade Zone
Administration Office
Kagamizu Sakihara Chisaki
Naha City
Okinawa
Japan
- 154.* Katunayake Investment Promotion Zone
Attn: The Director General
Greater Colombia Economic Commission
14 Sir Baron Jayatilaka Mawatha
P.O. Box # 1768
Colombo 1
Sri Lanka
- 155.* Biyagama Investment Promotion Zone
Attn: The Director General
Greater Colombo Economic Commission
14, Sir Baron Jayatilaka Mawatha
P.O. Box # 1768
Colombo 1
Sri Lanka
- 156.* Kaohsiung Export Processing Zone
Administration Office
One Ta-Haw First Road
Chian-cheng Street
Kaohsiung
Taiwan
Republic of China
- 157.* Nantze Export Processing Zone
Administration Office
600 Chian-cheng Road
Nantze
Kaohsiung
Taiwan
Republic of China
- 158.* Taichung Export Processing Zone
Administration Office
One Chiang-Kao Road
Taichung
Taiwan
Republic of China
159. Lat Krabang Export Processing Zone
Industrial Estate Authority of Thailand
Industrial Service Institute Building
Soi Kluaynamthai
Rama IV Road
Bangkok 10110
Thailand

APPENDIX [4]

Questionnaire package sent to the free trade zones authorities.

The package includes a cover letter addressed by the researcher's supervisor and a questionnaire form.



The University of Sheffield

School of Management and Economic Studies

Arthur Meidan, BSc(Econ), MBA, PhD
Professor of Marketing

Crookesmoor Building
Conduit Road
Sheffield S10 1FL
Tel: (0742) 768555

Our Ref: AM/JK

Dear Sir,

I am writing to ask for your co-operation in connection with a research work currently being undertaken on Free Trade Zone Operations around the world by Mr Abdul Al-Sanie, who is a doctoral student at this University.

Mr Al-Sanie is collecting data from a carefully selected sample of Free Trade Zone Authorities around the world. He would like to obtain some data from you and the selected Zone Directors, via the enclosed questionnaire, which will take just a few minutes to complete.

The data collected will be treated in the strictest confidence and analysed in aggregate. In this way the sources of information will not be revealed. The accuracy of your response on the items of this questionnaire is of extreme importance to the validity of the findings of this research.

I shall be grateful for your co-operation by completing the enclosed questionnaire and return it in the self-addressed envelope provided.

Please accept our thanks for your co-operation and assistance.

Yours sincerely,

Professor A Meidan
Director of Doctoral Programme
(Supervisor to Mr Al-Sanie)

Enc.

Dear Sir

We wish to assure you that all the information you provide in this questionnaire shall be kept strictly confidential. For this reason, every Free Trade Zone is given a numerical code known only to the researcher. In addition, the data collected from all sampled Free Trade Zones shall be analysed collectively rather than individually. Therefore, the accuracy of your responses to the items of this questionnaire is of extreme importance to the findings of this research.

Q. Please circle the appropriate number [from (1) to (9)] that would best indicate the level of importance you attach to the employment of each of the factors/activities in the operations of your Free Trade Zone. Please circle number (1) to all factors/activities you do not employ in the operations of your Zone.

	Not Important At All				Average Importance				Extremely Important
1. Location of the zone.	1	2	3	4	5	6	7	8	9
2. Size of the zone area.	1	2	3	4	5	6	7	8	9
3. Capacity of space for warehousing and storage.	1	2	3	4	5	6	7	8	9
4. The offering of processing operations.	1	2	3	4	5	6	7	8	9
5. The offering of assembly operations.	1	2	3	4	5	6	7	8	9
6. Size of area available for manufacturing activities.	1	2	3	4	5	6	7	8	9
7. Utilities for manufacturing activities (e.g., Energy sources, water supplies, sites for machinery, control devices, ventilation, etc.)	1	2	3	4	5	6	7	8	9
8. Transporting equipment (e.g., cranes, shafts, carts, trolleys, dollies, etc.)	1	2	3	4	5	6	7	8	9
9. Maintenance of equipment (e.g., cranes, machines, tools, devices, factory utilities etc.)	1	2	3	4	5	6	7	8	9
10. The offering of a Telex system.	1	2	3	4	5	6	7	8	9
11. The offering of a Facsimile system.	1	2	3	4	5	6	7	8	9

	Not Important At All				Average Importance				Extremely Important
12. The maintenance of telecommunication systems (e.g., telephones, telex, facsimile, computers, teleprocessors, etc.)	1	2	3	4	5	6	7	8	9
13. The size of the work force (e.g., Managers, staff, technicians and labour).	1	2	3	4	5	6	7	8	9
14. Quality of the work force.	1	2	3	4	5	6	7	8	9
15. The well-being of the work force (e.g., cafeteria, recreation, social activities etc.)	1	2	3	4	5	6	7	8	9
16. Safety of the work force.	1	2	3	4	5	6	7	8	9
17. Cleanliness of zone area.	1	2	3	4	5	6	7	8	9
18. Sanitation of zone area (e.g., minimizing noise and air pollution).	1	2	3	4	5	6	7	8	9
19. Security of zone premises.	1	2	3	4	5	6	7	8	9
20. Supervisory manoeuvring of the zone privileges, facilities, services and activities.	1	2	3	4	5	6	7	8	9
21. Maximisation of sales.	1	2	3	4	5	6	7	8	9
22. Maximisation of profits.	1	2	3	4	5	6	7	8	9
23. Maximisation of market share.	1	2	3	4	5	6	7	8	9
24. Maximisation of return on investment.	1	2	3	4	5	6	7	8	9
25. Minimising cost of zone operations.	1	2	3	4	5	6	7	8	9
26. Growth rate of Free Trade Zone.	1	2	3	4	5	6	7	8	9

	Not Important At All					Average Importance			Extremely Important
27. Integration of the departmental functions of the zone authority.	1	2	3	4	5	6	7	8	9
28. Public relations with zone users.	1	2	3	4	5	6	7	8	9
29. Relations with the Government.	1	2	3	4	5	6	7	8	9
30. Free Trade Zone image/reputation.	1	2	3	4	5	6	7	8	9
31. Expanding the area available for the zone privileges (e.g. spaces of warehousing and storage, sites of processing, assembly and manufacturing, cargo docks, etc.).	1	2	3	4	5	6	7	8	9
32. Improving the quality of the zone privileges (e.g., spaces of warehousing and storage; sites of processing, assembly and manufacturing; cargo docks etc.).	1	2	3	4	5	6	7	8	9
33. Updating the zone facilities (e.g., telecommunications systems, transporting equipment, manufacturing utilities, etc.)	1	2	3	4	5	6	7	8	9
34. Extending the capacity of the zone facilities (e.g., telecommunication systems, transporting equipment, manufacturing utilities, etc.).	1	2	3	4	5	6	7	8	9
35. Offering zone users more choice of operations inside the zone (e.g., packaging, repackaging, sorting, mixing, labelling, exhibition, containerisation, refrigeration, etc.).	1	2	3	4	5	6	7	8	9
36. Reviewing the pricing of the zone privileges, facilities, and services.	1	2	3	4	5	6	7	8	9

	Not Important At All				Average Importance				Extremely Important
37. Using advertising channels for the zone privileges, facilities, and services.	1	2	3	4	5	6	7	8	9
38. Personal selling of zone privileges, facilities, and services.	1	2	3	4	5	6	7	8	9
39. Marketing research activities for the zone privileges, facilities, and services.	1	2	3	4	5	6	7	8	9
40. Policies for implementing plans for marketing the zone privileges, facilities, and services.	1	2	3	4	5	6	7	8	9

APPENDIX [5]

Translations of the questionnaire package sent to the Free Trade Zones authorities. The questionnaire package which includes a cover letter and questionnaire form was translated into seven other languages, in alphabetical order they are:

Appendix 5a	Arabic
Appendix 5b	Chinese
Appendix 5c	French
Appendix 5d	German
Appendix 5e	Malaysian
Appendix 5f	Spanish
Appendix 5g	Turkish

APPENDIX [5a]

ARABIC TRANSLATION

Copies of this translation were sent to free trade zones authorities in: United Arab Emirates, Egypt, Jordan, Lebanon, Syria, and Tunisia.



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Tel: (0742) 768555

خطابنا رقم : ايه . ام/في . جاي تي .

حضرة السادة المحترمين /

نرسل لكم هذا الخطاب راجين مساعدتكم فيما يتصل ببحث جامعي يقوم به حاليا السيد عبد الرحمن الساني ، وهو طالب دكتوراه في هذه الجامعة، وذلك حول أعمال مناطق التجارة الحرة حول العالم .

ويقوم السيد الساني بجمع بيانات ومعلومات من عيّنات تم اختيارها بكل عناية من ضمن سلطات مناطق التجارة الحرة بالعالم . ويريد السيد الساني الحصول على بعض المعلومات منكم ومن مديري المناطق المختارة، وذلك بواسطة قائمة الاسئلة المرفقة طيه والتي تستغرق الاجابة عنها بضع دقائق فقط .

سوف تتم معاملة المعلومات المجمّعة بكامل السرية كما ستتم دراستها وتحليلها ككل . بهذه الصورة سوف لن يقع الكشف عن مصادر المعلومات . ان دقة اجوبتكم على الاسئلة المطروحة هامة جدا في تحديد صحة نتائج هذا البحث .

سوف نكون شاكرين مساعدتكم لنا عن طريق الاجابة عن الاسئلة المرفقة طيه وإرجاعها لنا في الظرف المعنون المرفق مع هذا الخطاب .

الرجاء تقبل تشكراتنا لكم على مساعدتنا في هذا البحث وشكرا .

المخلص

الأستاذ أ . مايدن

مدير ، برنامج ام . بي . ايه .

(الاستاذ المشرف على السيد الساني)

حضرة السيد المحترم /

نريد ان نوكد لكم بان جميع المعلومات التي تقومون باعطائها في أجوبتكم سوف تعامل بكامل السرية. ولهذا الغرض تم اعطاء كل منطقة تجارية حرة رمزا عدديًا لايعرفه الا الباحث فقط. بالإضافة الى ذلك فان جميع المعلومات التي سوف يتم جمعها من مناطق التجارة الحرة سوف يتم تحليلها ككل ولا بصورة فردية منفصلة. ولهذا السبب فان دقة اجوبتكم على هذه الاسئلة ذات اهمية بالغة في تحديد نتائج هذا البحث .

سؤال : الرجاء وضع دائرة حول الرقم الملائم (من ١ الى ٩) والذي يشير بافضل صورة الى مستوى الاهمية التي تعيرونها لكل من العوامل/النشاطات التي تستخدمونها في التشغيل العملي والفعلي لمنطقة التجارة الحرة. الرجاء وضع دائرة حول رقم (١) بالنسبة لجميع العوامل/النشاطات التي لاتستخدمونها في التشغيل الفعلي لمنطقتكم.

غير هام	متوسط الأهمية	هام جدا							
١	٢	٣	٤	٥	٦	٧	٨	٩	١ موقع المنطقة
١	٢	٣	٤	٥	٦	٧	٨	٩	٢ حجم/مساحة المنطقة
١	٢	٣	٤	٥	٦	٧	٨	٩	٣ السعة الخاصة بالمستودعات والتخزين
١	٢	٣	٤	٥	٦	٧	٨	٩	٤ توفر/تقديم اعمال المعالجة
١	٢	٣	٤	٥	٦	٧	٨	٩	٥ توفر/تقديم اعمال التجميع
١	٢	٣	٤	٥	٦	٧	٨	٩	٦ مساحة المنطقة المتوفرة لنشاطات التصنيع
١	٢	٣	٤	٥	٦	٧	٨	٩	٧ التجهيزات المساعدة على نشاطات التصنيع (مثلا: موارد الطاقة، الامداد بالمياه، مواقع الآلات، اجهزة للرقابة، التهوية، الخ)
١	٢	٣	٤	٥	٦	٧	٨	٩	٨ معدات النقل (مثلا: الرافعات العربات، مراكب نقل البضاعة، العربات المكشحة، منصات النقل، الخ)
١	٢	٣	٤	٥	٦	٧	٨	٩	٩ صيانة المعدات (مثلا: الرافعات المكنات، الادوات، الاجهزة، تجهيزات الورشة، الخ)
١	٢	٣	٤	٥	٦	٧	٨	٩	١٠ توفر جهاز تلكس
١	٢	٣	٤	٥	٦	٧	٨	٩	١١ توفر جهاز لنقل الصور الثابتة (فكسيميلى)

هام جدا	متوسط الامة	غير هام							
									١٢
									صيانة اجهزة المواصلات (مثلا: التليفونات، التلكس، اجهزة نقل الصور، الكومبيوتر، اجهزة المعالجة عن بعد، الخ)
٩	٨	٧	٦	٥	٤	٣	٢	١	
									١٣
									حجم القوة العاملة (مثلا : المديرون، الموظفون، التقنيون، والايدي العاملة).
٩	٨	٧	٦	٥	٤	٣	٢	١	
									١٤
									نوعية القوة العاملة
٩	٨	٧	٦	٥	٤	٣	٢	١	
									١٥
									رفامية القوة العاملة (مثلا : كفيتيريا، التسلية، النشاطات الاجتماعية، الخ)
٩	٨	٧	٦	٥	٤	٣	٢	١	
									١٦
									سلامة وامن القوة العاملة
٩	٨	٧	٦	٥	٤	٣	٢	١	
									١٧
									نظافة المنطقة
٩	٨	٧	٦	٥	٤	٣	٢	١	
									١٨
									التدابير الصحية في المنطقة (مثلا تخفيض الضجيج وتلوث الهواء الى ادنى حد ممكن)
٩	٨	٧	٦	٥	٤	٣	٢	١	
									١٩
									أمن المحلات بالمنطقة
٩	٨	٧	٦	٥	٤	٣	٢	١	
									٢٠
									تدابير مراقبة مرافق وخدمات ونشاطات المنطقة
٩	٨	٧	٦	٥	٤	٣	٢	١	
									٢١
									رفع المبيعات الى اقصى حد ممكن
٩	٨	٧	٦	٥	٤	٣	٢	١	
									٢٢
									رفع الارباح الى اقصى حد ممكن
٩	٨	٧	٦	٥	٤	٣	٢	١	
									٢٣
									رفع حصة السوق الى اقصى حد ممكن
٩	٨	٧	٦	٥	٤	٣	٢	١	
									٢٤
									رفع عائدات الاستثمار الى اقصى حد ممكن
٩	٨	٧	٦	٥	٤	٣	٢	١	
									٢٥
									تخفيض تكاليف اعمال المنطقة الى ادنى حد ممكن
٩	٨	٧	٦	٥	٤	٣	٢	١	
									٢٦
									معدل نمو منطقة التجارة الحرة
٩	٨	٧	٦	٥	٤	٣	٢	١	
									٢٧
									تكامل الوظائف الادارية لسلطات المنطقة
٩	٨	٧	٦	٥	٤	٣	٢	١	
									٢٨
									العلاقات العامة مع مستعملي المنطقة
٩	٨	٧	٦	٥	٤	٣	٢	١	
									٢٩
									العلاقات مع الحكومة
٩	٨	٧	٦	٥	٤	٣	٢	١	
									٣٠
									صورة/سمعة منطقة التجارة الحرة

هام جدا	متوسط الاهمية	غير هام							
٩	٨	٧	٦	٥	٤	٣	٢	١	٢١ توسيع المساحة المتوفرة لتسهيلات المنطقة (مثلا : اماكن المستودعات والتخزين، مواقع المعالجة والتحويل، التجميع والتصنيع، أرصفة الشحن، الخ)
٩	٨	٧	٦	٥	٤	٣	٢	١	٢٢ تحسين نوعية مرافق المنطقة (مثلا: اماكن المستودعات والتخزين، مواقع المعالجة والتحويل، التجميع والتصنيع، أرصفة الشحن، الخ)
٩	٨	٧	٦	٥	٤	٣	٢	١	٢٣ تحديث خدمات المنطقة (مثلا: انظمة الاتصالات ، معدات النقل، اجهزة التصنيع، الخ)
٩	٨	٧	٦	٥	٤	٣	٢	١	٢٤ توسيع مقدرة خدمات المنطقة (مثلا: انظمة الاتصالات، معدات النقل، اجهزة التصنيع، الخ)
٩	٨	٧	٦	٥	٤	٣	٢	١	٢٥ تقديم اختيارات اعمال اكبر لمستعملي المنطقة (مثلا: التعبئة، إعادة التعبئة، الفرز، الخلط، تلصيق البطاقات، العروض، التعبئة في اوعية، التبريد/التثليج، الخ)
٩	٨	٧	٦	٥	٤	٣	٢	١	٢٦ مراجعة اسعار مرافق وخدمات المنطقة
٩	٨	٧	٦	٥	٤	٣	٢	١	٢٧ استعمال طرق الدعاية التجارية لمرافق وخدمات المنطقة
٩	٨	٧	٦	٥	٤	٣	٢	١	٢٨ البيع الشخصي لمرافق وخدمات المنطقة
٩	٨	٧	٦	٥	٤	٣	٢	١	٢٩ نشاطات دراسات تسويق لمرافق وخدمات المنطقة
٩	٨	٧	٦	٥	٤	٣	٢	١	٤٠ سياسة لتنفيذ خطط تسويق مرافق وخدمات المنطقة

APPENDIX [5b]

CHINESE TRANSLATION

Copies of this translation were sent to free trade zones authorities in: The People's Republic of China, and the Republic of China (Taiwan).



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Professor of Marketing

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敬啟者：

我寫信給您是想您協助本校博士研究生阿伯德阿山尼先生對世界各國自由貿易區機構的研究工作。

阿山尼先生正在從一些經心選出的世界各地自由貿易區總局的例子中收集數據。他要從您和所選出的董事獲得一些數據，並望您能用幾分鐘填好所附的問卷。

他所獲的數據將會分析匯總並絕對保密，您對每一問題解答的準確性會對此研究結果的準確有直接的重要意義。

若您能答完此卷並用附上的信封寄回，我將不勝感激。

請接受我對您相助的感謝。

您的忠誠的

A. Meidan教授

董事·博士

阿山尼導師

敬啟者：

我們向你保證您所提供的信息將絕對保密。為此，每一個自由貿易區將編有一個號碼，此號碼僅研究生自己知道。此外，從這些試點的自由區中所收集的數據將總匯而不是單獨處理。所以，您對每一問題解答的準確性將會對此研究結果的準確性有直接影響。

問題：請從以下(1)至(9)中圈上您認為最合適的數字以表示貴自由貿易區對每一活動及因素所起的作用。請圈(1)為貴區對以下的因素及活動沒有作用。

	不重要			較重要			非常重要		
1. 區的位置	1	2	3	4	5	6	7	8	9
2. 區的面積	1	2	3	4	5	6	7	8	9
3. 倉庫面積	1	2	3	4	5	6	7	8	9
4. 加工業的提供	1	2	3	4	5	6	7	8	9
5. 裝配業務的提供	1	2	3	4	5	6	7	8	9
6. 廠房面積	1	2	3	4	5	6	7	8	9
7. 生產利用(如能源、供水、機械房的面積、控制設備、通風等)	1	2	3	4	5	6	7	8	9
8. 運輸機械(如吊機,推車、手推車、獨輪台車等)	1	2	3	4	5	6	7	8	9
9. 機械保養(如吊機,推車、手推車、獨輪台車等)	1	2	3	4	5	6	7	8	9
10. 電傳系統	1	2	3	4	5	6	7	8	9
11. 圖文傳真系統	1	2	3	4	5	6	7	8	9
12. 電訊系統的保養(如電話、電傳、圖文傳真、電腦、電傳處理機等)	1	2	3	4	5	6	7	8	9
13. 職工人數(如經理、職員、技工和工人)	1	2	3	4	5	6	7	8	9

14. 勞動力的質素	1	2	3	4	5	6	7	8	9
15. 職工福利(如飯堂、娛樂、社交活動)	1	2	3	4	5	6	7	8	9
16. 安全生產	1	2	3	4	5	6	7	8	9
17. 區內的衛生	1	2	3	4	5	6	7	8	9
18. 區內的環境污染(如最低噪音和空氣污染)	1	2	3	4	5	6	7	8	9
19. 區住房安全	1	2	3	4	5	6	7	8	9
20. 區掌管的設備、服務設施和事務	1	2	3	4	5	6	7	8	9
21. 最大銷售量	1	2	3	4	5	6	7	8	9
22. 最大利潤	1	2	3	4	5	6	7	8	9
23. 最大市場股份	1	2	3	4	5	6	7	8	9
24. 最大的投資回收量	1	2	3	4	5	6	7	8	9
25. 區最低開支	1	2	3	4	5	6	7	8	9
26. 自由貿易區的增長率	1	2	3	4	5	6	7	8	9
27. 區總局的分類	1	2	3	4	5	6	7	8	9
28. 區用戶與公眾的關繫	1	2	3	4	5	6	7	8	9
29. 政府聯絡	1	2	3	4	5	6	7	8	9
30. 自由貿易區的形像	1	2	3	4	5	6	7	8	9
31. 可擴大的區域(如倉庫面積、加工安裝和制造車間的面積)	1	2	3	4	5	6	7	8	9
32. 設備的質量改善(如倉庫面積、加工安裝和制造車間的面積)	1	2	3	4	5	6	7	8	9

33. 最新的區設施(如通訊系統、運輸設備、製造)	1	2	3	4	5	6	7	8	9
34. 區設施的擴大(如通訊系統、運輸設備、製造)	1	2	3	4	5	6	7	8	9
35. 為區用戶者在本區內所提供的更多業務(如包裝、再包裝、分類、混合、標籤、展覽、貨櫃、冷凍)	1	2	3	4	5	6	7	8	9
36. 檢查物價的設備及措施	1	2	3	4	5	6	7	8	9
37. 通過廣告來推廣區的設備和服務	1	2	3	4	5	6	7	8	9
38. 本區私人出售的設備和設施	1	2	3	4	5	6	7	8	9
39. 為推廣區的設備和服務所作的市場調查活動	1	2	3	4	5	6	7	8	9
40. 為推廣區的設備和服務的計劃	1	2	3	4	5	6	7	8	9

APPENDIX [5c]

FRENCH TRANSLATION

Copies of this translation were sent to free trade zones authorities in: France, Senegal, Togo, and Romania (an English copy was also sent).



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Notre réf.: AM/VJT

Cher

Je vous écris pour vous demander de bien vouloir nous rendre service en collaborant avec nous dans un projet de recherche visant les opérations dans les zones de libre-échange partout dans le monde et à présent entrepris par Mr. Abdul Al-Sanie qui est étudiant doctoral à l'université.

Mr. Al-Sanie collecte des données à partir d'un échantillon soigneusement sélectionné d'autorités responsables des zones de libre-échange réparties dans le monde entier. Il voudrait obtenir des renseignements de vous-même et des autres directeurs des zones sélectionnées au moyen du questionnaire annexé qui ne nécessitera que quelques minutes à remplir.

Les renseignements collectés seront bien entendu traités à titre strictement confidentiel et analysés globalement. De cette manière, les sources d'information ne seront pas révélées. La précision de vos réponses aux articles de ce questionnaire est d'une importance primordiale à la validité des résultats de cette enquête.

Je vous serais redevable de bien vouloir collaborer avec nous dans la rédaction du questionnaire annexé et son retour dans l'enveloppe préadressée incluse.

Veuillez, s'il vous plaît, accepter nos remerciements pour votre collaboration et assistance.

Avec mes sincères salutations,

Professeur A. Meidan,
Directeur MBA Programme,
(Chef de Mr. Al-Sanie).

P.J.

Monsieur,

Nous voulons vous assurer que tous les renseignements que vous fournissez sur le présent questionnaire seront traités à titre strictement confidentiel. A cet effet, chaque zone de libre-échange est prévue d'un code numérique connu seulement par le chercheur. En outre, les données collectées de toutes les zones de libre-échange prélevées seront analysées collectivement plutôt qu'individuellement. La précision de vos réponses aux articles de ce questionnaire sera donc d'une importance primordiale aux résultats de cette enquête.

Q. Prière d'encercler le numéro approprié (de 1 à 9) qui indiquera le mieux possible le niveau d'importance que vous attachez à chacun des facteurs/activités que vous utilisez dans les opérations proprement dites de votre zone de libre-échange.
Prière d'encercler le numéro (1) à tous les facteurs/activités que vous n'utilisez pas dans les opérations proprement dites de votre zone.

	Pas important		Moyenne importance					Extrêmement important	
1. Situation de la zone	1	2	3	4	5	6	7	8	9
2. Superficie de la zone	1	2	3	4	5	6	7	8	9
3. Capacité superficielle pour entreposage et emmagasinage	1	2	3	4	5	6	7	8	9
4. Disponibilité de prestations de traitement	1	2	3	4	5	6	7	8	9
5. Disponibilité de prestations de montage	1	2	3	4	5	6	7	8	9
6. Superficie disponible pour procédés de fabrication	1	2	3	4	5	6	7	8	9
7. Services d'approvisionnement pour procédés de fabrication (p.e. sources d'énergie, d'eau, locaux pour machines, dispositifs de commande, ventilation, etc.)	1	2	3	4	5	6	7	8	9
8. Matériels de transport (p.e. grues, chariots, plateaux roulants, etc.)	1	2	3	4	5	6	7	8	9
9. Entretien du matériel (p.e. grues, machines, outils, équipements, services d'approvisionnements, etc.)	1	2	3	4	5	6	7	8	9
10. Disponibilité d'un système télex	1	2	3	4	5	6	7	8	9
11. Disponibilité d'un système télécopieur	1	2	3	4	5	6	7	8	9

	Pas important			Moyenne importance				Extrêmement important	
	1	2	3	4	5	6	7	8	9
12. Entretien de systèmes de télécommunication (p.e. téléphones, télex, télécopieurs, ordinateurs, téléprocesseurs, etc.)	1	2	3	4	5	6	7	8	9
13. Importance de la main d'oeuvre (p.e. chefs de service, employés de bureau, techniciens, ouvriers)	1	2	3	4	5	6	7	8	9
14. Qualifications de l'effectif d'entreprise	1	2	3	4	5	6	7	8	9
15. Prestations sociales pour l'effectif (p.e. cafétéria, divertissements, activités sociales, etc.)	1	2	3	4	5	6	7	8	9
16. Protection de l'effectif	1	2	3	4	5	6	7	8	9
17. Propreté de la zone	1	2	3	4	5	6	7	8	9
18. Environnement (p.e. réduction du bruit et de la pollution)	1	2	3	4	5	6	7	8	9
19. Sécurité des bâtiments de la zone	1	2	3	4	5	6	7	8	9
20. Surveillance des opérations, services et activités de la zone	1	2	3	4	5	6	7	8	9
21. Maximisation des ventes	1	2	3	4	5	6	7	8	9
22. Maximisation des bénéfices monétaires	1	2	3	4	5	6	7	8	9
23. Maximisation de la proportion des marchés	1	2	3	4	5	6	7	8	9
24. Maximisation de la rentabilité des investissements	1	2	3	4	5	6	7	8	9
25. Minimisation du coût des opérations de la zone	1	2	3	4	5	6	7	8	9
26. Taux d'accroissement de la zone de libre-échange	1	2	3	4	5	6	7	8	9
27. Intégration des fonctions des services de l'autorité de la zone	1	2	3	4	5	6	7	8	9
28. Relations publiques avec les utilisateurs de la zone	1	2	3	4	5	6	7	8	9
29. Liaison gouvernementale	1	2	3	4	5	6	7	8	9
30. Représentation/réputation de la zone de libre-échange	1	2	3	4	5	6	7	8	9

	Pas important			Moyenne importance			Extrêmement important		
	1	2	3	4	5	6	7	8	9
31. Agrandissement de l'aire disponible pour les prestations de la zone (p.e. superficies d'entreposage et d'emmagasinement, locaux de fabrication, traitement et montage, prestations portuaires, etc.)	1	2	3	4	5	6	7	8	9
32. Amélioration de la qualité des prestations de la zone (p.e. superficies d'entreposage et d'emmagasinement, locaux de fabrication traitement et montage, prestations portuaires, etc.)	1	2	3	4	5	6	7	8	9
33. Mise à jour des services de la zone (p.e. systèmes de télécommunication, matériel de transport, services d'approvisionnement pour la fabrication, etc.)	1	2	3	4	5	6	7	8	9
34. Augmentation de la capacité des services de la zone (p.e. systèmes de télécommunication, matériel de transport, services d'approvisionnement pour la fabrication, etc.)	1	2	3	4	5	6	7	8	9
35. Davantage de choix pour les utilisateurs de la zone à l'intérieur de celle-ci (p.e. emballage, reemballage, triage, mélange, étiquetage, exposition, transport par conteneurs, réfrigération, etc.)	1	2	3	4	5	6	7	8	9
36. Revue des prix des prestations et services de la zone.	1	2	3	4	5	6	7	8	9
37. Emploi de la publicité pour les prestations et services de la zone	1	2	3	4	5	6	7	8	9
38. Vente personnelle des prestations et services de la zone	1	2	3	4	5	6	7	8	9
39. Sondages de marketing pour les prestations et services de la zone	1	2	3	4	5	6	7	8	9
40. Lignes de conduite pour la planification du marketing des prestations et services de la zone	1	2	3	4	5	6	7	8	9

APPENDIX [5d]

GERMAN TRANSLATION

Copies of this translation were sent to free trade zones authorities in: Germany and Austria.



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Our Ref: AM/VJT

Sehr geehrter Herr

Ich wende mich an Sie mit der Bitte um Unterstützung im Zusammenhang mit einem Forschungsprojekt bei unserem Herrn Al-Sanie, einem an der Sheffield Universität promovierenden Doktoranten, in die Aktivitäten der Freihandelszonen der Welt.

Herr Al-Sanie trägt die Daten zusammen von einer Anzahl sorgfältig ausgewählter Freihandelsbehörden auf weltweiter Basis. Zu diesem Zweck hätte er gerne von Ihnen, und dem Freihandelszonenvorstand über den beiliegenden Fragebogen einige Auskünfte, die nur ein paar Minuten Ihrer Zeit in Anspruch nehmen werden.

Die gesammelten Daten werden von ihm streng vertraulich behandelt, und nur im Aggregat ausgewertet. Auf diese Art werden keine Informationsquellen preisgegeben. Äußerste Sorgfalt im Ausfüllen des Fragebogens spielt für die Gültigkeit der Untersuchungsergebnisse eine wichtige Rolle.

Ich danke Ihnen für Ihre Mitarbeit in der Erledigung dieses Auftrages und möchte Sie bitten, den ausgefüllten Fragebogen im beiliegenden, adressierten Umschlag an uns zurückzusenden.

Für Ihre wertige Mitarbeit und Hilfe danken wir Ihnen bereits im voraus.

Mit freundlichen Grüßen

Professor A Meidan
Director, MBA Programme
(Supervisor to Mr Al-Sanie)

Anl:

Sehr geehrter Herr

Bitte seien Sie versichert, daß die von Ihnen in diesem Fragebogen gemachten Angaben streng vertraulich behandelt werden. Zu diesem Zweck wurde jeder Freihandelszone eine Referenzzahl zugeteilt, die nur dem Forscher selbst bekannt ist. Die Daten werden außerdem kollektiv und nicht einzeln ausgewertet. Ihre Sorgfalt in der Beantwortung der Fragen spielt für die Gültigkeit bei der Auswertung der Forschungsergebnisse eine ungemein wichtige Rolle.

Bitte umringen Sie die entsprechende Ziffer von (1) - (9) je nach Wichtigkeit der in Ihrer Freihandelszone gültigen Umstände/Aktivitäten. Umringen Sie bitte die Ziffer (1) bei allen Umständen/Aktivitäten die Ihrer Meinung nach in Ihrer Freihandelszone nicht zutreffen.

	Nicht Wichtig		Durchschnittlich Wichtig					Äußerst Wichtig	
	1	2	3	4	5	6	7	8	9
1. Zonenstandort	1	2	3	3	5	6	7	8	9
2. Zonengröße	1	2	3	4	5	6	7	8	9
3. Kapazität der Lagerräume und Speicher	1	2	3	4	5	6	7	8	9
4. Vorhandensein von Verarbeitungsanlagen	1	2	3	4	5	6	7	8	9
5. Vorhandensein von Montageeinrichtungen	1	2	3	4	5	6	7	8	9
6. Größe der für die Fertigung verfügbaren Fläche	1	2	3	4	5	6	7	8	9
7. Versorgungsbetriebe für die Fertigung (z.B. Strom-, Wasserversorgung, Gelände für Maschinen, Steuergeräte, Lüftung usw)	1	2	3	4	5	6	7	8	9
8. Beförderungsmittel (z.B. Kran, Schafte, Karren, Wagen, Schmalspur Loks usw)	1	2	3	4	5	6	7	8	9
9. Wartungsmöglichkeiten (z.B. Kran, Maschinen, Werkzeuge, Geräte, Versorgung usw)	1	2	3	4	5	6	7	8	9

10. Angebot eines Fernschreibsystems	1	2	3	4	5	6	7	8	9
11. Angebot eines Telefaxsystems	1	2	3	4	5	6	7	8	9
12. Unterhalt eines Fernmeldewesens (z.B. (Telefon, Fernschreiber, Telefax, Computer, Fernverarbeitung von Daten)	1	2	3	4	5	6	7	8	9
13. Belegschaftsgröße (z.B. Geschäftsführer, Angestellte, Techniker Arbeiter)	1	2	3	4	5	6	7	8	9
14. Kompetenz der Arbeitskräfte	1	2	3	4	5	6	7	8	9
15. Wohlbefinden der Belegschaft (z.B. Kantine, Sportplätze und Geselligkeiten usw)	1	2	3	4	5	6	7	8	9
16. Betriebssicherheit	1	2	3	4	5	6	7	8	9
17. Sauberkeit auf dem Zonengelände	1	2	3	4	5	6	7	8	9
18. Gesundheitswesen auf dem Zonengelände (z.B. Bekämpfung von Lärm und Luftverschmutzung)	1	2	3	4	5	6	7	8	9
19. Betriebsschutz auf dem Zonengelände	1	2	3	4	5	6	7	8	9
20. Gezielte Mobilität von Einrichtungen, Service und Aktivitäten	1	2	3	4	5	6	7	8	9
21. Steigerung der Absätze	1	2	3	4	5	6	7	8	9
22. Steigerung der Erlöse	1	2	3	4	5	6	7	8	9
23. Steigerung des Marktanteils	1	2	3	4	5	6	7	8	9
24. Steigerung der Renditen	1	2	3	4	5	6	7	8	9
25. Kosteneinsparungen im Zonenbetrieb	1	2	3	4	5	6	7	8	9

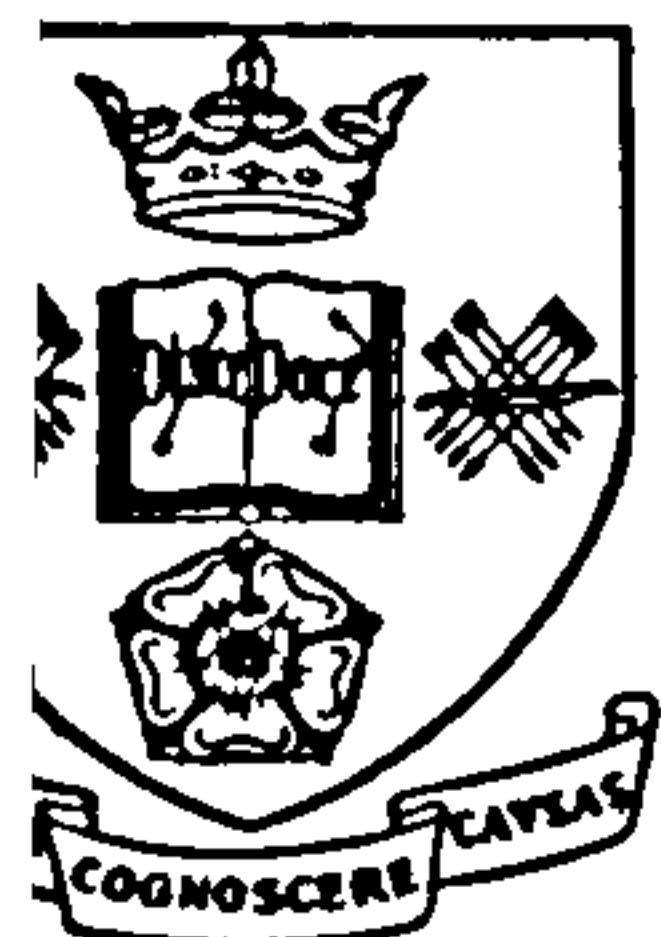
26. Wachstumsrate der Freihandelszone	1	2	3	4	5	6	7	8	9
27. Integration der Verwaltungsfunktionen	1	2	3	4	5	6	7	8	9
28. Public Relations mit anderen Zonenbenutzern	1	2	3	4	5	6	7	8	9
29. Zusammenarbeit von staatlicher Seite	1	2	3	4	5	6	7	8	9
30. Bild/Ruf der Freihandelszone	1	2	3	4	5	6	7	8	9
31. Ausbau der für die Einrichtungen verfügbaren Fläche (z.B. Lagerräume, Speicher, Verarbeitungsanlagen, Montage und Fertigung, Frachtbecken usw)	1	2	3	4	5	6	7	8	9
32. Sanierung der Einrichtungen (z.B. Lagerräume und Speicher, Verarbeitungsanlagen, Montage und Fertigung, Frachtbecken usw)	1	2	3	4	5	6	7	8	9
33. Modernisierung der Services (z.B. Fernmeldewesen, Beförderungsmittel Versorgung usw)		2	3	4	5	6	7	8	9
34. Erweiterung der Services (z.B. Fernmeldewesen, Beförderungseinrichtungen Versorgung usw)	1	2	3	4	5	6	7	8	9
35. Größere Auswahl der Freihandelszonenaktivitäten (z.B. Verpackung und Wiederverpackung, Sortieren, Blenden, Etikettieren, Ausstellung, Containerbetrieb, Kältetechnik usw)	1	2	3	4	5	6	7	8	9
36. Freisrevison der Einrichtungen und Services	1	2	3	4	5	6	7	8	9
37. Zuhilfenahme von Werbemedien für Einrichtungen und Services	1	2	3	4	5	6	7	8	9

38. Persönliche Werbung für Einrichtungen und Services	1	2	3	4	5	6	7	8	9
39. Marketing der Forschungsarbeiten über Einrichtungen und Services	1	2	3	4	5	6	7	8	9
40. Aussicht einer Absatzpolitik für Einrichtungen und Services	1	2	3	4	5	6	7	8	9

APPENDIX [5e]

MALAYSIAN TRANSLATION

Copies of this translation were sent to free trade zones authorities in: Malaysia and
Indonesia.



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Kepada

Saya manulis untuk memohon kerjasama pinak tuan untuk membantu penyellidikan mengenai Zon-Zon Perdagangan Bebas Seluruh Dunia yang sedang dikendalikan oleh En. Abdul Al-Sanie.

Encik Abdul Al-Sanie sedang dalam proses mengumpul makwmat mengenai Zon-Zon Perdagangan Bebas terpilih metalui soal-selidik yang disertakan bersama surat ini.

Nakwmat yang terkutip akan dijaga dengan cermat dan diransiakan. Ia tidak akan disetarkan kepada pinak-pinak lain. Ia akan cuma dianalisa secara berkelompok bersama makwmat menegenai zon-zon perdegangan bebas tain. Ketepatan makwmat yang tuan sediakan adalah amat penting bagi penemuan akhir penyellidikan ini.

Pengisian soal selidik ini akan menganbil masa beberapa minit sanaja oleh para Pengarah Zon tuan. Kami mangreapkan ribuan terima kasin atas kerjasama yang bakal tuan hulurkan.

Sila putangkan soal selidik yang tetah diisikan melalui sampul surat yang turut disertakan.

Sekian, Terima Kasin

Yang benar

Prof. A. Meidan
Pengarah, Program MBA
(Penyelia penyellidikan En Abdul Al-Sanie)

Tuan

Maklumat yang bakal tuan sumbongkan akan kami rahsiakan. Ianya akan dianalisa secara berkelompok bersama maklumat-maklumat yang kami perolehi dari zon-zon perdagangan bebas yang lain. Ia tidak akan digunakan untuk tujuan-tujuan lain. Oleh yang demikian, ketepatan maklumat yang tuan sediakan amatlah penting demi kejayaan penyelidikan ini. Zon perdagangan bebas tuan akan diberikan kod yang akan diketahui hanya oleh penyelidik sendiri.

Arahan: Sila bulatkan nombor [dari (1 hingga (9)] yang tuan fikir paling menepati tahap kepentingan faktor/aktiviti yang digunakan dalam kendalian sebenar operasi zon perdagangan bebas. Sila butat (1) bagi segata faktor/aktiviti yang tidak digunakan dalam kendalian sebenar zon perdagangan bebas tuan.

	Tidak Penting			Penting			Amat Penting		
	1	2	3	4	5	6	7	8	9
1. Kedudukan/lokasi Zon Perdagangan Bebas	1	2	3	4	5	6	7	8	9
2. Keluasan kawasan Zon Perdagangan Bebas	1	2	3	4	5	6	7	8	9
3. Kapasiti muatan gudang-gudang dan storan yang ditawarkan oleh Zon Perdagangan Bebas	1	2	3	4	5	6	7	8	9
4. Kemudahan untuk memproses Keluaran yang ditawarkan oleh Zon Perdagangan Bebas	1	2	3	4	5	6	7	8	9
5. Kemudahan untuk pemasangan keluaran yang ditawarkan oleh Zon Perdagangan Bebas	1	2	3	4	5	6	7	8	9
6. Keluasan kawasan untuk aktiviti-aktiviti pengeluaran/pembuatan yang ditawarkan oleh Zon Perdagangan Bebas	1	2	3	4	5	6	7	8	9
7. Kemudahan untuk aktiviti pembuatan/pengeluaran yang ditawarkan oleh Zon Perdagangan Bebas (cth: sumber tenaga, apidan air, kedudukan mesin-mesin, alat kawalan dll.)	1	2	3	4	5	6	7	8	9
8. Kemudahan alat-alat pengangkutan yang ada di Zon Perdagangan Bebas (cth: crane, mesin muatan berat, fork lifts dll.)	1	2	3	4	5	6	7	8	9
9. Kemudahan kendalian dan pembaikan alat-alatan (cth: keperluan pembaikan mesin dll.)	1	2	3	4	5	6	7	8	9

	Tidak Penting			Penting			Amat Penting		
	1	2	3	4	5	6	7	8	9
10. Kemudahan sistem komunikasi melalui Telex yang ditawarkan di Zon Perdagangan Bebas	1	2	3	4	5	6	7	8	9
11. Kemudahan sistem komunikasi Fascimile	1	2	3	4	5	6	7	8	9
12. Kendalian/pembaikan sistem telekomunikasi yang ditawarkan di Zone Perdagangan Bebas (cth: Telefon, telex, fascimile, komputer, tele-processios dll.)	1	2	3	4	5	6	7	8	9
13. Kecukupan tenaga kerja di Zon (cth: Pengurus, kekerja staf, juruteknik dan buruh)	1	2	3	4	5	6	7	8	9
14. Mutu/kualiti tenaga kerja di Zon	1	2	3	4	5	6	7	8	9
15. Kegajikan dan keselesaan tenaga kerja di Zon (cth: kemudahan kantin, riadhah, aktibiti sosial dll.)	1	2	3	4	5	6	7	8	9
16. Keselamatan tenaga kerja di Zon	1	2	3	4	5	6	7	8	9
17. Kebersihan kawasan Zon Perdagangan Bebas	1	2	3	4	5	6	7	8	9
18. Keselesaan kawasan Zon Perdagangan Bebas (cth: kurangkan pencemaran udara, kebisingan dll.)	1	2	3	4	5	6	7	8	9
19. Keselamatan kawasan Zon Perdagangan Bebas	1	2	3	4	5	6	7	8	9
20. Kebolah lunturan (flexibility) aktibiti pengawasan kemudahan perkhidmatan dan aktibiti yang dtiawarkan oleh Zon Perdagangan Bebas	1	2	3	4	5	6	7	8	9
21. Memaksimumkan jumlah hualan bagi Zon	1	2	3	4	5	6	7	8	9
22. Memaksimumkan jumlah keuntungan bagi Zon	1	2	3	4	5	6	7	8	9
23. Memaksimumkan Bahagian pasaran/market share bagi Zon	1	2	3	4	5	6	7	8	9
24. Memaksimumkan pulangan atas pelaburan bagi Zon	1	2	3	4	5	6	7	8	9
25. Meminimumkan kos kendalian Zon Perdagangan Bebas	1	2	3	4	5	6	7	8	9
26. Kodar pertumbuhan bagi Zon Perdagangan Bebas	1	2	3	4	5	6	7	8	9
27. Persepaduan fungsi-fungsi jabatan yang mengendalikn Zon Perdagangan Bebas	1	2	3	4	5	6	7	8	9

	Tidak Penting			Penting			Amat Penting		
	1	2	3	4	5	6	7	8	9
28. Perhubungan awam dengan pengguna Zon Perdagangan Bebas	1	2	3	4	5	6	7	8	9
29. Perhubungan pihak berkuasa Zon dengan Kerajaan	1	2	3	4	5	6	7	8	9
30. Imej/nama baik Zon Perdagangan Bebas	1	2	3	4	5	6	7	8	9
31. Memperluaskan kawasan bagi kemudahan-kemudahan yang ditawarkan oleh Zon (keluasan gudang, storan, tapak po, prosesan, pemasangan dan pengewaran, dock kargo dll.)	1	2	3	4	5	6	7	8	9
32. Memperbaiki kualiti/mutu kemudahan yang ditawarkan oleh Zon (cth. keluasan gudang, storan, tapak pemprosesan, pemasangan dan pengeluaran dll.)	1	2	3	4	5	6	7	8	9
33. Pengemaskinian perkhidmatan yang ditawarkan oleh Zon (cth. sistem telekomunikasi, alat-alat pengangkutan, kemudahan pengeluaran dll.)	1	2	3	4	5	6	7	8	9
34. Memperbesarkan kapasiti perkhidmatan yang ditawarkan oleh Zon (cth: sistem telekomunikasi, alat-alat pengangkutan, kemudahan pengeluaran dll.)	1	2	3	4	5	6	7	8	9
35. Menowarkan pengguna kemudahan-kemudahan tambahan dalam kawasan Zon (cth: pembungkusan, sistem oukugabm oanurabm storab sejuk, sistem kontena, penampalan label dll.)	1	2	3	4	5	6	7	8	9
36. Penibian semula kadat-kadar dan harga bagi kegunaan perkhidmatan dan kemudahan yang ditawarkan oleh Zon	1	2	3	4	5	6	7	8	9
37. Penggunaan saluran pengiklanan bagi kemudahan dan perkhidmatan yang ditawarkan oleh Zon	1	2	3	4	5	6	7	8	9
38. Penjualan secara 'personal selling' bagi kemudahan dan perkhidmatan yang ditawarkan oleh Zon	1	2	3	4	5	6	7	8	9
39. Aktibiti penyelidikan pemasaran bagi kemydahan dan perkhidmatan yang ditawarkan oleh Zon	1	2	3	4	5	6	7	8	9
40. Polisi-polisi yang digunakan dalam mengimplimentasikan rancangan pemasaran bagi kemudahan dan perkhidmatan yang ditawarkan oleh Zon	1	2	3	4	5	6	7	8	9

APPENDIX [5f]

SPANISH TRANSLATION

Copies of this translation were sent to free trade zones authorities in: Spain, Central and South America, and the Dominican Republic in the Caribbean.



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Nuestra Ref: AM/VJT.

Estimado

Le escribo pidiendo su cooperación con respecto a un trabajo de investigación sobre Free Trade Zone Operations (Operaciones de Zonas de Mercado Libre) alrededor del mundo, llevado a cabo por el Sr. Abdul Al-Sanie, que hace su doctorado en ésta Universidad.

El Sr. Al-Sanie está recogiendo ejemplos cuidadosamente elegidos de Autoridades de Zonas de Mercado Libre por todo el mundo. Le gustaría recibir datos de Vd., y ciertos selectos Directores de Zona, a través del cuestionario adjunto que sólomente tardaría unos minutos en completar.

Los datos recogidos serán tratados en absoluta confianza y analizados en conjunto. De ésta manera las fuentes de información no serán divulgadas. La exactitud de sus respuestas es de óptima importancia para la validez de las decisiones deducidas por medio de ésta investigación.

Agradecería su cooperación completando el cuestionario adjunto y devolviéndolo en el sobre sobrescrito provisto.

Acepte, por favor, nuestro agradecimiento por su cooperación y ayuda.

Atentamente,

Profesor A. Meidan
Director, Programa MBA
(Supervisor del Sr. Al-Sanie)

Adj.

Muy Sr. nuestro:

Deseamos asegurarle que toda la información que preste a éste cuestionario se tratará en absoluta confianza. Por ésta razón cada Zona de Mercado Libre recibe un código numérico, solamente conocido por el investigador. Además, los datos recogidos de todas las Zonas serán analizados en conjunto y no individualmente. Por ésta razón, la exactitud de sus respuestas al cuestionario son de óptima importancia para las conclusiones de ésta investigación.

Por favor, marque con un círculo el número - (del 1 al 9) - que mejor indique el nivel de importancia que Vd., considere a cada uno de los factores empleados bajo su dirección en su Zona de Mercado Libre. Por favor marque un círculo alrededor del número 1 para los factores que no estén en uso en las operaciones de su Zona.

	Sin									Importancia	Sumamente
	Importancia									Media	Importante
1. Localidad de la zona.	1	2	3	4	5	6	7	8	9		
2. Extensión de la zona.	1	2	3	4	5	6	7	8	9		
3. Capacidad para almacenaje y depositos.	1	2	3	4	5	6	7	8	9		
4. Posibilidad de ofrecer operaciones de tratamiento.	1	2	3	4	5	6	7	8	9		
5. Posibilidad de ofrecer operaciones de montaje.	1	2	3	4	5	6	7	8	9		
6. Tamaño del area disponible para actividades de fabricación.	1	2	3	4	5	6	7	8	9		
7. Facilidades para operaciones de fabricación (e.g. fuentes de energía, suministro de agua, locales para maquinaria, dispositivos para control, ventilación, etc).	1	2	3	4	5	6	7	8	9		
8. Equipo de transporte (e.g. gruas, ejes, carretas, carretillas, locomotoras auxiliares.	1	2	3	4	5	6	7	8	9		
9. Equipo de mantenimiento (e.g. gruas, maquinas herramientas, dispositivos, utiles de fábrica, etc)	1	2	3	4	5	6	7	8	9		

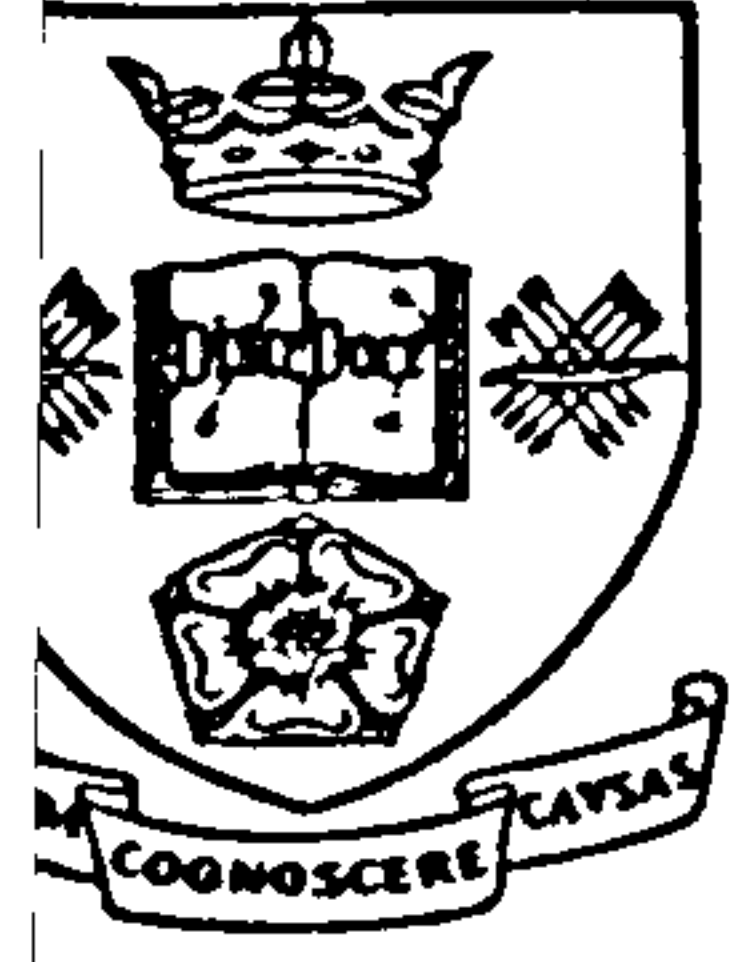
	Sin Importancia			Importancia Media				Sumamente Importante	
10. Ofrecer sistemas de telex.	1	2	3	4	5	6	7	8	9
11. Ofrecer sistemas de facsimile.	1	2	3	4	5	6	7	8	9
12. Mantenimiento de equipos de telecomunicacion (e.g. teléfonos, telex, facsimiles, ordenadores, teleprocesos, etc)	1	2	3	4	5	6	7	8	9
13. Número total de la mano de obra (e.g. Gerentes, personal, tecnicos, obreros.	1	2	3	4	5	6	7	8	9
14. Calidad de la mano de obra.	1	2	3	4	5	6	7	8	9
15. Bienestar del personal (e.g. cafetería, recreo, actividades sociales).	1	2	3	4	5	6	7	8	9
16. Seguridad del personal.	1	2	3	4	5	6	7	8	9
17. Limpieza de la zona.	1	2	3	4	5	6	7	8	9
18. Saneamiento de la zona (e.g. reducción de ruido, y polución de la atmósfera).	1	2	3	4	5	6	7	8	9
19. Protección de los locales de la zona.	1	2	3	4	5	6	7	8	9
20. Tácticas supervisoras para las facilidades de la zona, servicios y actividades.	1	2	3	4	5	6	7	8	9
21. Maximizar ventas.	1	2	3	4	5	6	7	8	9
22. Maximizar beneficios.	1	2	3	4	5	6	7	8	9
23. Maximizar participación del mercado.	1	2	3	4	5	6	7	8	9
24. Maximizar réditos de inversiones.	1	2	3	4	5	6	7	8	9
25. Minimizar costes de las operaciones zonales.	1	2	3	4	5	6	7	8	9
26. Proporción de aumento de la Zona de Mercado Libre.	1	2	3	4	5	6	7	8	9
27. Integración de las actividades departamentales de la autoridad zonal.	1	2	3	4	5	6	7	8	9

	Sin Importancia				Importancia Media			Sumamente Importante	
28. Relaciones públicas con usuarios de la zona.	1	2	3	4	5	6	7	8	9
29. Enlace con el Gobierno.	1	2	3	4	5	6	7	8	9
30. Prestigio de la Zona de Mercado Libre.	1	2	3	4	5	6	7	8	9
31. Expansión de las áreas disponibles para facilidades (e.g. lugares para almacenaje y depositos, locales para tratamientos, montaje y fabricación, muelles para carga, etc.)	1	2	3	4	5	6	7	8	9
32. Mejorar la calidad de las facilidades de la zona (e.g. lugares para almacenaje, depositos, locales para tratamiento, montaje y fabricación, muelles para carga, etc)	1	2	3	4	5	6	7	8	9
33. Modernización de los servicios de la zona (e.g. sistemas de telecomunicaciones, equipos de transporte, utilidades para fabricación.)	1	2	3	4	5	6	7	8	9
34. Ampliación de la capacidad de los servicios de la zona (e.g. sistemas de telecomunicación, equipos de transporte, utilidades para fabricación.)	1	2	3	4	5	6	7	8	9
35. Ofrecer a los usuarios de la zona ampliación de operaciones dentro de la zona (embalaje, re-embalaje, clasificación, mixtura, exposición, rotular, containerización, refrigeración, etc).	1	2	3	4	5	6	7	8	9
36. Revisión de los precios de las facilidades y servicios de la zona.	1	2	3	4	5	6	7	8	9
37. Empleo de métodos de publicidad para las facilidades y servicios de la zona.	1	2	3	4	5	6	7	8	9

	Sin				Importancia			Sumamente	
	Importancia				Media			Importante	
38. Venta personal de las facilidades y servicios de la zona.	1	2	3	4	5	6	7	8	9
39. Actividades de marketing para las facilidades y servicios de la zona.	1	2	3	4	5	6	7	8	9
40. Política para implementar proyectos de marketing para las facilidades y servicios de la zona.	1	2	3	4	5	6	7	8	9

TURKISH TRANSLATION

Copies of this translation were sent to free trade zones authorities in: Turkey and Cyprus (also an English copy was sent).



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Bizim Ref: AM/VJT

Sayın

Sheffield üniversitesinde doktora öğrencisi olan Bay Abdul Al-Sanie dünyadaki Serbest Ticaret Bölgesi çalışmaları üzerine halen bir araştırma yapmaktadır ve ben konu ile ilgili olarak kendisine yardımcı olmanız için size yazıyorum.

Bay al-Sanie dünya çapında dikkatlice seçilmiş örnek Serbest Ticaret Bölge Yetkililerinden bilgi toplamaktadır. O sizden ve seçilmiş Bölge Müdürlüklerinden de ekte verilen ve doldurulması, sadece birkaç dakika alacak olan anket yolu ile biraz bilgi elde etmek istiyor.

Toplanılan bilgi siki gizlilik içerisinde işlemden geçirilecektir ve bir bütün olarak incelenecektir. Sizin bu anketin maddelerine vereceğiniz dikkatli yanıt bu araştırmanın bulgularının geçerliliği için çok önemlidir.

Ekteki anketi doldurup önceden hazırlanmış, üzerine adres yazılı zarfın içinde göndermekle göstereceğiniz yardıma çok minnettar kalacağım.

Lütfen işbirliğiniz ve yardımınız için teşekkürlerimizi kabul edin.

Saygılarımla
Profesör A Meidan
MBA Program Müdürü
(Bay Al-Sanie'nin akademik)
danışmanı

Sayın Efendim,

Sizleri temin etmek isteriz ki bu ankette vereceğiniz tüm bilgi tam manası ile gizli tutulacaktır. Bu nedenle her Serbest Ticaret Bölgesine sadece araştırmacı tarafından bilinen bir sayısal şifre verilir. Buna ek olarak, tüm örneklenmiş serbest Ticaret Bölgelerinden toplanan bilgi ayrı yerine toplu olarak incelenecektir. Bundan dolayı, bu anketin maddelerine vereceğiniz dikkatli yanıtınız bu araştırmanın bulguları için çok önemlidir.

Lütfen sizin Serbest Ticaret Bölgenizin esas çalışmalarında kullandığınız görevler / faaliyetler' den her birine verdiğiniz önem derecesini en iyi şekilde gösterecek olan sayıyı daire içine alın (1' den 9'a). Lütfen bölgenizin esas çalışmalarında kullanmadığınız tüm görevler / faaliyetler için numara (1) 'i daire içine alın.

	önemsiz				Orta önemde			Çok önemli	
1. Bölgenin yeri	1	2	3	3	5	6	7	8	9
2. Bölgenin büyüklüğü	1	2	3	4	5	6	7	8	9
3. Ambar ve depolama için yer hacmi	1	2	3	4	5	6	7	8	9
4. Yöntem çalışmalarının mevcudiyeti	1	2	3	4	5	6	7	8	9
5. Toplantı çalışmalarının mevcudiyeti	1	2	3	4	5	6	7	8	9
6. Üretim faaliyetleri için varolan alan	1	2	3	4	5	6	7	8	9
7. Üretim faaliyetleri için kolaylıklar (örneğin, enerji kaynakları, su temini, makineler için yer, kontrol aletleri havalandırma v.s.)	1	2	3	4	5	6	7	8	9
8. Taşıma araçları (örneğin, vinç, saft, el arabası, tramvay arabası, tekerlekli kriko, v.s.)	1	2	3	4	5	6	7	8	9
9. Techizat bakımı (örneğin, vinç, makineler, aletler, cihazlar, fabrikaya yararlı diğer aletler, v.s.)	1	2	3	4	5	6	7	8	9

10. Teleks sisteminin mevcudiyeti	1	2	3	4	5	6	7	8	9
11. Faksimile sisteminin mevcudiyeti	1	2	3	4	5	6	7	8	9
12. İletişim sisteminin bakımı (örneğin, telefon, teleks, faksimile bilgisayar teleprosesör v.s.)	1	2	3	4	5	6	7	8	9
13. İşçilerin sayısı (örneğin, müdürler, personel, teknisyenler ve işçiler)	1	2	3	4	5	6	7	8	9
14. İşçilerin kalitesi	1	2	3	4	5	6	7	8	9
15. İşçilerin refahlığı (örneğin, kafeterya, eğlence, sosyal faaliyetler v.s.)	1	2	3	4	5	6	7	8	9
16. İşçilerin güvenliği	1	2	3	4	5	6	7	8	9
17. Bölgenin temizliği	1	2	3	4	5	6	7	8	9
18. Bölgenin sağlık teskilatı (örneğin, ses ve hava kirliliğini en aza indirme)	1	2	3	4	5	6	7	8	9
19. Bölgenin güvenliği	1	2	3	4	5	6	7	8	9
20. Bölgede tesisatları, hizmetleri ve faaliyetleri denetleyici tedbirler	1	2	3	4	5	6	7	8	9
21. Satışı en yüksek düzeye çıkartmak	1	2	3	4	5	6	7	8	9
22. Kârı en yüksek düzeye çıkartmak	1	2	3	4	5	6	7	8	9
23. Piyasa hissesini en yüksek düzeye çıkartmak	1	2	3	4	5	6	7	8	9
24. Yatırıma dönen parayı en yüksek düzeye çıkartmak	1	2	3	4	5	6	7	8	9
25. Bölge çalışmalarının harcamasını en alt düzeye indirmek	1	2	3	4	5	6	7	8	9

26. Serbest Ticaret Bölgesinin büyüme hızı	1	2	3	4	5	6	7	8	9
27. Bölge müdürlüğünün bölümsel görevlerini bütünleme	1	2	3	4	5	6	7	8	9
28. Bölgeyi kullananların halkla ilişkilerini güçlendirme çabası	1	2	3	4	5	6	7	8	9
29. Hükümetle irtibat	1	2	3	4	5	6	7	8	9
30. Serbest Ticaret Bölgesinin timsali/itibarı	1	2	3	4	5	6	7	8	9
31. Varolan alanı bölge tesisatı için genişletme (örneğin, ambar ve depolama için yer, işlem için yer, toplantı ve üretim, yük iskelesi için yer v.s.)	1	2	3	4	5	6	7	8	9
32. Bölge tesisatının kalitesini artırmak (örneğin, ambar ve depolama için yer, işlem için yer, toplantı ve üretim, yük iskelesi için yer v.s.)	1	2	3	4	5	6	7	8	9
33. Bölge hizmetlerinin güncelleştirilmesi (iletisim, sistemi, nakil araçları, imalat için gerekli hizmetler v.s.)	1	2	3	4	5	6	7	8	9
34. Bölge hizmetlerinin hacimini genişletme (örneğin, iletisim sistemi, nakil araçları, imalat için gerekli hizmetler v.s.)	1	2	3	4	5	6	7	8	9
35. Bölgeyi kullananlara bölge içinde daha çok çeşit çalışma verme (örneğin, paketleme, tekrar paketleme, sınıflandırma, karıştırma, etiketleme, sergi, muhafaza, dondurma v.s.)	1	2	3	4	5	6	7	8	9

36. Bölge olanak ve hizmetlerinin değerlerinin yeniden gözden geçirilmesi	1	2	3	4	5	6	7	8	9
37. Bölge olanak ve servisleri için reklam kanallarının kullanılması	1	2	3	4	5	6	7	8	9
38. Bölge olanak ve servislerinin şahsi satımı	1	2	3	4	5	6	7	8	9
39. Bölge olanak ve hizmetleri için pazarlama araştırması faaliyetleri	1	2	3	4	5	6	7	8	9
40. Bölge olanak ve hizmetlerinin pazarlaması politikasında kullanılacak planları yürürlüğe koymak.	1	2	3	4	5	6	7	8	9

APPENDIX [6]

Group Means Profile of the forty Marketing variables for the FTZs Expert Panel and the five different FTZs groupings.

Group Means Profile of the Forty Marketing Variables for the FTZs Experts: The Most, Moderate, and Less Marketing-Oriented FTZs; and the FTZs in the Developed and Developing Countries

Marketing Variables	FTZs Experts	The Most Marketing-Oriented FTZs	The Moderate Marketing-Oriented FTZs	The Less Marketing-Oriented FTZs	FTZs in the Developed Countries	FTZs in the Developing Countries
I. <u>Satisfying the Industrial Buyer Needs:</u>						
1. Location of the zone.	8.5	8.9	8.1	7.7	8.1	8.1
2. Size of the zone area.	5.9	7.7	6.9	5.8	6.6	6.5
3. Capacity of space for warehousing and storage.	6.5	7.5	7.1	5.4	7.1	6.1
4. The offering of processing operations.	7.9	7.3	6.3	4.8	5.3	5.9
5. The offering of assembly operations.	7.5	7.5	6.4	5.3	5.7	6.3
6. Size of area available for manufacturing activities.	6.9	7.6	7.0	6.0	5.7	7.1
7. Utilities for manufacturing activities (e.g. Energy sources, water supplies, sites for machinery, control devices, ventilation, etc.)	8.1	8.8	7.1	6.9	5.9	8.0
8. Transporting equipment (e.g. cranes, shafts, carts, trolleys, dollies, etc.)	6.6	7.5	6.1	5.0	5.6	5.9
9. Maintenance of equipment (e.g. cranes, machines, tools, devices, factory utilities etc.)	7.2	7.2	5.7	4.8	5.5	5.6
10. The offering of a Telex system.	7.8	8.6	7.1	6.9	6.5	7.6
11. The offering of a Facsimile system.	7.8	8.0	6.9	6.2	7.3	6.5
12. The maintenance of telecommunication systems (e.g. telephones, telex, facsimile, computers, teleprocessors, etc.)	8.6	8.6	7.6	7.0	7.5	7.5

Marketing Variables	FTZs Experts	The Most Marketing-Oriented FTZs	The Moderate Marketing-Oriented FTZs	The Less Marketing-Oriented FTZs	FTZs in the Developed Countries	FTZs in the Developing Countries
13. The size of the work force (e.g. Managers, staff, technicians and labour).	6.7	7.9	6.8	6.3	5.9	7.2
14. Quality of the work force.	7.9	8.8	8.0	7.3	7.8	7.9
15. The well-being of the work force (e.g. cafeteria, recreation, social activities etc.)	7.0	8.0	6.5	5.6	6.2	6.4
16. Safety of the work force.	7.4	8.2	7.2	7.0	7.7	7.7
17. Cleanliness of zone area.	7.0	8.6	7.8	7.8	7.8	7.8
18. Sanitation of zone area (e.g. minimizing noise and air pollution).	7.0	8.0	7.4	6.6	6.8	7.3
19. Security of zone premises.	7.9	8.6	8.1	7.8	8.1	7.9
20. Supervisory manoeuvring of the zone privileges, facilities, services and activities.	7.0	8.2	7.1	6.7	7.4	6.9
II. <u>Achieving Organisational Goals:</u>						
21. Maximisation of sales.	7.2	6.8	7.2	6.5	7.1	6.7
22. Maximisation of profits.	7.5	7.4	7.5	6.5	7.4	6.8
23. Maximisation of market share.	6.9	6.7	7.3	4.9	6.2	6.2
24. Maximisation of return on investment.	7.5	8.0	7.4	6.8	7.2	7.2
25. Minimising cost of zone operations.	7.3	8.5	7.3	6.9	7.3	7.2
26. Growth rate of Free Trade Zone.	7.3	7.7	7.0	5.4	6.8	6.2

Marketing Variables	FTZs Experts	The Most Marketing-Oriented FTZs	The Moderate Marketing-Oriented FTZs	The Less Marketing-Oriented FTZs	FTZs in the Developed Countries	FTZs in the Developing Countries
27. Integration of the departmental functions of the zone authority.	6.3	7.8	6.7	5.7	5.6	6.8
28. Public relations with zone users.	7.1	8.5	7.7	7.6	7.4	7.4
29. Relations with the Government.	7.6	8.7	7.8	7.2		
30. Free Trade Zone image/reputation.	7.9	8.7	8.1	7.9	7.7	8.3
III. <u>Integrating the Marketing Functions:</u>						
31. Expanding the area available for the zone privileges (e.g. spaces of warehousing and storage, sites of processing, assembly and manufacturing, cargo docks, etc.).	6.6	8.3	6.8	5.6	6.8	6.3
32. Improving the quality of zone facilities (e.g. spaces of warehousing and storage, sites of processing, assembly and manufacturing, cargo docks etc.).	7.5	8.2	7.3	6.5	7.1	7.1
33. Updating the zone facilities (e.g. telecommunications systems, transporting equipment, manufacturing utilities, etc.)	7.8	8.2	7.3	6.9	6.9	7.4
34. Extending the capacity of the zone facilities (e.g., telecommunication systems, transporting equipment, manufacturing utilities, etc.).	7.4	8.2	7.4	6.7	6.6	7.4

Marketing Variables	FTZs Experts	The Most Marketing-Oriented FTZs	The Moderate Marketing-Oriented FTZs	The Less Marketing-Oriented FTZs	FTZs in the Developed Countries	FTZs in the Developing Countries
35. Offering zone users more choice of operations inside the zone (e.g. packaging, repackaging, sorting, mixing, labelling, exhibition, containerisation, refrigeration, etc.).	7.8	7.7	6.9	6.1	7.4	6.3
36. Reviewing the pricing of the zone privileges, facilities, and services.	6.8	7.1	6.7	5.7	6.0	6.5
37. Using advertising channels for the zone privileges, facilities, and services.	7.2	7.2	6.8	5.5	5.6	6.6
38. Personal selling of zone privileges, facilities, and services.	7.4	6.6	7.2	4.7	7.3	5.3
39. Marketing research activities for the zone privileges, facilities, and services.	7.7	7.2	7.3	5.0	6.6	6.1
40. Policies for implementing plans for marketing the zone privileges, facilities, and services.	8.1	7.0	7.3	6.1	6.8	6.7

APPENDIX [7]

The lower half matrix of Pearson Correlation Coefficients
Among the Forty Marketing Concept Variables

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20
V1																				
V2	.47																			
V3	.33	.48																		
V4	.00	.27	.19																	
V5	.05	.20	.19	.49																
V6	.25	.31	.31	.29	.46															
V7	.22	.01	.04	.34	.32	.43														
V8	.09	.26	.37	.32	.35	.31	.20													
V9	.09	.09	.23	.28	.35	.27	.31	.84												
V10	.24	.32	.03	.24	.14	.25	.26	.21	.17											
V11	.13	.07	.17	.10	.36	.19	.16	.17	.21	.43										
V12	.05	.08	.02	.32	.18	.05	.15	.24	.28	.53	.54									
V13	.22	.15	.06	.20	.10	.14	.20	.21	.18	.22	.17	.02								
V14	.17	.09	.34	.21	.28	.30	.25	.33	.30	.15	.40	.35	.36							
V15	.10	.08	.17	.25	.26	.01	.15	.26	.35	.09	.43	.26	.45	.58						
V16	.05	.09	.02	.26	.27	.09	.15	.27	.33	.19	.40	.32	.44	.53	.64					
V17	.10	.05	.11	.18	.13	.01	.12	.28	.32	.23	.28	.30	.33	.41	.49	.62				
V18	.15	.02	.10	.36	.27	.09	.10	.23	.33	.02	.26	.28	.39	.52	.60	.47	.51			
V19	.24	.14	.12	.11	.08	.03	.16	.16	.16	.13	.20	.21	.15	.21	.28	.35	.42	.30		
V20	.13	.11	.10	.44	.26	.07	.03	.26	.21	.23	.17	.32	.22	.07	.17	.22	.18	.09	.21	
V21	.14	.07	.06	.30	.21	.14	.08	.23	.22	.16	.13	.20	.20	.04	.05	.12	.09	.12	.03	.34
V22	.19	.12	.21	.33	.32	.17	.07	.30	.30	.23	.18	.28	.04	.16	.00	.04	.10	.13	.13	.29
V23	.19	.16	.12	.35	.38	.20	.14	.32	.37	.12	.26	.10	.30	.13	.20	.17	.10	.35	.05	.27
V24	.12	.09	.08	.48	.32	.03	.21	.12	.20	.37	.16	.23	.25	.10	.13	.28	.31	.12	.10	.42
V25	.48	.21	.19	.17	.18	.10	.28	.21	.25	.29	.09	.09	.10	.23	.08	.08	.19	.03	.18	.19
V26	.27	.27	.42	.37	.40	.19	.11	.29	.29	.07	.27	.08	.28	.17	.24	.20	.11	.18	.12	.32
V27	.20	.23	.17	.40	.18	.13	.10	.36	.31	.32	.08	.22	.37	.18	.20	.30	.23	.18	.18	.42
V28	.12	.08	.26	.17	.10	.16	.20	.10	.11	.13	.03	.07	.11	.26	.10	.17	.26	.13	.38	.12
V29	.03	.08	.20	.20	.21	.24	.23	.18	.16	.17	.08	.13	.16	.20	.13	.24	.36	.12	.33	.25
V30	.15	.08	.08	.25	.31	.24	.28	.19	.21	.21	.20	.21	.31	.22	.34	.48	.42	.25	.53	.28
V31	.30	.31	.42	.24	.36	.11	.14	.27	.27	.05	.33	.00	.32	.37	.42	.19	.28	.36	.20	.26
V32	.15	.21	.43	.35	.27	.11	.11	.25	.20	.06	.13	.17	.29	.32	.34	.36	.43	.38	.31	.33
V33	.03	.03	.02	.27	.15	.11	.10	.23	.21	.22	.30	.56	.29	.41	.42	.43	.35	.47	.20	.13
V34	.12	.16	.10	.28	.29	.23	.32	.07	.10	.43	.53	.55	.39	.45	.54	.50	.40	.40	.17	.16
V35	.16	.19	.47	.33	.30	.15	.05	.27	.22	.13	.21	.26	.00	.14	.02	.03	.12	.08	.16	.50
V36	.23	.37	.42	.30	.29	.33	.25	.37	.34	.38	.21	.24	.23	.27	.20	.27	.42	.18	.24	.04
V37	.26	.35	.30	.40	.28	.37	.24	.26	.17	.15	.05	.02	.28	.16	.10	.01	.15	.12	.12	.19
V38	.10	.10	.33	.26	.32	.12	.03	.23	.22	.06	.30	.20	.00	.29	.31	.21	.17	.24	.15	.17
V39	.10	.19	.34	.40	.30	.23	.21	.32	.27	.03	.13	.18	.09	.17	.06	.14	.21	.19	.21	.18
V40	.01	.13	.32	.29	.28	.22	.15	.23	.15	.06	.12	.11	.05	.07	.04	.04	.17	.05	.05	.19

APPENDIX [7] (Continued)

The lower half matrix of Pearson Correlation Coefficients
Among the Forty Marketing Concept Variables

	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30	V31	V32	V33	V34	V35	V36	V37	V38	V39	V40	
V1																					
V2																					
V3																					
V4																					
V5																					
V6																					
V7																					
V8																					
V9																					
V10																					
V11																					
V12																					
V13																					
V14																					
V15																					
V16																					
V17																					
V18																					
V19																					
V20																					
V21																					
V22	.77																				
V23	.68	.61																			
V24	.60	.59	.52																		
V25	.43	.48	.33	.59																	
V26	.35	.32	.53	.26	.23																
V27	.33	.18	.36	.39	.36	.46															
V28	.08	.05	.15	.28	.19	.27	.42														
V29	.12	.16	.25	.30	.10	.35	.31	.61													
V30	.07	.00	.07	.22	.11	.08	.37	.49	.34												
V31	.09	.09	.35	.19	.29	.41	.22	.13	.19	.21											
V32	.23	.23	.26	.44	.24	.38	.27	.34	.48	.42	.53										
V33	.22	.10	.22	.26	.08	.00	.23	.25	.13	.43	.18	.45									
V34	.13	.02	.14	.32	.09	.16	.24	.21	.22	.45	.33	.49	.69								
V35	.47	.53	.30	.35	.38	.44	.28	.21	.22	.20	.19	.29	.07	.10							
V36	.31	.37	.30	.42	.40	.37	.35	.36	.38	.26	.05	.40	.21	.30	.31						
V37	.41	.35	.41	.32	.34	.41	.46	.35	.36	.19	.20	.34	.09	.14	.33	.57					
V38	.42	.39	.58	.24	.18	.59	.25	.28	.35	.09	.41	.32	.20	.15	.38	.28	.40				
V39	.47	.39	.53	.43	.30	.52	.38	.35	.42	.15	.25	.46	.21	.17	.48	.51	.51	.64			
V40	.40	.30	.31	.42	.28	.38	.37	.26	.27	.15	.10	.35	.07	.16	.42	.53	.48	.44	.82		

APPENDIX [8]

How a FTZ Authority can assess its Marketing Orientation

The instructions are as follows:

1. The questionnaire should be copied.
2. The FTZ authority should score its attitudes on each of the 40 items according to the instruction given in the questionnaire.
3. The scores on items [1] through [40] should be substituted, respectively, for (x_1) through (x_{40}) in the following discriminant equation:

$$Z = W_0 + W_1(x_1) + W_2(x_2) + \dots + W_{40}(x_{40})$$

where;

Z = The Discriminant score.

W_0 = A constant which is given in the table on the following page.

(x_1) through (x_{40}) = the attitude score on each item from [1] through [40] respectively.

(W_1) through (W_{40}) = the multiplier, representing the Unstandardised Canonical Discriminant Coefficient (Weight) for each item (variable) from [1] through [40], respectively.

4. Values for W_1 through W_{40} should be substituted from the following table.
5. Multiply each $W_1(x_1)$ through $W_{40}(x_{40})$. Then sum up the total and add it to the constant value (a) to obtain the final discriminant score (Z).
6. Compare the calculated (Z) score with the following criteria for the classification of FTZs' marketing orientation, as it is established in this study, as follows: Less Marketing-Oriented < 6.75 ≤ Moderate ≤ 7.93 > Most Marketing-Oriented. Thus, if the (Z) score is higher than 7.93 then the FTZ

authority must be most marketing-oriented. If the Z score is less than 6.75 then the authority is less marketing-oriented. And if the Z score falls within the limit of (6.75-7.93) then the authority is moderate marketing-oriented.

7. To monitor the marketing orientation, a FTZ authority may wish to administer this assessment test periodically.

The Unstandardised Canonical Correlation Coefficients			
$W_1 = .1326$	$W_{11} = -.1205$	$W_{21} = -.0680$	$W_{31} = .2437$
$W_2 = -.0744$	$W_{12} = -.0005$	$W_{22} = -.1020$	$W_{32} = -.2395$
$W_3 = -.0058$	$W_{13} = -.1675$	$W_{23} = -.2808$	$W_{33} = -.1303$
$W_4 = .2755$	$W_{14} = .5958$	$W_{24} = .0136$	$W_{34} = .3643$
$W_5 = -.0589$	$W_{15} = .2532$	$W_{25} = .1242$	$W_{35} = .2512$
$W_6 = .2803$	$W_{16} = .0531$	$W_{26} = .2845$	$W_{36} = .0619$
$W_7 = .0955$	$W_{17} = .3706$	$W_{27} = .0246$	$W_{37} = -.0794$
$W_8 = .0450$	$W_{18} = -.1115$	$W_{28} = -.0320$	$W_{38} = -.0836$
$W_9 = .0307$	$W_{19} = -.0221$	$W_{29} = -.1069$	$W_{39} = .6465$
$W_{10} = .0847$	$W_{20} = -.0920$	$W_{30} = .5063$	$W_{40} = -.0670$
The constant (W_0) = -24.2161			