

To the Graduate Council:

I am submitting herewith a dissertation written by Jan Montgomery Hathcote entitled "Impact of Apparel Imports on Retail Profitability." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Human Ecology.

Carl L. Dyer

Carl L. Dyer
Major Professor

We have read this dissertation
and recommend its acceptance:

William B. Loomer

James B. Kridler

Mary Frances Duke

Accepted for the Council:

Leuminkel

Vice Provost
and Dean of The Graduate School

IMPACT OF APPAREL IMPORTS ON RETAIL
PROFITABILITY

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Jan Montgomery Hathcote

December 1989

ACKNOWLEDGEMENTS

Sincere appreciation is expressed to Dr. Carl Dyer for his guidance and direction of this research. Appreciation is also expressed to committee members Dr. William B. Locander, Dr. Jamie Kridler and Dr. Mary Frances Drake.

The author is indebted to Anne Reid from the UT Computing Center for her patience and guidance in organizing the data for analysis and preparing the graphs. Gratitude is also extended to Ponappa from the John Hodges Library for his assistance in obtaining missing government documents. Appreciation is also expressed to the many retailers who participated in the study.

A sincere thanks goes to the graduate students and staff of the Textiles, Merchandising and Design department for their support, and especially to Barbara Webber who helped format the final document.

Most of all the author would like to thank Jim Hathcote, her husband, and Stephanie Hathcote, their daughter, for their unending patience and understanding while she was preparing this document and attending graduate school. Without their support this endeavor would not have been possible.

ABSTRACT

The purpose of this research was to examine economic profitability of domestic versus imported apparel in the United States. Aggregate estimates from price elasticities of import demand functions for six categories of imports from twelve distinct apparel exporting world regions as well as profit estimates obtained from a national sample of retailers were both utilized to estimate apparel profitability.

The research hypotheses were divided into 2 major divisions. Two hypotheses dealt with price and income demand elasticities and how these elasticities affect quantities of apparel demanded. The second group of hypotheses examined eight factors which may affect apparel profitability. The factors included: (1) brand, (2) country of origin, (3) classification of departments, (4) fashionability, (5) initial retail price, (6) methods of purchase, (7) type of item (basic versus new), and (8) quality.

Secondary data from the U.S. General Imports and Imports for Consumption and other U.S. Department of Commerce data were used to estimate the price and income elasticities. The directions of elasticities were positive

for income and negative for prices as economic theory suggests. Dresses and sweaters displayed the most significance across imports from the twelve world regions examined. Dresses, sweaters, and coat/suits categories were most significant with response to price per capita. Income elasticities were most significant with the skirt and slack categories.

Out of 800 randomly selected U.S. retailers, 308 responded to the survey providing data to estimate profitability factors based on initial and maintained markup of domestic and imported apparel. When using initial markup as the dependent variable on two-way, three-way, and four-way ANOVA models, significant differences were found between domestics and imported apparel categories. Other insignificant differences included the brand types in the sweater category; levels of fashion, initial retail price, and quality for shirts; fashion for the coat/suit category; and type of brand for the slack category. Very few significant differences were found with maintained markup.

TABLE OF CONTENTS

CHAPTER		PAGE
I.	INTRODUCTION	1
	STATEMENT OF THE PROBLEM	2
	PURPOSE OF THE STUDY	2
	BRIEF BACKGROUND OF APPAREL IMPORTS	5
	Protectionism Versus Free Trade	5
	CONCEPTUAL FRAMEWORK	10
	The Economic Relationship Between Domestic and Imported Apparel	10
	Income Elasticity of Demand	15
	Price Elasticities of Demand	17
	Conceptual Definitions	21
	Limitations	24
II.	REVIEW OF LITERATURE	26
	Price Elasticities of Imported Apparel	26
	Domestic/Imported Apparel Profitability	37
	Summary	55
III.	RESEARCH METHODOLOGY	59
	Null Hypotheses	60
	Operational Definitions	61
	Research Design	63
	Pre-test	65

CHAPTER	PAGE
Data Collection	66
Data Analysis	68
IV. RESULTS AND DISCUSSION OF AGGREGATE STUDY . .	70
Findings	71
Apparel Demand Models	80
Summary and Hypotheses	106
V. RESULTS OF PROFITABILITY ANALYSIS:	
PRIMARY DATA	109
Description of Responses/Respondents	110
Findings and Analysis	117
Summary and Hypotheses	143
VI. SUMMARY AND CONCLUSIONS	157
Future Studies	165
LIST OF REFERENCES	166
APPENDICES	176
VITA	252

LIST OF TABLES

TABLE	PAGE
2.1. Import Market Competition	41
2.2. Cumulative Markup* and Gross Margins** for Department Stores with Sales Exceeding \$1 Million	56
2.3. Cumulative Markup* and Gross Margins** for Specialty Stores with Sales Exceeding \$1 Million	57
4.1. Import Demand Elasticities for Coats/Suits . .	86
4.2. Import Demand Elasticities for Dresses	88
4.3. Import Demand Elasticities for Shirts	90
4.4. Import Demand Elasticities for Sweaters . . .	92
4.5. Import Demand Elasticities for Skirts	94
4.6. Import Demand Elasticities for Slacks	95
4.7. Import Elasticities for Suits/Coats (Per Capita)	98
4.8. Import Elasticities for Dresses (Per Capita) .	99
4.9. Import Elasticities for Shirts (Per Capita) .	101
4.10. Import Elasticities for Skirts (Per Capita) .	102
4.11. Import Elasticities for Slacks (Per Capita) .	103
4.12. Import Elasticities for Sweaters (Per Capita)	105
5.1. Demographic Characteristics of Respondents . .	112
5.2. Analysis of Variance Summary Table of Brand Type Between Domestic and Imported Sweaters (Initial Markup Percentage)	121

TABLE	PAGE
5.3. Analysis of Variance Summary Table of Fashion Between Domestic and Imported Shirts (Initial Markup Percentage).	123
5.4. Analysis of Variance Summary Table of Initial Retail Prices Between Domestic and Imported Shirts (Initial Markup Percentage).	124
5.5. Analysis of Variance Summary Table of Quality Between Domestic and Imported Shirts (Initial Markup Percentage)	125
5.6. Analysis of Variance Summary Table of Fashion Between Domestic and Imported Coats and Suits (Initial Markup Percentage)	127
5.7. Analysis of Variance Summary Table of Brand Type Between Domestic and Imported Slacks (Initial Markup Percentage)	128
5.8. Analysis of Variance Summary Table of Store Type Between Domestic and Imported Slacks (Initial Markup Percentage)	129
5.9. Analysis of Variance Summary Table Between Retail, Brand Type, Fashion, and Store Type for Coats (Initial Markup Percentage)	132
5.10. Analysis of Variance Summary Table Between Retail, Store Type, Fashion, and Quality for Dresses (Initial Markup Percentage)	134
5.11. Analysis of Variance Summary Table of Fashion, Brand, and Retail Between Domestic and Imported Shirts (Initial Markup Percentage)	135

TABLE	PAGE
5.12. Analysis of Variance Summary Table Between Retail, Brand Type, Store Type and Domestic and Imported Shirts (Initial Markup Percentage)	136
5.13. Analysis of Variance Summary Table of Fashion, Brand, and Store Type Between Domestic and Imported Sweaters (Initial Markup Percentage)	137
5.14. Analysis of Variance Summary Table Between Retail, Brand Type, Fashion and Domestic and Imported Sweaters (Initial Markup Percentage)	139
5.15. Analysis of Variance Summary Table Between Retail, Brand Type, Store Type, and Domestic and Imported Slacks (initial Markup Percentage)	141
5.16. Distribution of Exporting World Regions from Questionnaire	146
5.17. Analysis of Variance Summary Table Between Fashion, Brand, Retail, Domestic and Import for Coats (Initial markup Percentage)	150
5.18. Analysis of Variance Summary Table Between Brand, Store Type, Domestic and Imported Sweaters (Initial Markup Percentage)	154
5.19. Analysis of Variance Summary Table Between Brand, Store Type, Domestic Import for Slacks (Initial Markup Percentage)	156
A.1. Standard Industrial Classification Codes Used in Study	178
B.1. World Areas and Countries	180

TABLE	PAGE
F.1. Analysis of Variance Summary Table of Brand Type Between Domestic and Imported Dresses (Initial Markup Percentage)	219
F.2. Analysis of Variance Summary Table of Country of Origin Between Domestic and Imported Dresses (Initial Markup Percentage)	220
F.3. Analysis of Variance Summary Table of Fashion Between Domestic and Imported Dresses (Initial Markup Percentage)	221
F.4. Analysis of Variance Summary Table of Item Type Between Domestic and Imported Dresses (Initial Markup Percentage)	222
F.5. Analysis of Variance Summary Table of Purchase Method Between Domestic and Imported Dresses (Initial Markup Percentage)	223
F.6. Analysis of Variance Summary Table of Quality Between Domestic and Imported Dresses (Initial Markup Percentage)	224
F.7. Analysis of Variance Summary Table of Initial Retail Prices Between Domestic and Imported Dresses (Initial Markup Percentage)	225
F.8. Analysis of Variance Summary Table of Store Type Between Domestic and Imported Dresses (Initial Markup Percentage)	226
F.9. Analysis of Variance Summary Table of Brand Type Between Domestic and Imported Coats and Suits (Initial Markup Percentage)	227

TABLE	PAGE
F.10. Analysis of Variance Summary Table of Country of Origin Between Domestic and Imported Coats and Suits (Initial Markup Percentage)	228
F.11. Analysis of Variance Summary Table of Item Type Between Domestic and Imported Coats and Suits (Initial Markup Percentage)	229
F.12. Analysis of Variance Summary Table of Purchase Method Between Domestic and Imported Coats and Suits (Initial Markup Percentage)	230
F.13. Analysis of Variance Summary Table of Quality Between Domestic and Imported Coats and Suits (Initial Markup Percentage)	231
F.14. Analysis of Variance Summary Table of Initial Retail Prices Between Domestic and Imported Coats and Suits (Initial Markup Percentage)	232
F.15. Analysis of Variance Summary Table of Store type between Domestic and imported Coats and Suits (Initial Markup Percentage)	233
F.16. Analysis of Variance Summary Table of Brand Type Between Domestic and Imported Shirts (Initial Markup Percentage)	234
F.17. Analysis of Variance Summary Table of Country of Origin Between Domestic and Imported Shirts (Initial Markup Percentage)	235
F.18. Analysis of Variance Summary Table of Item Type Between Domestic and Imported Shirts (Initial Markup Percentage)	236

TABLE	PAGE
F.19. Analysis of Variance Summary Table of Purchase Method Between Domestic and Imported Shirts (Initial Markup Percentage)	237
F.20. Analysis of Variance Summary Table of Store Type Between Domestic and Imported Shirts (Initial Markup Percentage)	238
F.21. Analysis of Variance Summary Table of Country of Origin Between Domestic and Imported Slacks (Initial Markup Percentage)	239
F.22. Analysis of Variance Summary Table of Fashion Between Domestic and Imported Slacks (Initial Markup Percentage)	240
F.23. Analysis of Variance Summary Table of Item Type Between Domestic and Imported Slacks (Initial Markup Percentage)	341
F.24. Analysis of Variance Summary Table of Purchase Method Between Domestic and Imported Slacks (Initial Markup Percentage)	242
F.25. Analysis of Variance Summary Table of Quality Between Domestic and Imported Slacks (Initial Markup Percentage)	243
F.26. Analysis of Variance Summary Table of Initial Retail Prices Between Domestic and Imported Slacks (Initial Markup Percentage)	244
F.27. Analysis of Variance Summary Table of Country of Origin Between Domestic and Imported Sweaters (Initial Markup Percentage)	245

TABLE	PAGE
F.28. Analysis of Variance Summary Table of Fashion Between Domestic and Imported Sweaters (Initial Markup Percentage)	246
F.29. Analysis of Variance Summary Table of Item Type Between Domestic and Imported Sweaters (Initial Markup Percentage)	247
F.30. Analysis of Variance Summary Table of Purchase Method Between Domestic and Imported Sweaters (Initial Markup Percentage)	248
F.31. Analysis of Variance Summary Table F Quality Between Domestic and Imported Sweaters (Initial Markup Percentage)	249
F.32. Analysis of Variance Summary Table of Initial Retail Prices Between Domestic and Imported Sweaters (Initial Markup Percentage)	250
F.33. Analysis of Variance Summary Table of Store Type Between Domestic and Imported Sweaters (Initial Markup Percentage)	251

LIST OF FIGURES

FIGURE	PAGE
1.1. Demand and supply curves for domestic apparel with protection and with free trade	13
1.2 Mathematical expression of income elasticity .	16
2.1 U.S. apparel trade, 1972-86	28
2.2. Examples of merchandise profit margins	52
2.3. Maintained markup formula	54
2.4. Maintained markup percentage formula	54
4.1. Domestic U.S. apparel production compared with apparel imported into the U.S., \$ millions by year	72
4.2. Total U.S. apparel imports compared with U.S. apparel consumption, \$ millions by year	74
4.3. U.S. domestically produced dresses compared with dress imports, \$ millions by year	75
4.4. U.S. domestically produced skirts compared with skirt imports, \$ millions by year	76
4.5. U.S. domestically produced shirts compared with shirt imports, \$ millions by year	77
4.6. U.S. domestically produced sweaters compared with sweater imports, \$millions by year	78
5.1. Calculation of initial markup	114
5.2. Formula for maintained markup	115

FIGURE	PAGE
E.10. U.S. apparel consumption compared with slacks imported into the U.S., \$ millions by year	210
E.11. US. apparel consumption compared with sweaters imported into the U.S., \$ millions by year	211
E.12. U.S. domestically produced dresses compared with imported dresses from exporting world regions: European Economic Commonwealth, Latin America, and Southeast Asia, \$ millions by year	212
E.13. U.S. Domestically produced shirts compared with imported shirts from major exporting world regions: North/South Asia, Latin America, and Southeast Asia, \$ millions by year	213
E.14. U.S. domestically produced skirts compared with imported skirts from exporting world regions: North/South Asia, European Economic Commonwealth, and Southeast Asia, \$ millions by year	214
E. 15. U.S. domestically produced slacks compared with imported slacks from exporting world regions: North/South Asia, Japan, and Southeast Asia	215
E.16. U.S. domestically produced sweaters compared with imported sweaters from exporting world regions: Communist Asia, European Economic Commonwealth, and Southeast Asia	216
E.17. U.S. domestically produced dresses, skirts, and slacks compared with U.S. apparel consumption	217

CHAPTER I

INTRODUCTION

Over the last five years imported textile and apparel's percentage of the U.S. market has risen dramatically. In 1985, the share of imports reached 50 percent of domestic apparel, with a estimated share of 60 percent by 1987 (FFACT, 1986). The increase in imports has caused concern in the apparel manufacturing industry. American textile and apparel manufacturers are lobbying Congress for stronger protectionism. Marketing campaigns produced by apparel manufacturers encourage American consumers to buy garments "Made in the U.S.A." Textile and apparel manufacturers' fear of import competition assumes a decrease in profits. Loss of profits inevitably would close plants, thus decreasing the work force.

The nature of retailing involves selling products to the final consumer for a profit. With protectionism, however, retailers are concerned about increases in the cost of apparel. Due to our minimum wage system, labor-intensive garments cost more to produce in the United States than garments produced in foreign countries. Many retailers indicate the increased cost may be passed on to

consumers. Therefore, consumers would be losers in the protected apparel trade.

STATEMENT OF THE PROBLEM

The profitability of apparel for retailers depends on demand, cost, and retail of the merchandise. The method of purchase, item type and fashionability, price point, type of store, and other intrinsic factors must also be considered. Some imports may appear more advantageous in their lower initial cost. However, domestic purchases may be more profitable for retailers due to many operational policies which reduce final costs. For example, with shorter lead times of domestic purchases, a buyer can react quicker to re-order merchandise. This allows faster turn on domestic merchandise and greater return on investments.

PURPOSE OF THE STUDY

The purpose of this research is to examine the economic profitability of domestic versus imported apparel in the United States. Aggregate estimates from price elasticities as well as profit estimates obtained from a sample of retailers are both utilized. Profitability factors include retail selling prices, promotional and

markdown prices, cost of merchandise and other factors.

Among those considered in this study are country of origin, method of purchase, type and fashionability of the garment, and store and brand type. Specific research questions of this study include:

1. Are domestic U.S. apparel products competitive with imports on the basis of profits?

2. Is fashion a significant factor in profitability of apparel imports into the United States?

3. Is fashion a significant factor in the profitability of domestic U.S. apparel?

4. Are marketing channels significant factors in profitability of apparel imports into the United States?

5. Do the store types significantly effect import profitability in the United States relative to domestically produced apparel?

6. Is method of purchase a significant factor in profitability of imported apparel into the U.S.?

7. Is quality a significant factor in the profitability of apparel imported into the United States?

8. Is quality an important factor in profitability of U.S. domestic apparel?

9. Is product brand an important factor in profitability of U.S. apparel imports?

10. Does brand contribute significantly to profits of U.S. retailers?

11. Are implied aggregate profits consistent with the profit situation at disaggregated product and subsector levels?

Given these and other related questions, the general hypothesis of this study is that the profitability to U.S. retailers of imported apparel differs from the profitability of domestically produced apparel, and imports may be less profitable or at least not as profitable as casual observation would suggest. In the simplest statistical framework, the general null hypothesis is that at the retail level profits from imports into the U.S. are equal to profits from domestically produced apparel across apparel categories that are imported adjusted for other factors that affect profitability. In this context the general alternative hypothesis is that profits to retailers of imports are less than profits of domestically produced apparel.

BRIEF BACKGROUND OF APPAREL IMPORTS

This section will examine the overall effect of apparel imports on the American textile and apparel manufacturing industry, as well as on the American retailer and consumer. Background information is very helpful in placing the apparel import situation in proper context.

Protectionism Versus Free Trade

Depending on the prosperity of its domestic production, the United States government constantly adjusts its import tariffs either to discourage imports (protectionism), or to encourage imports (free trade). Free trade entails "a more open international trading system" (Andres, 1984). As free trade became more advantageous in the post-war era, the General Agreement of Tariff and Trade (GATT) was formed in 1947 to lessen restrictions. The General Agreement of Tariff and Trade affected the international textile and apparel industry by encouraging textile manufacturing in developing countries, encouraging the accumulation of their trade capital, and opening up foreign markets for U.S. industrial goods.

Conversely, protectionism involves "the growing pressure to restrict, even halt imported goods from

entering this country" (Andres, 1984). The trend to increase quotas and tariffs has grown naturally out of the government's intent to protect domestic producers. To compete more successfully with foreign manufacturers who enjoyed lower labor costs, and government subsidies providing security. American apparel manufacturers sought protective legislation (Courtless, 1986).

The Multi-Fibre Arrangement (MFA) was enacted in 1974 as part of GATT and tightens the restrictions originally eased (Courtless, 1986). While allowing a non-threatening amount of import competition, this legislation prevents imports from jeopardizing the domestic market. For example, if an importing member country's internal market approaches disruption, the MFA allows it the right to initiate bilateral talks with the exporting country. If agreements are not reached within 60 days, trade restrictions can be enacted (DAS, 1983; Nordquist, 1984-1985).

More recently, a dramatic growth of imports has caused domestic producers to lobby for stricter protectionism measures. Currently before Congress, the Textiles and Apparel Trade Enforcement Act (Jenkins Bill) requests a

five-year freeze on imported textiles and apparel (FFACT, 1986).

In 1984, legislation requiring domestic manufactured products to be labeled "Made in the U.S.A." passed into law. This label shows consumers concrete evidence of country of origin (FFACT, 1986). In addition to lobby action, a national marketing campaign to combat imports was created by the American Textile Manufacturing Institute (ATMI) and assisted by professor Kitty Dickerson, University of Missouri and others. The campaign introduced the "Crafted with Pride" advertisements to further attract American consumer attention to apparel labeled "Made in the U.S.A." (ATMI, 1986).

It is obvious that protectionism almost certainly means higher retail prices for consumers, and anti-protectionist William Andres (chairman of the Executive Committee, Dayton Hudson Corporation) believes hidden disadvantages also exist. Andres (1984) foresees the possibility of apparel exporting countries' retaliating and severing trade relations with the United States. This action would drastically reduce jobs for domestic agricultural and industrial workers who produce exportable

products. Most of these workers would be in industries outside textiles and apparel manufacturing.

Import quotas produce an additional cost to consumers. Another cost is caused by a tariff. As merchandise enters the United States, a tariff or tax is applied which increases the cost of the goods, thus discouraging retailers to import or to import less. In 1984 alone, this hidden tax (tariff) on apparel goods reached \$23 billion (Andres, 1984).

In their fight for free trade, retailers organized the Retail Industry Trade Action Coalition (RITAC) to counter lobbying efforts of the textile and apparel protectionist (Andres, 1984). The primary impetus for the formation of RITAC was to fight the trade legislation in 1985 that would severely restrict textile and apparel imports into the U.S.

A balance must be achieved between free trade and protectionism. The following questions can be asked regarding imported and domestic apparel in general:

- * To what degree is imported apparel being substituted for domestic apparel?
- * Are some of the imported apparel items unique to other countries?
- * Do some imports complement the domestic apparel?

The economic theories of demand and supply can assist explaining each of these questions. To properly answer these questions, the import demand function must be known (or estimated in reality) and estimates of price elasticities obtained therein. Both direct and cross price elasticities are needed for disaggregated apparel products from individual exporters.

CONCEPTUAL FRAMEWORK

The Economic Relationship Between Domestic and Imported Apparel

Over the past fourteen years apparel imports increased from \$2.5 billion to approximately \$16 billion according to the Department of Commerce (cited in AAMA, 1989). United States textile and apparel manufacturers have been actively lobbying Congress for increased protection from imports since the 1950's when Japan flooded the U.S. market with cotton textiles and apparel. Today, textiles and apparel are the most protected manufacturing industries in the U.S. outside of sensitive national defense industries.

Most apparel retailers oppose protectionism and seek more open global markets. Retailers feel domestic protection permits many American manufacturers to stay in

business and produce products at less competitive prices than imports. Quality has been questioned in the past. Retailers prefer to shop the world markets to enhance their chance of obtaining the best products at the best price and to provide greater assortment and choice for consumers. They also would prefer quotas lessened and tariffs reduced or removed from imports to offer consumers competitive prices and to potentially increase profits at retail.

Whether an individual purchases an imported garment depends on the consumer's income and his (her) tastes and the retail price of the garment, and price of the related products such as price of competing domestically. Demand for any product is determined by its price, prices of substitutes and complements, consumer income and preference. Equation 1.3 mathematically represents demand relationship for domestic and imported apparel items. If the consumer's income remains constant, a direct relationship occurs between the price of domestic and imported apparel. The decision to purchase domestic or imported apparel is directly related to the respective retail prices of the respective garments and to the consumers' preferences relative to domestic versus imported apparel.

Let f_m represent the different methods of determining purchase preferences. The quantity demanded for a particular domestic apparel item (Equation 1.1), the i th product, X_i is a function of the price of domestic the i th apparel product (P_i), the prices of related domestic products (P_j), the price of related imported apparel (P_k), consumer income (Y), and consumer tastes and preferences (T).

The quantity demanded (see Equation 1.2) for the k th imported apparel product (X_k), is a function of its price (P_k), the prices of related domestic apparel (P_i), price of related products P_t , and consumer income (Y), and consumer tastes and preferences (T).

Symbolically,

$$X_i = f_1(P_i, P_j, P_k, Y, T) \quad (1.1)$$

$$X_k = f_2(P_k, P_i, P_t, Y, T) \quad (1.2)$$

$$\text{where, } \frac{\partial X_i}{\partial P_i} < 0, \frac{\partial X_i}{\partial Y} > 0 \text{ (typically); } \frac{\partial X_i}{\partial P_j}, \frac{\partial X_i}{\partial P_k} \text{ and } \frac{\partial X_i}{\partial T} \gtrless 0, \quad (1.3)$$

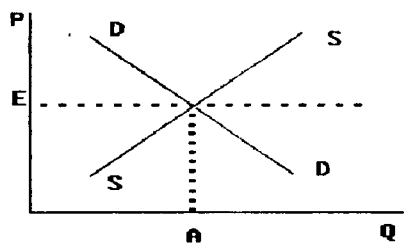
depending upon whether X_j and X_k are substitutes or compliments for X_i and upon the nature of consumer preferences and,

$$\frac{\partial X_k}{\partial P_k} < 0, \frac{\partial X_k}{\partial Y} > 0; \frac{\partial X_k}{\partial P_i}, \frac{\partial X_k}{\partial P_t} \text{ and } \frac{\partial X_k}{\partial T} \lesseqgtr 0 \quad (1.4)$$

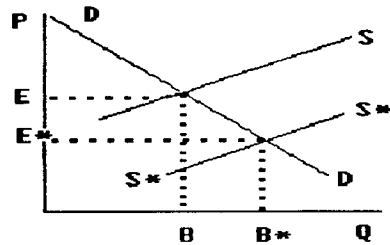
depending upon whether X_i and X_k are substitutes or complements for X_k and upon the nature of consumer preferences.

Demand and supply largely determine the quantity of domestic as well as imported merchandise available to sell. With import quotas or tariffs, less imported merchandise is available resulting in higher import prices for American consumers and almost certainly higher prices for domestic goods as well. In theory, the first round effects of a tariff or quota result is increased domestic production and higher prices for domestic goods as well as imports. The final static equilibrium position of price and quantity of imported apparel often the imposition of a quota or tariff will depend upon the relative price elasticities or demand for imports and for domestic apparel, particularly domestic apparel that is a substitute for the imported apparel product(s). Figure 1.1 illustrates demand and supply analysis involving protection and demonstrates how quotas affect consumer prices.

With protection, demand (D) and supply (S) are in equilibrium at price (E). At this price, the quantity that consumers are willing and able to buy and the quantity that producers are willing and able to supply are equal for both



**Domestic Product with
Protection**



**Domestic Product with
Free Trade**

Figure 1.1. Demand and supply curves for domestic apparel with protection and with free trade.

Source: Adapted from The Economics of Consumer Behavior by D. E. Eastwood (1985). Newton, Mass: Allyn & Bacon, Inc. p. 126.

consumer and producer. If equilibrium were not attained, large shortages or surpluses of products would exist. When manufacturers sell a product at a loss, the product profitability decreases thus reducing or ending production.

Free trade, however, increases supply (shifting supply from S to S^*), reducing consumer cost, and providing consumers more disposable income to make increased purchases. Retailers' objectives are to sell the greatest quantity of merchandise to consumers at the highest profit available. Tariffs (taxes on imported merchandise) and quotas increase the cost of imported and domestic apparel and force consumers to pay more for apparel of equal quality produced overseas. Therefore, with tariffs or quotas, domestic manufacturers maintain a relative price advantage over imported apparel.

Consumers bear the greatest burden of quotas and tariffs in terms of increased prices and reduced selection of apparel goods. With free trade, international competition would force domestic manufacturers to produce the highest quality apparel at competitive prices, and manufacturers would be forced out of business in inefficient operations or in noncompetitive product lines.

Income Elasticity of Demand

The economic concept of income elasticity of demand relates consumer income to product quantity demanded. Income elasticity of demand is a measure of the strength of causality between changes in income (Y) and the responsiveness of consumer demand for a given good, say good i . (Dardis, Derrick, and Lehfeld, 1983). Figure 1.2 provides an expression for this relationship.

The more $E_{i,y}$ approaches zero, or equals zero, the less any income change affects the quantity purchased. If $E_{i,y}$ is negative, then the percent change in income has an opposite effect on the percent change in quantity demanded. When $E_{i,y}$ is negative, the product or good is termed an inferior good. Therefore, as income rises, demand for the good decreases. If $E_{i,y}$ is positive, the quantity demanded of a good increases as income increases. If the $E_{i,y}$ range is between 0 and 1, then the demand percentage is in proportion to the increase in income, resulting in a good termed a normal good. When the $E_{i,y}$ exceeds one, then the product termed a luxury good. Luxury goods are exemplified when the quantity is demanded exceeds the increased proportion of income.

Given the demand equation,

$$X_i = f (P_i, P_j, P_k, Y, T)$$

where P_i, P_j, P_k , are prices,

T = consumer tastes and preferences,

Y = consumer income,

X_i = quantity demanded of product i ,

$$\text{then, } E_i = \frac{\% \Delta X_i}{\% \Delta I}$$

$$\text{or } E_{i,y} = \frac{\partial X_i}{\partial Y} \frac{Y}{X_i}$$

$E_{i,y}$ = income elasticity of demand for product i ,

Figure 1.2. Mathematical expression of income elasticity.

Source: Adapted from The Economics of Consumer Behavior, Eastwood, D. E. (1985). Newton, Mass: Allyn & Bacon, Inc.

Price Elasticities of Demand

Price elasticities of demand are of two types: direct (or own) price elasticity of demand and cross price elasticity of demand. A direct or own price elasticity of demand is a measure of the responsiveness of the quantity demanded of a good to a change in its (own) price, and a cross price elasticity of demand is a measure of the responsiveness of the quantity demanded of a given good to a change in the price of a related good such as a substitute or a complement.

Given the demand function,

$$X_i = f(P_i, P_j, Y, T) \quad (1.5)$$

where, X_i = quantity demanded of good i ,

P_i = price of good i ,

P_j = price of related good j ,

Y = consumer income,

T = consumer tastes and preferences

then the direct price elasticity of demand for good i is:

$$E_{ii} = \frac{\% \Delta X_i}{\% \Delta P_i}, \text{ i.e., } E_{ii} = \begin{array}{l} \text{the percent change in} \\ \text{quantity demanded of good } i \\ \text{divided by the caused} \\ \text{percentage change in the} \\ \text{price of good } i. \end{array} \quad (1.6)$$

$$\text{also, } E_{ii} = \frac{\frac{\partial X_i}{X_i^*}}{\frac{\partial P_i}{P_i^*}} \quad (1.7)$$

$$= \frac{\partial X_i}{\partial P_i} \frac{P_i^*}{X_i^*} \quad \text{where } \frac{\partial X_i}{\partial P_i} \text{ is the slope of the}$$

demand function and P_i^* and X_i^*
are particular values of P_i
and X_i on the demand
function. (1.8)

The cross price elasticity of demand for good i relative to a price change in good j is:

$$E_{ij} = \frac{\% \Delta X_i}{\% \Delta P_j} \quad , \text{ i.e., } E_{ij} = \frac{\text{the percentage change in}}{\text{quantity demanded of good } i}$$

divided by the caused
percentage change in the
price of good i . (1.9)

$$\text{Also, } E_{ij} = \frac{\frac{\partial X_i}{X_i^*}}{\frac{\partial P_j}{P_j^*}} \quad (1.10)$$

$$= \frac{\partial X_i}{\partial P_j} \frac{P_j^*}{X_i^*} \quad \text{where } P_j^* \text{ and } X_i^* \text{ are particular values of}$$

P_j and X_i on the demand functions for
good j and good i , respectively. (1.11)

The own price elasticity E_{ii} is usually negative because (as the theory of consumer demand has shown) own price and quantity demanded usually move in opposite directions. Price elasticities of demand may be classified as elastic, unitary, and inelastic. A demand function for a product is elastic when the quantity demanded is very sensitive to price changes. Demand is elastic when the absolute value of percentage of change in quantity demanded is greater than the absolute value in percentage change in price, resulting in a number greater than 1 in absolute value, i.e., $|E_{ii}| > 1$.

Unitary elasticity demand occurs when both the numerator (percent change in quantity demanded) and the denominator (percent change in price) are equal in absolute value, i.e. $|E_{ii}| = 1$.

Inelastic demand occurs if quantity demanded is not sensitive to price changes. When computing own-price elasticity, if the absolute value of the percent change in quantity demanded is less than the absolute value of percent change in the price of a product and, if the absolute value results in a number between 0 and 1, the product is considered inelastic i.e. $0 \leq |E_{ii}| < 1$. If E_{ii}

approaches zero, the demand function is said to become perfectly inelastic.

Complements, in consumption are products who are consumed together. Substitutes are competing goods in consumption. These may be identified by their cross-price elasticities. The cross price elasticities of complements are negative and substitutes have positive cross price elasticities. Then, from Equation 1.9 if E_{ij} is negative, goods i and j are compliments and if E_{ij} is positive, goods i and j are substitutes. These concepts can be applied to any pairs of goods, including domestic apparel and imported apparel, generally considered to be substitutes for each other although many types of apparel are complements in consumption.

These elasticities will be examined further when comparing types of imported and domestically produced apparel in this study. United States Department of Commerce trade data will be utilized to examine apparel imports by product classifications. The nature of income elasticities, direct price elasticities, and cross-price elasticities of imported apparel will be estimated and examined for selected categories of apparel products.

Conceptual Definitions

Terms used in this study will be defined as follows:

American wholesaler purchase

Purchase made from an American "merchant establishment operated by a concern that is primarily engaged in buying, taking title to, usually storing and physically handling goods in large quantities, and reselling the goods, usually in smaller quantities, to retailers or to industrial or business users" (Krieger, 1980, p. 123).

Cash discounts

Monetary deductions "if full payment of the invoice is made within a prescribed period of time" (Lewison & DeLozier, 1986, p. 204).

Central buying office purchase

A purchase made from "an office in a resource city to which non-competing stores belong" (Krieger, 1980, p. 90).

Complements

"A good which tends to be purchased when another good is purchased since it 'complements' the first good. (e.g. cups and saucers) (Pearce, 1986, p. 74).

Cost of goods sold

"The actual cost of all merchandise that was sold during a given period of time" (Troxell, 1980, p. 32).

Cross elasticity of demand

"The responsiveness of quantity demanded of one good to a change in the price of another good" (Pearce, 1986, p. 91).

Department store

"A large retailing institution that carries a wide variety of merchandise lines with a reasonably good selection within each line" (Lewison & DeLozier, 1986, p. 70).

Discount store

"A retailing institution that sells a wide variety of merchandise at less than traditional retail prices" (Lewison & DeLozier, 1980, p. 77).

Domestic item

Apparel produced and purchased in the United States.

Gross margin

"The dollar difference between the retailer's net sales and the total cost of goods sold" (Lewison & DeLozier, 1986, p. 204).

Gross sales

"The total dollar revenues the retailer receives from the sale of merchandise and services" (Lewison & DeLozier, 1986, p. 202).

Imported item

Imported apparel produced outside the United States, purchased directly as an import, purchased through a central buying office, or purchased through an American wholesaler.

Import purchase

Purchase made "from a foreign country for sale or use" (Stein, J., 1984, p. 688).

Inventory at cost

"The cost value of the inventory investment" (Krieger, 1980, p. 46).

Net sales

A mathematical figure "determined by deducting returns, allowances, and discounts from gross sales" (Krieger, 1980, p. 202).

Profit

"Income after all costs, expenses, and taxes have been deducted (Krieger, 1980, p. 82).

Re-buy/basic item

"An item or merchandise that customers ask for continually during a season and which the retailer must maintain in stock to satisfy demand" (Krieger, 1980, p. 7).

Retailing

"The business of buying for resale to the ultimate consumer" (Krieger, 180, p. 91).

Specialty store

A retailing institution which "offers only one or a very few closely related product lines" (Lewison & DeLozier, 1980, p. 67).

Substitutes

"A good which can be substituted for another good" (Pearce, 1986, p. 407).

Transportation costs

"Costs the retailer incurs in getting the merchandise to the store from the supplier's place of business" (Lewison & DeLozier, 1986, p. 203).

Vendor returns and allowances

Means by which retailers adjust for dissatisfaction by charging the vendor (Lewison & DeLozier, 1986).

Limitations

1. The study is concerned only with United States retailers and imports.
2. The items chosen for comparison on the survey are left to the buyer's discretion for equality.

3. Apparel assembled overseas from American fabrics (807 goods) will be considered as labeled.

4. A selected subset of apparel was studied.

5. Data was not available for some categories of apparel which necessitated their omission from the study.

CHAPTER II

REVIEW OF LITERATURE

On the heels of a 33-year deficit in the U.S. apparel trade, apparel manufacturers and labor unions continue to urge Congress for more protection from apparel imports (Courtless, 1988). Simultaneously, retailers continue to request fewer and reduced trade restrictions in order to offer customers increased product choices and increased selection at reduced prices (Magnusson, 1989). This chapter will review studies and other literature on price elasticities of imported apparel at an aggregate level, as well as literature relevant to compare domestic and imported apparel's profitability.

Price Elasticities of Imported Apparel

Introduction

GATT encourages bilateral discussion when imports disrupt a domestic industry. The U.S. has negotiated voluntary quotas with Korea, Taiwan, and Japan for specific consumer products including apparel. Imports often provide savings to consumers by offering products below comparable prices of domestic goods. Limiting supply of imports not

only would force consumers to purchase more expensive domestic goods, but reduce supply and indirectly raise prices. According to basic economic theory, a decrease in supply causes prices to rise and reach a new equilibrium at a reduced quantity.

Manufacturers in favor of protectionism feel that consumers do not always benefit from lower prices because markups are frequently higher on imports than on domestic goods. However, this view does not appropriately account for increased quantity supplied with imports. The increase in quantity results, at least initially in both domestic and import prices being lower than if imports were not present. In this context, imports can be considered another means of domestic competition (Cain, 1984).

In consumer categories other than apparel imported products substitute for domestic products. If price differentiation does exist, direct competition may not, and domestic production does limit the quantity of imports the market can absorb (Kortbech-Olesen, 1986).

The Georgia World Congress Institute sponsored a large study requested by the American Apparel Manufacturing Association (1988). The study focused on the economic impact of importing countries after 1972. One aspect of

the study comprised longitudinal analysis of trade flows and statistical data on U.S. and foreign apparel industries. Overall apparel imports increased from \$2500 million (1972) to \$16000 million from 1972 to 1986 respectively (see Figure 2.1). When categorized by importing locations, trends became apparent. The Far East shows the greatest cumulative growth; the Rest of World the

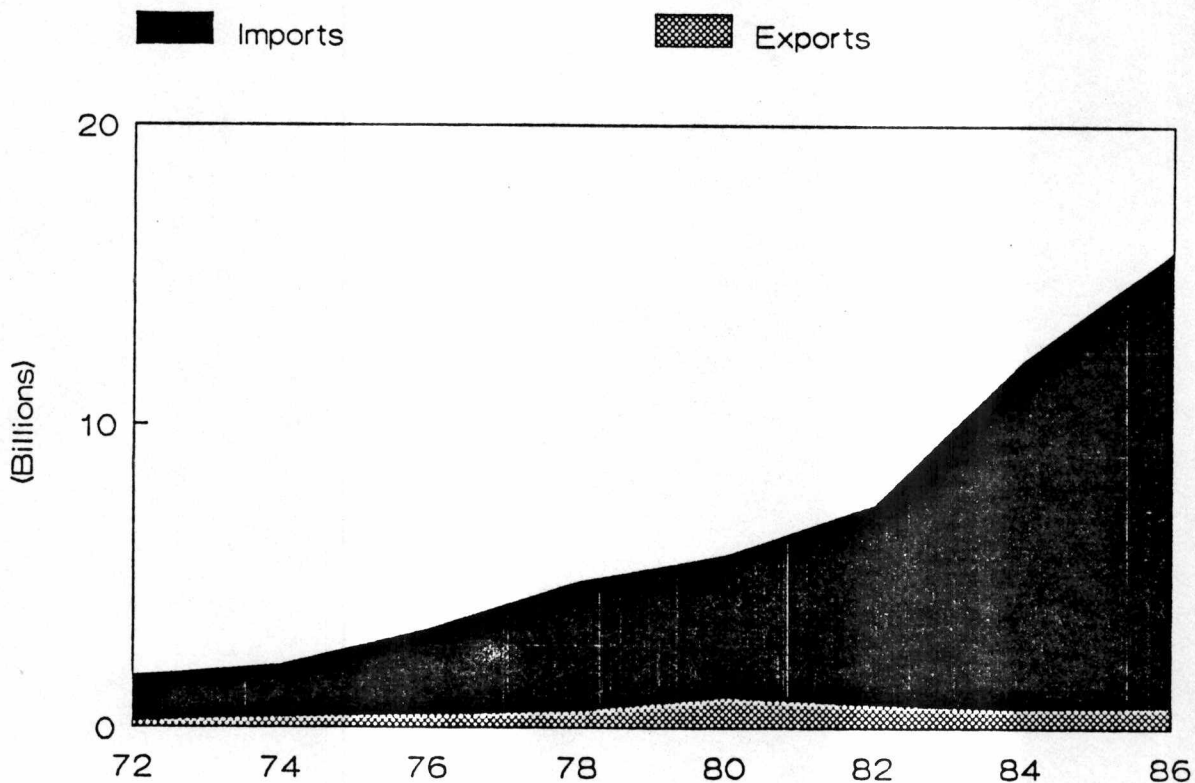


Figure 2.1. U.S. apparel trade, 1972-86.

Source: Adapted from American Apparel Manufacturers Association. (1987) FOCUS, P. 31.

A major reason for the shift of apparel imports from third world countries involves the relative low capital and low skilled labor requirements. Clothing and textile manufacturing are usually the first industries to evolve in developing countries (Fitzpatrick, 1983).

The U.S. and European apparel manufacturers are facing similar problems. Along with the bombardment of imports, the domestic industries are experiencing increased production costs and decreased employment.

Differences also can be noted when imported apparel is segmented by Standard Industry Classification (SIC) code (see Appendix A.1.). Imports of women's sweaters and women's and girl's coats impacted American production the most; suits and dresses the least (Arpan, De La Torre & Toyne, 1981).

Previous Import Demand Studies

Economists have found the practical and theoretical implications of demand elasticities are unquestionable. It has also become apparent that income elasticities are as important as demand elasticities, especially in a growing economy.

The most common demand equations are single demand equations, systems of demand equations, and simultaneous

demand and supply equations. Single demand equation models (SDE) are the most popular approaches in estimating import demand behavior (Mansour-Khabiri, 1987) Since the single demand equations and systems of demand equation models are partial equilibrium approaches, the supply side is not modeled. The absence of supply-side effects can result in bias in the price elasticity estimates.

A typical model of import demand is the following simple demand relationship (Mansour-Khabiri, 1987):

$$M = f (P, Y) \quad (2.1)$$

where:

M = quantity of imports demanded,

P = price of imports in relation to all
other goods,

Y = income if the demand equations are
derived from utility maximization or an
activity variable if input demand
equations are derived from cost
minimization.

Mansour-Khabiri expresses three issues of estimating the import demand relation presented in the above equation.

1. Modelers must choose the most appropriate functional specification for the import demand equation of interest.

2. The explanatory variables must be chosen.

3. A method must be devised to compensate for the inadequacy of the existing time-series data.

The unavailability of truly appropriate time series data has been a major issue. The price of imports and domestically produced goods are not usually available on desegregated levels for most categories of goods. Consequently, unit values have been used frequently as a proxy for import prices, and the proxy for aggregate domestic goods has been the Gross Domestic Product Deflator (DDP), the wholesale Price Index (WPI) or the Consumer Price Index (CPI). Such choices in proxies has led to some bias in the elasticity estimates.

Burgess (1974) contended that imports are not all final goods which are separable from all other commodities in the utilities function of the consumer. He felt additional measures should be taken into account to deal with the problem. Since this study is involved with finished apparel, other measures will not be necessary.

Houthakker and Magee (1969) estimated demand elasticities for both imports and exports with respect to income and price for several countries, mostly developed. They used ordinary least-squares methods and confided their results may obtain some bias. Other supply-side studies have found supply elasticities to be fairly high for many exporters, thus reducing the likelihood of bias in estimated demand elasticities.

Houthakker and Magee's study separated commodity classes which allowed the proper price index to be applied. They estimated long-run elasticities which varied considerably among the five commodity classes that they considered. Their results indicated crude foods had low income and price elasticities while finished manufactures elasticities were high. Such results seem to hold for unfinished versus finished goods in general and for apparel categories as well. They also concluded that the U.S. income elasticity of demand for total imports is about the same as other countries, but the income elasticity of other countries' demand for U.S. products is abnormally low.

Several studies have attempted to determine the best model to estimate import demand elasticities in international trade. In the mid-seventies, economists had

not decided on the appropriate form to use when specifying and estimating an import demand equation. Kahn, Mohsin, and Ross (1977) wanted to test empirically the form of the aggregate import demand equation for three major trading countries (United States, Canada, and Japan). Their conclusions found the log-linear form to be superior to the linear form. Since international trade relationships are primarily interested in obtaining price and income elasticities, these elasticities can conveniently be obtained from the regression equation. Not only are the log-linear forms convenient to use but are preferred empirically.

The use of a linear functional form for an aggregate import demand equation implies a decreasing price elasticity of import demand and an income elasticity tending towards unity. The use of log-linear formulation implies constant elasticities with respect to price and income. Theoretically this may be too restrictive.

Boylan, Cuddy, and O'Muircheartaigh (1980) also examined utilization of linear versus log-linear methods and found the log-linear form to be the preferred form. The study estimated generalized import demand functions of three small trading countries, Ireland, Denmark and

Belgium. Their findings, that the log-linear function form was the appropriate form, generalized Kahn and Ross' (1977) previous work.

Thursby and Thursby (1984) employed nine models of aggregate demand for five countries (Canada, Germany, Japan, United Kingdom, and United States) to determine which of the frequently used single equation models of import demand $M = f(P, Y)$ were appropriate. The theory does not provide guidance on the appropriate measures of Q , P , or Y . In their models both linear and log-log specifications of each model were estimated. Each functional form was estimated using two measures of the dependent variable and three measures of the price of all other goods. Both the real value of the imports and the ratio of import value to price of imports, and the import quantity index (1970 = 100) were used. The equations used the appropriate price deflator, the wholesale price index or the consumer price index as measures of the price of other goods.

Rousslang and Parker (1984) studied cross-price elasticities combining data on value of imports and domestic shipments with own-price demand elasticities. Cross-price elasticities of U.S. import demand determines

how changes in relative prices in imports from one country will affect demand for domestic output and imports from other countries. Their study was primarily conducted to determine how U.S. tariffs will affect imports.

In a dissertation by Asieh Mansour-Khabiri (1987) popular models were examined and a new model was created. His formula was based on utility and production being functions of the imported product when differentiated by country of origin. He estimated the elasticities for 37 commodities based on Tariff Schedules supplied by 15 countries. His findings suggested that the greater the degree of product homogeneity, the greater the degree of substitutability among imports by country of origin.

Goldstein, Kahn, and Officer (1980) formulated a general import function with import prices, tradable goods, and non-tradable goods as factors. The function was tested using price indices of tradable and non-tradable goods to determine if non tradable goods were relevant empirically in the determination of the demand for imports. The finding concludes the price of non-tradable goods did not appear to be a significant determinant of the demand for imports in most countries.

Hichman and Lau (1973) explained the composition of imports on the bases of relative prices and time trends, given the total quantity of imports for each country. Elasticities of substitution among each country of origin in each import market were used in the obtaining aggregate export demand functions for the individual countries.

Johnston (1988) created models to estimate the impact of textile and apparel imports on employment in the U.S. textile and apparel industries, the production level of U.S. domestic textiles and apparel, and selected textile and apparel production resources. The models included textile and apparel import demand functions, textiles and apparel output functions, and resource or input adjustment functions. The model of particular interest to this paper is the textile and apparel demand function. Resulting elasticities that were estimated included direct price elasticities of import demand, cross price elasticity of import demand, and income price elasticity of import demand.

To obtain a more precise estimate of the parameters, Johnston's data set included monthly time series observations from 1974-1987. This data was obtained from

published secondary sources and unpublished data from the Federal Reserve Board and International Trade Commission.

Estimations of demand elasticities were accomplished by ordinary least squares and generalized least squares. The variables were transformed to their natural logarithms and regressions were executed to obtain constant elasticity functions. These functions support the methodology determining the price and income elasticities used in this study.

Domestic/Imported Apparel Profitability

Introduction

With the apparel industry's trade deficit escalating, imports have become a major economic issue (see Figure 2.2). Consumers often consider imports to be inferior in quality and less expensive than domestically produced apparel. Typically, these consumers are considering imports only from the Far East. No empirical studies were found concerning retailers and profitability. The closest study was done for the Knitwear association by Nathan Katz consulting group.

While price and quality are important, buyers also should also consider non-price factors such as quality,

brand type, store type, fashionability, method of purchase, delivery time, return privileges, and promotional benefits. Other world regions besides the Far East also should be considered when estimating quality and price. This exploratory study is concerned with the profitability of apparel domestically produced and imported from twelve world regions using non-price factors as variables.

The review of literature contains seven sections:

(1) imported and domestic apparel, (2) country of origin of apparel imports, (3) retail store classifications, (4) apparel fashionability, (5) apparel brand classifications, (6) inventory segments, (7) marketing channels, and (8) retail profitability.

Apparel

The University of Missouri's Kitty Dickerson studied consumer perceptions of imported and domestic apparel quality. Dickerson's studies (1982) show that Americans prefer U.S. apparel and perceive the quality to be superior. Other studies, however, indicate that Americans perceive imports to be of higher quality for an equal price (Dardis, Spivak and Shih, 1985; Sternquist and Tolbert, 1986).

Dickerson's purpose was to determine consumer views on the quality of imported and U.S.-produced apparel. The findings indicated that a majority of respondents preferred domestically produced clothing. Some of these respondents admitted their preference stemmed from patriotism. Findings consistently indicated that consumers perceived imported apparel to be of poorer quality than American-made apparel. Dickerson's study did not segment the regions of the world for this comparison.

Country of Origin

Dardis and Sul (1983) divided the importing markets into five major world regions to study trends in importing. The first region, the Far East, included Hong Kong, Taiwan, the Korean Republic, and the People's Republic of China. The second area was Japan, and the third combined Canada and Western Europe. The next region included Eastern Europe, and the remaining importing countries comprised the fifth region called Rest of World (ROW).

To project future trends, Dardis and Sul compared U.S. Department of Commerce data from 1967-1977 and tracked import activity from the five regions. Their findings indicated three trends: (1) the Far East was retaining its market share, (2) the developed regions and developing

regions were in competition, and (3) ROW, Japan, Western Europe, and Eastern Europe have ceased to be a threat to the U.S. in apparel imports (Dardis and Sul, 1983). Table 2.1 shows the trends they found.

Retail Perceptions of Imports by Store Classification

Although consumers may perceive imports to be inferior, import sales continue to rise. These sales produce profits as retailers find new and better markets offering the best merchandise for the price. Sternquist and Tolbert (1986) surveyed discount, department, and specialty stores for their position on imports. The findings showed that discount stores increased their purchase of imports in 1986. These stores' buyers perceived import quality to be as good or better than American products and indicated that consumers rarely asked for "Made in the U.S.A." products. Retailers also admitted taking higher markups on imports.

The study found that department store buyers sometimes must absorb great losses on imports due to the expense of returning defective goods. Therefore, they take higher markups on imports to overcome these losses (Sternquist & Tolbert, 1986).

Table 2.1 Import Market Competition.

Actual and projected market shares: Women's apparel*					
Category	Country Groups	1967 (%)	1977 (%)	1987 (%)	2000 (%)
Coats	Far East	13	57	60	62
	Japan	31	05	03	01
	Western Europe	51	11	04	01
	Eastern Europe	00	06	08	09
	ROW	05	21	25	26
Blouses and Skirts	Far East	34	62	60	60
	Japan	40	09	08	08
	Western Europe	17	05	04	04
	Eastern Europe	01	01	00	00
	ROW	08	23	27	27
Dresses	Far East	23	44	40	40
	Japan	10	01	02	02
	Western Europe	55	21	17	17
	Eastern Europe	00	00	00	00
	ROW	12	34	41	41
Sweaters	Far East	59	86	85	85
	Japan	21	01	00	00
	Western Europe	19	08	08	08
	Eastern Europe	00	01	01	01
	ROW	00	03	05	06
Robes, Pajamas, Underwear	Far East	46	64	59	59
	Japan	23	05	09	09
	Western Europe	08	06	08	08
	Eastern Europe	00	00	00	00
	ROW	22	24	24	24
Foundation Garments	Far East	15	11	11	11
	Japan	01	00	00	00
	Western Europe	18	03	04	04
	Eastern Europe	03	00	00	00
	ROW	62	85	85	85

*Percentages do not always add up to 100 due to rounding.

Source: Dardis, R. and Sul, J. (1983). Competition in the U.S. Apparel Import Market. Home Economics Research Journal, 12(2), 245.

Sternquist and Davis (1986) studied store status and country of origin to determine which factors influenced consumer perceptions of quality and price. Country of origin (domestic versus imported) was not significant whereas, store prestige (well known department store versus national discount store) was significant.

Buyers also are concerned with current import quotas. Countries are allowed to export goods of a specific quantity, not a specific monetary value. This system of numerical quotas affects import deliveries of necessary merchandise such as children's wear. These products often are stopped or delayed after men's and women's wear have reached their quota limitations. Because women's and men's wear are more expensive, the exporting countries naturally prefer to ship these items first. This practice can eliminate shipment of the lesser priced children's wear (Children's imports, 1984).

In particular, discounters trying to be price-competitive suffer under import quotas. Many retailers want separate quotas of apparel items by classification.

Fashionability

Nystrom defines fashion as "the prevailing style at any given time" (cited in Solomon, 1985). A trend suggests

that a garment's fashionability depends on the stage of the fashion life cycle.

DeLong, Minshall and Larntz (1987) studied a fashion item in conjunction with the Fishbien behavioral model. In preparation for their study jeans were selected from past issues of fashion magazines and ranked according to fashionability. Similar levels of fashionability will be used as class levels in this study.

These fashion levels will be generalized as High Fashion (innovation); Fashion (early adoption); Mass Fashion (early and late majority); and Passe (laggards). Each of these segments signifies what fashion stage a garment presently occupies.

Brand Classification

Most department stores strike a balance between buying national and private brands. Successful retailers such as Macy's feel that one brand should not dominate the inventory of a department. However, customers demand certain brands because of strong national advertising. These brands, along with designer names, private labels, and lesser known brands, can provide the foundation of a department, (NRMA, 1979).

National brands. The brand of apparel is a known indicator of quality to consumers. Dardis, Spivak, and Shih (1985) studied men's oxford cloth shirts for workmanship and fabric quality. The shirts were washed extensively to determine the performance quality. The researchers also recorded retail prices of the different brand shirts. Findings indicated that the imported shirts were of better quality and the initial retail prices were less. Imported shirts were promoted more often in sales. National brand shirts were most expensive and promoted less often.

Private labeling. Changes are occurring in the retail market. Salmon and Cmar (1987) explain that these changes include new customer shopping habits, sophisticated retail information systems, and better relationships between retailers and manufacturers.

Technology also has reduced the retailers' buying risk by providing information from test markets; this allows quick response on reorders of the best selling items. Advanced technology reduces carrying costs and lowers markdowns as well. The new relationship between retailers and manufacturers has established more differentiation among finished goods (Salmon and Cmar, 1987).

In particular, a new phenomenon in the retail market involves the individuality of private labeling. Private labels are blazing new marketing frontiers. Many manufacturers of brands such as Ralph Lauren, Laura Ashley, and Bennetton have opened exclusive shops. As a result, retailers have increased and promoted their own private labels. In specialty stores, private labels target their market while limiting their customer selections (Salmon and Cmar, 1987).

Historically, overseas manufacturers provided a major source of national brand "knockoffs" for large retailers. The majority of private labeling has occurred overseas. The drawback to private label foreign production has been the long turn-around times between the initial planning phase, the sample's arrival, and the final product delivery. Domestic manufacturers have turned these offshore problems into a competitive advantage for their industry.

For example, the domestic sweater category is most severely threatened by imports (see Appendix E.7). Leon Seidel (1983) found that more women's sweaters are produced overseas for American import than are produced in the United States. The U.S. producers maintain that a market

exists for American-produced sweaters for three reasons. First, they argue that higher quality domestic yarns result in better quality garments. Second, shorter domestic lead time allows quicker response to design changes and delivery. Finally, U.S. shipments are not delayed by offshore quotas, thus providing timely receipt of shipments. Seidel suggests that an optimum situation for a retailer marketing domestic sweaters would involve direct communication with the supplier. Retailers would provide design guidelines from sketches and use private labels for brand exclusivity.

In 1985, private label sweaters accounted for 25 percent of sweater departments in department stores. Although private labels are important, branded merchandise also is needed to legitimize the private label fashion and prices.

According to Apparel Merchandising (1985, January), domestic purchases are more beneficial to retailers than overseas purchases. The authors feel that fashion is important to domestic as well as overseas markets. Retailers purchasing domestic products do not have to commit dollars as early, are not affected by the quota system, and may reorder fast-selling items. Private labels

can be used as marketing and as status symbols. No brand competition from rivals exists and profit margins can be hidden (PL sweaters, 1985, January).

Alen Kulek, president of Crib-Domestic, New York, believes private label programs benefit both manufacturers and retailers. He provides design, manufacturing, merchandising, and financial services to the retailer. Thus, the advantages of private labels include fashion timeliness, quicker turn, exclusivity, price, and value, thereby reducing markdowns and errors (Dlaboha, 1986).

Inventory Segments

Product novelty determines inventory classification. Three basic categories include staple basics, fashion basics, and fashion merchandise.

Staple basics. Staple basics include merchandise that does not change for periods of at least six months. If staple items are purchased under private labels or in large quantities, buyers must make yearly plans to maintain an adequate stock of merchandise at all times (NRMA, 1979).

Fashion basics. Fashion basics includes merchandise that customers want for several seasons, such as basic slack or shirt styles. Buyers must coordinate their stock in terms of variety, harmony, and quantity over the selling

period. Usually this merchandise is bought in basic colors such as navy, beige, or black to carry over the seasons (NRMA, 1979).

Fashion merchandise. Fashion merchandise has a shorter selling period. The merchandise should be tested and, if successful, reordered. This must be done at the beginning of the season to optimize sales. New items create excitement in the department. To maintain customer interest in shopping the department, open-to-buy must be set aside for these unproven items (NRMA, 1979).

The life span of each category differs. Staple items and fashion basics can be carried over many years, while fashion items last about a season. New items sometimes become fad items with very short selling times.

Marketing Channels

Several marketing channels exist for retail buyers to obtain merchandise. For domestic products, the buyer may buy directly from the manufacturer, a wholesaler, or a resident buying office. Buyers also order merchandise made to specification (e.g. private labels). The import buyer accesses the same channels, although the marketing functions are different for imports. There are advantages

and disadvantages to each method, depending on purchase quantities and markup structures the retailer desires.

Manufacturer. Manufacturers possess the advantage of regulating their product's distribution. By limiting product supply and distribution, manufacturers control the accessibility of the merchandise to the retailers.

Wholesaler. The wholesaler handles the merchandise and increases its accessibility to the retailer. Services include obtaining a quantity discount by buying in bulk and dividing the shipment to resell for a profit. Other services can include controlling inventory by balancing stock and by counting inventory. By representing many merchandise lines, the wholesaler decreases buying time and simplifies ordering.

Resident buying office. Buying offices usually are independent offices consisting of non-competing stores in a resource city such as New York and Dallas. The buying office acts as a consultant that scouts the retail market for new resources, trends, and opportunities for member buyers. Buyers meet annually or semi-annually to discuss fast- and slow-moving merchandise, successful promotions, and current trends in the marketplace. Three services of the resident buying office are: (1) to assist buyers in

obtaining merchandise, (2) to assist retailers in selling merchandise (promotion), and (3) to communicate information regarding store operation and general management (NRMA, 1979).

When buying imports from foreign countries, the resident buying office can assist in the physical, financial, and legal complexities of importing the merchandise. Some offices consolidate orders for member stores to achieve greater purchase quantities (NRMA, 1979).

Buying from specification. When buying from specification, the buyer sets the standards for the product and the construction. These specifications include fabric, size, and number of stitches per inch when sewing the garment (NRMA, 1979).

Profitability

Webster, (1981) defines profit as the amount earned beyond expenses. Retail profit can be calculated according to the available data and the intended use. Dominic Mangone, vice president and controller of Montgomery Ward & Co., stresses (1984) that merchandise profitability should be measured by incremental, marginal, and controllable aspects of the business. By implementing incremental accounting, company management charges its departments and

stores only for controllable costs and expenses.

Therefore, attention remains focused on expenses that departments and stores can manage. Mangone stresses that retailers not only should measure sales and gross margin, but include expenses that vary with sales and asset productivity (Mangone, 1984).

The example for a departmental merchandise margin statement is given in Figure 2.4.

Extensive information is needed from the store and the department to complete a margin statement thus determining merchandise profitability on a national basis is difficult. For purposes of comparison, a less extensive measure of profitability can be determined from the first four elements of the merchandise margin statement: (1) retail sales, (2) initial markup, (3) total reductions at cost, resulting in (4) maintained gross profit (Mangone, 1984).

Maintained markup, a similar method of comparison, (see Figure 2.5) subtracts the cost of merchandise sold from the final selling price. The cost of the merchandise is the actual billed cost before cash discount.

Calculations show the maintained markup in dollars. However, to compare different items or items in different departments, it is necessary to represent maintained markup

Retail sales	XX	
Initial markup		XX
Total reductions at cost		<u>XX</u>
Maintained Gross Profit		XX
Advertising expense		XX
Other controllable expenses		<u>XX</u>
Controllable margin		XX
Selling Payroll	XX	
Distribution expense		<u>XX</u>
Department contribution		XX

Contr/sq. ft. GMROI

Sales/sq. ft. CMROI

Turnover

Figure 2.2. Examples of merchandise profile margins.

Source: Retail Control, Dominic M. Mangone, vice president and controller Montgomery Ward & Co., Chicago, October, 1984 p. 15.

as a percentage. To find maintained markup percentage, divide the maintained markup dollars by the net retail (see Figure 2.6).

For example, a store's sales are \$340,000, and price reductions are \$45,000 of merchandise that costs \$150,000. Thus, the maintained markup dollars may be calculated as follows:

$$\begin{aligned}\$MM &= (\text{OR-RED}) - \text{CMS} \\ &= (\$340,000 - \$45,000) - \$150,000 \\ &= \$295,000 - \$150,000 \\ &= \$145,000\end{aligned}$$

For the maintained markup percentage:

$$\begin{aligned}\text{MM}\% &= \$MM - \text{Net Retail} \\ &= \$145,000 - (\$340,000 - \$45,000) \\ &= \$145,000 - \$295,000 \\ &= 49\%\end{aligned}$$

Besides incremental accounting and maintained markup, other measures of profitability exist. These include: (1) gross margin which equals the sum of maintained markup dollars plus cash discounts, and (2) operating profit which subtracts operating expenses from the gross margin dollars (Shuch, 1988). The National Retail Merchant's Association publishes annual profitability figures by store type and

$$MM = (OR - RED) - CMS$$

MM = Maintained Markup

OR = Original Retail

RED = Reductions

CMS = Cost of Merchandise Sold

Figure 2.3. Maintained markup formula.

Source: Retail Buying and Merchandising, Milton Shuch, Englewood Cliffs: Prentice Hall, 1988, p. 160.

$$MM\% = \$MM - \text{Net Retail}$$

MM = Maintained Markup

Net Retail = Retail dollars after reductions

Figure 2.4. Maintained markup percentage formula.

Source: Retail Buying and Merchandising, Milton Shuch, Englewood Cliffs: Prentice Hall, 1988, p. 161.

department classifications. See Tables 2.2, and 2.3 for these figures.

Since retail buyers were surveyed for this research, operating expense by department would be difficult to obtain. Even if the information were available, this is a sensitive subject for buyers. Since cash discounts are considered an accounting function, they also are difficult to obtain from buyers. Although buyers may anticipate cash discounts, they are not always taken by accounting for reasons beyond the buyer's control.

Because of the sensitivity of operating expenses and cash discounts, profitability was based on initial and maintained markup percentages as measures of comparison.

Summary

As imports have increased their percentage of market share, U.S. manufacturers have begun exploring competitive measures. The marketing initiative "Crafted with Pride" was designed to increase public awareness of American-made products. "Quick Response," a sophisticated computer link between retailer and manufacturer, now gives manufacturers a competitive advantage to win back American retailers (Schwartz, 1987). Other "Quick Response" benefits include

Table 2.2. Cumulative Markup* and Gross Margins** for Department Stores with Sales Exceeding \$1 Million.

Category	Description	1985		1986		1987	
		CM	GM	CM	GM	CM	GM
1011	W. G. Coats	52.1	42.0	52.0	42.7	53.9	43.0
1012	W. G. Suits	53.2	43.6	53.8	37.7	54.9	41.7
1017	W. Dresses	52.1	40.2	52.4	39.7	52.6	39.3
1019	Jr. Dresses	52.6	43.1	52.8	41.6	52.6	41.3
1041	Sportswear	52.6	43.4	52.6	42.8	53.1	41.2
1045	Sportswear	52.6	43.1	52.8	43.1	52.9	41.0
3011	M. B. Clothing	50.5	36.8	50.6	37.0	51.8	37.7
3041	M. B. Clothing	51.3	39.9	51.9	40.2	52.4	40.2

* indicates original selling price less delivered cost.

** includes workroom costs and cash discounts deducted.

Source: National Retail Merchants Association Management Operating Results for the years 1986-1988.

Table 2.3. Cumulative Markup* and Gross Margins** for Specialty Stores with Sales Exceeding \$1 Million.

Category	Description	1985		1986		1987	
		CM	GM	CM	GM	CM	GM
1011	W. G. Coats	51.6	43.1	52.9	42.8	51.2	43.1
1012	W. G. Suits	50.4	37.5	50.3	39.4		
1017	W. Dresses	50.9	42.6	52.3	40.3	52.4	39.4
1019	Jr. Dresses	50.7	40.8	51.6	39.3	52.3	40.9
1041	Sportswear	51.6	43.4	52.7	41.7	51.2	40.0
1045	Sportswear	51.6	43.4	53.6	42.3	52.5	37.9
3011	M. B. Clothing	50.3	41.8	51.3	38.2	53.5	36.3
3041	M. B. Clothing	54.6	43.7	52.5	41.5	52.6	41.1

* indicates original selling price less delivered cost.

** includes workroom costs and cash discounts deducted.

Source: National Retail Merchants Association Management Operating Results for the years 1986-1988.

pre-ticketing merchandise in the sewing room and shipping direct to each retail outlet. These steps reduce distribution center processing time by 50 percent (Lettich, 1985).

According to management consultant Nathan Katz, president of Nathan Katz Co., retailers must educate themselves to the advantages of domestic products. Many retailers are unaware of the bottom-line costs of imported merchandise. Katz believes domestic products compare favorably to imports. Although imports have a higher mark-on, domestics have less inventory and fewer delivery problems. In a study for the National Knitwear and Sportswear Association, Katz (cited in Lettich, 1986) found the gross margins on imported sweaters to be only 3.8 percent higher than on domestics. This resulted from favorable discount terms, higher markdowns, and other price adjustments. Inventory turn on domestic sweaters was higher. Retailers who were contacted stated that three out of five customers preferred domestic sweaters over imports (Lettich, 1986).

CHAPTER III

RESEARCH METHODOLOGY

The purpose of this research is to generalize the profitability of apparel imports and to examine import trends by both exporting country and garment classification. This research also explores a real world problem facing retailers: import profitability. More specifically, domestic and import apparel will be compared to determine which is more profitable. Factors such as country of origin, brand notoriety, fashionability, and method of purchase will be considered.

This chapter will explain the processes of collecting both primary and secondary data to determine which variables have the greatest influence on apparel profitability. The research methodology will be formatted in the following manner: null hypotheses; operational definitions; research design (including the sample, both instruments, and data collection); and data analysis.

Null Hypotheses

H1: Exporting country does not affect apparel profitability

H2: Apparel classification does not affect apparel profitability.

H3: Brand type does not significantly affect apparel profitability.

H4: Different exporting world regions do not significantly affect apparel profitability.

H5: No differences exist between the levels of fashion and the profitability of domestic and imported apparel.

H6: Apparel Initial retail prices does not significantly affect retail profitability.

H7: The type of item (New versus Basic/Staple) does not significantly affect apparel profitability.

H8: The method of purchase does not significantly affect apparel profitability.

H9: The buyers perceived quality of apparel does not influence profitability.

H10: Store type does not significantly affect apparel profitability.

Operational Definitions

Secondary data

The variables used with the secondary data are defined operationally as follows. The dependent variable is the quantity of apparel import i from world region j .

The independent variables include country of origin and garment classification. The independent variables will be defined as follows:

Price of import apparel i . Annual price values obtained from the Bureau of Census reports divided by Quantity.

Price of domestic apparel i . Annual values obtained from Survey of Manufacturers divided by quantities provided by ATMI's Focus.

Country of origin. Nominal variable with 12 categories: 1) Canada, 2) Latin America, 3) Other Western Hemisphere, 4) European Economic Commonwealth (E.E.C.), 5) Other O.E.C.D. Countries 6) Communist Europe 7) Communist China 8) Japan 9) North and South Asia 10) Southeast Asia, 11) Australia and Oceania, and 12) Africa (see Appendix B.1. for specific countries in each world area).

Apparel classification. Nominal variable with six categories: 1) coats and jackets, 2) dresses, 3) shirts or

blouses, 4) sweaters, 5) slacks or trousers, and 6) suits (see Appendix A.1. for S.I.C. codes used in each classification).

Disposable income. Annual income data published in Textile Highlights.

Population. Annual population figures published in Textile Highlights.

Primary Data. The variables used with the primary data are defined operationally as follows. The dependent variables are profitability (initial markup and maintained markup) of domestic and import garments as computed in Appendix C.1.

The independent variables include (a) type of brand, (b) country of origin, (c) classification of departments, (d) fashionability, (e) methods of purchase, and (f) classification of store.

The independent variables will be defined as follows:

Brand. Nominal variable with three categories: National, Off-brand/Unbranded, or Private label.

Country of origin. Nominal variable with five categories: Far East, including Hong Kong, Taiwan, Korean Republic, and the People's Republic of China; Japan; Canada and Western Europe; Eastern Europe; and Rest of World.

Department classification. Nominal variable with four categories; Ladies; Junior; Men's; and Children's, including girls and boys.

Fashionability. Nominal variable including five categories: High fashion; Fashionable; Mass fashion; Classic; and Passe.

Method of purchase. Nominal variable including four categories: Direct from the manufacturer; Through an American wholesaler; Through a buying office; or Other.

Store classification.

Nominal variable including five categories: Department; Discount; Specialty; Chain; or Other.

Research Design

Secondary data published by the United States Department of the Census were used for imported apparel.

The survey research method was used to provide primary data concerning the actual retail profitability of apparel produced domestically and overseas.

Sample Selection

A mailing list of 806 buyers was randomly selected from the 1988 Sheldon's Retail Directory. This directory provides a major source of mailing lists in the retailing

industry listing over 35,000 retailing establishments. Buyers were selected from major department stores and department store chains, women's specialty stores and chains, men's specialty stores and chains, children's stores, and family apparel stores.

Instrument

A self-administered five page questionnaire was divided into three parts (see Appendix D) and used the design formatted by the Total Design Method (Dillman, 1978).

Survey Instrument

The survey instrument will employ a three-part questionnaire (Appendix D). The questionnaire will be formatted according to Don Dillman's Total Design Method (1978). This format involves constructing mail surveys by formulating the pages, using vertical response categories, and providing response instructions. The questionnaire will be printed in booklet form on 8 1/2" x 14" paper folded in half and stapled. A self-addressed, stamped reply envelope will be included to encourage participation.

Part I of the questionnaire will introduce the study and identify the selected items chosen for comparison.

Part II will ask open-ended questions comparing financial and operational information regarding two equivalent items: one produced domestically and one produced overseas. The method of purchase will be noted in order to examine the level of profitability. Profitability will be calculated by the traditional method (see Appendix C). Part III will gather demographic information concerning buyers and type of store surveyed.

Pre-test

The questionnaire was pre-tested by 10 Knoxville, Tennessee, retail buyers. None were members of the final sample. Two groups were selected for the pre-test: department store buyers and specialty store buyers.

The pre-test was administered to ensure clarity of the questionnaire's instructions, to determine difficulty of the questions, and to estimate the length of time needed to complete the instrument. In addition, it was necessary to identify the best format.

A few suggestions were made regarding the questionnaire's instructions. Revisions were made to reflect these changes. Since the revisions were minor, no further pre-tests were conducted.

Data Collection

Secondary Data

The U.S. Imports for Consumption and General Imports (FT 210), and U.S. Imports for Consumption (FT 246) were used to collect secondary import data.

General imports represent total arrivals of merchandise including merchandise for immediate consumption and merchandise entering into warehouses which will later be exported. Imports for consumption include merchandise for immediate consumption and merchandise released from warehouses for consumption. For this study imports for consumption will be used.

The U.S. Import for Consumption and General Import (FT 210) published commodity import figures using the Standard Industrial Classification (SIC) codes and areas of origin. Only the apparel sections were used for this study. The FT 210 report was used for the years 1972 - 1984. When information was missing from the FT 210 reports, the U.S. Import for Consumption (FT 246) reports were used. FT 210 uses TSUSA codes and exporting country. The 1980 and 1985 Concordias (U.S. Foreign Trade Statistics classifications and cross-classifications) cross referenced TSUSA codes and SIC codes. The FT 246 reports by country which had to be

condensed to world regions to be consistent with the FT 210's world regions. Both reports list import figures by general imports and imports for consumption.

The dollar value figure used represented the market value from the exporting country. The value did not include U.S. duties, freight, insurance, or other charges incurred in the delivery process. Before 1982 the figure shown on the FT 210 was the f.a.s. value which was the transaction value of the merchandise at the foreign port.

Survey of Manufacturers provided annual value figures for domestically produced apparel. Focus a publication by AAMA provided annual quantity data. Textile Highlights, published by ATMI, contained annual disposable income, population, and apparel consumption data.

Primary Data

Data was collected from the 800 questionnaires mailed to American retail buyers. Each questionnaire displayed The University of Tennessee's seal in orange and the title of the study in black ink. Each questionnaire was identified by a number, so the returned questionnaires could be checked against a list. Also enclosed were a self addressed business reply envelope and a cover letter

printed on Department of Textiles, Merchandising, and Design stationary explaining the study.

A letter also was mailed to the buyers superiors informing them of the study and asking for their assistance. A reminder post card was mailed one week after the initial mailing. A second and third mailing of a follow-up letter and questionnaire was made in two week intervals to those who have not responded.

As an incentive to the buyers to complete the questionnaire, a summary of results was offered to the respondents, if requested.

The University of Tennessee Department of Human Subjects exempted the research from review by the research committee since the questionnaire asked no personal or privileged information.

Data Analysis

Regression models will be used on the secondary data to infer the price and income elasticities of imports in aggregate. Each apparel classification will be divided by world region and analyzed separately for their elasticities.

Analysis of Variance by apparel classification will be used on the primary data. A post-hoc test (Tukey) will be administered to determine locations and degrees of variance.

CHAPTER IV

RESULTS AND DISCUSSION OF AGGREGATE STUDY

Analysis of the secondary sources will be discussed in this chapter. These findings will support the following hypotheses:

H1: Apparel classification does not affect apparel profitability.

H2: Exporting world region does not affect apparel profitability.

Annual data of import quantities and values were obtained from the years 1972 - 1984. A price per unit proxy was determined by dividing the values by quantities. Each apparel category (as determined by S.I.C. Code) are national aggregates. Domestic data was collected for the years 1972 - 1984 by annual values and quantities. A proxy value was also obtained by dividing values by units.

Two models were selected to estimate the price and income elasticities of U.S. apparel import demand by world region of origin and by apparel category. Both linear and log-linear estimates were obtained to determine the best estimation. The popular single demand function and a single demand function using per capita expenditures as one

of the independent variables were used. For the equations using natural logarithms, the variables were converted to logs and then used in the regression equation. Using natural logarithms, the coefficients express the elasticities.

Many factors influence the demand of apparel. These factors include import prices, domestic prices and income. First overall elasticities will be examined consisting of all apparel categories and exporting world regions. Then each of the six selected apparel classifications will be reported. Apparel was divided into categories corresponding with the apparel questionnaire (see Appendix D for questionnaire) and to follow the format of the S.I.C. codes (see Appendix A for S.I.C codes used).

Findings

Sample Description

Dollar value data. Import and domestic was collected from 1972 to 1984 for selected apparel categories and displayed in the following figures. Figure 4.1 illustrates overall apparel production and import trends for this time period. The figure indicates a steady increase in value of apparel imports while value of U.S. production displays

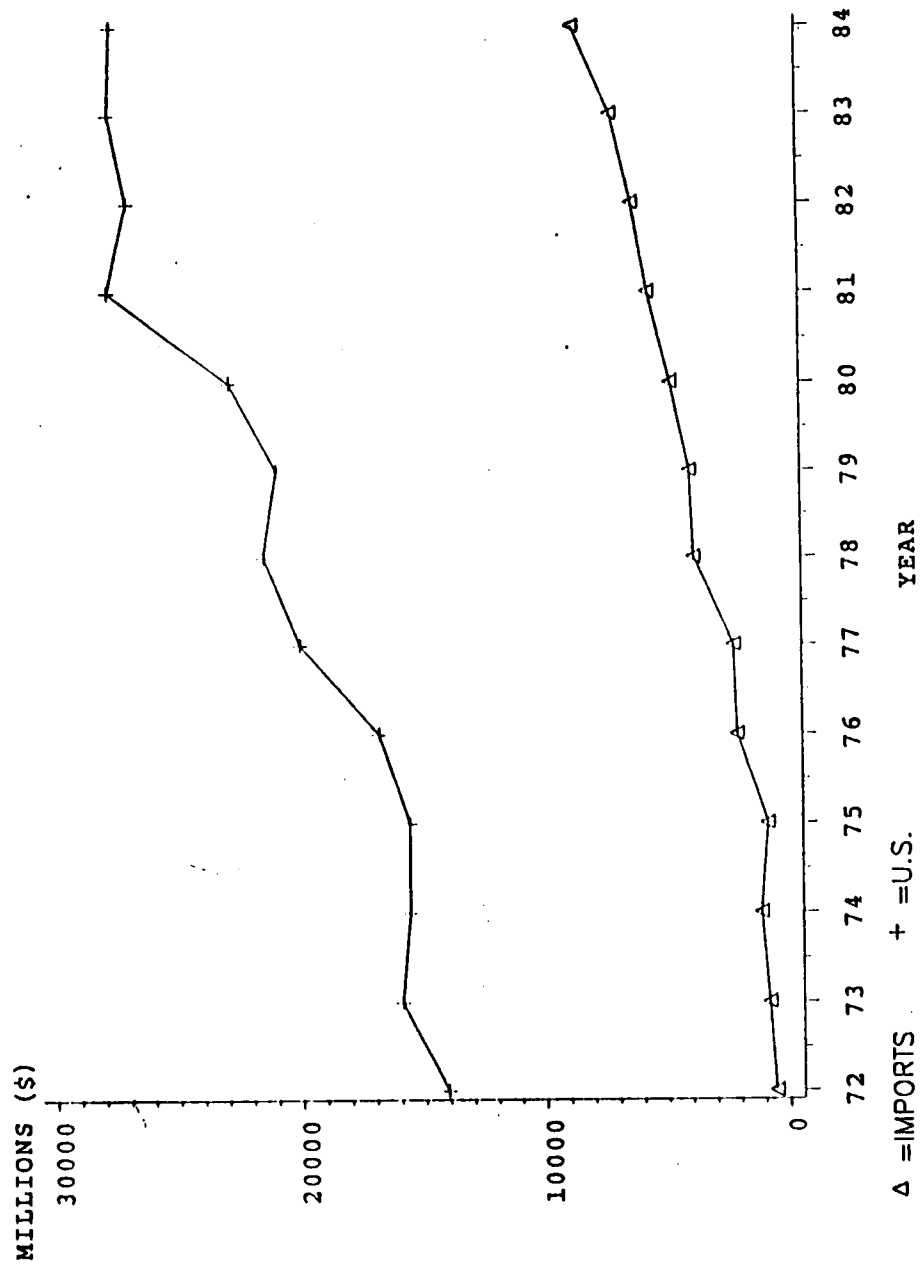


Figure 4.1. Domestic U.S. apparel production compared with apparel imported into the U.S., \$ millions by year.

slow and irregular growth. The proportion of imports to domestic apparel production does not appear to be narrowing. Apparel consumption, also shown in Figure 4.2 in dollar terms, has steadily increased while value of apparel imports have not experienced the same growth.

When the apparel categories are disaggregated, interesting trends emerge. For example, Figure 4.3 shows that the percentage of dress imports to dresses domestically produced is nominal. The ratio of skirt imports to domestic production of skirts in value terms is very low (see Figure 4.4) but has increased somewhat in recent years.

Imported shirts make up a large percentage of the domestic shirt market as shown in Figure 4.5. The value of sweaters imported into the U.S. exceeds the value of sweaters produced domestically (see Figure 4.6). Additional figures by major exporting regions by apparel categories can be found in Appendix E.

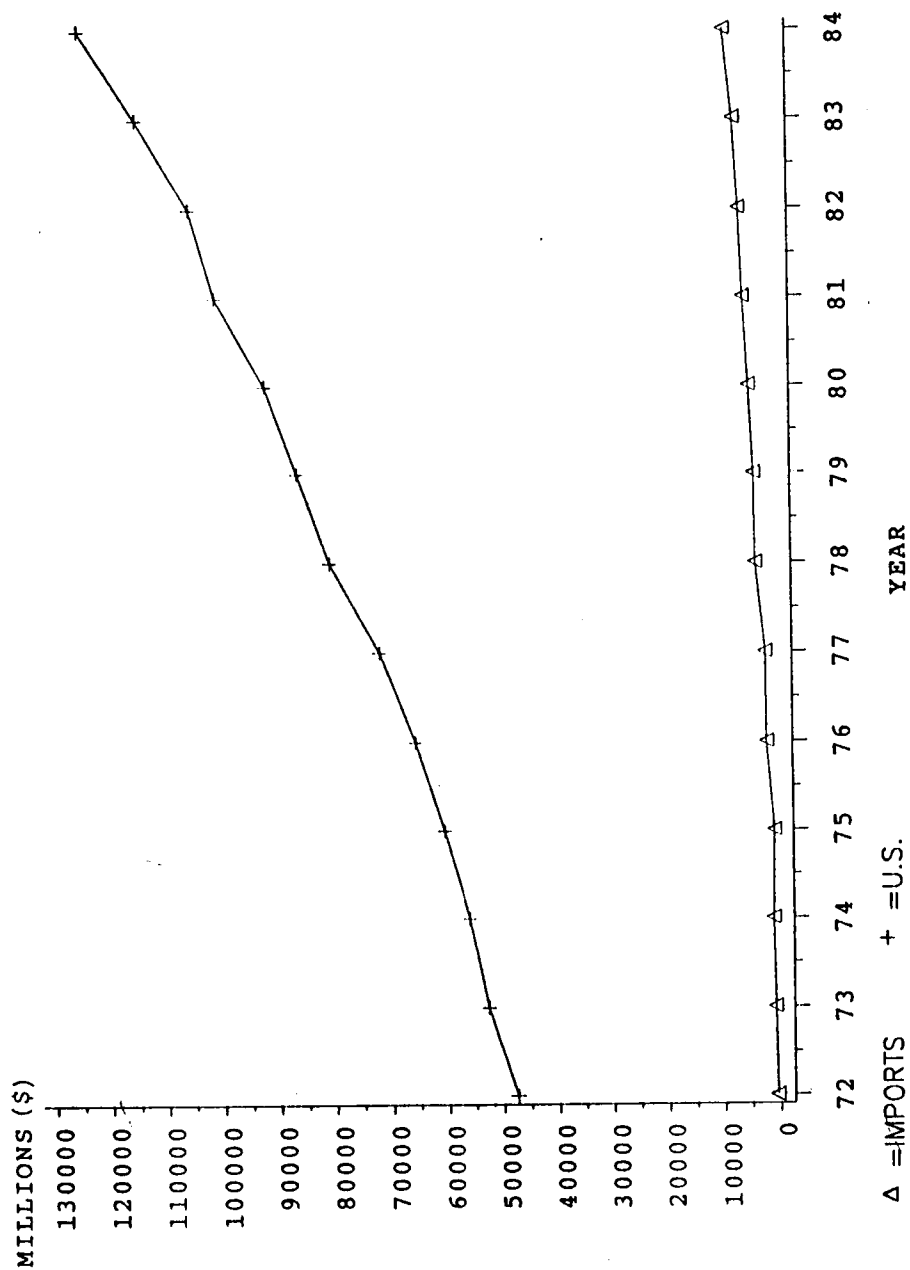


Figure 4.2. Total U.S. apparel imports compared with U.S. apparel consumption, \$ millions by year.

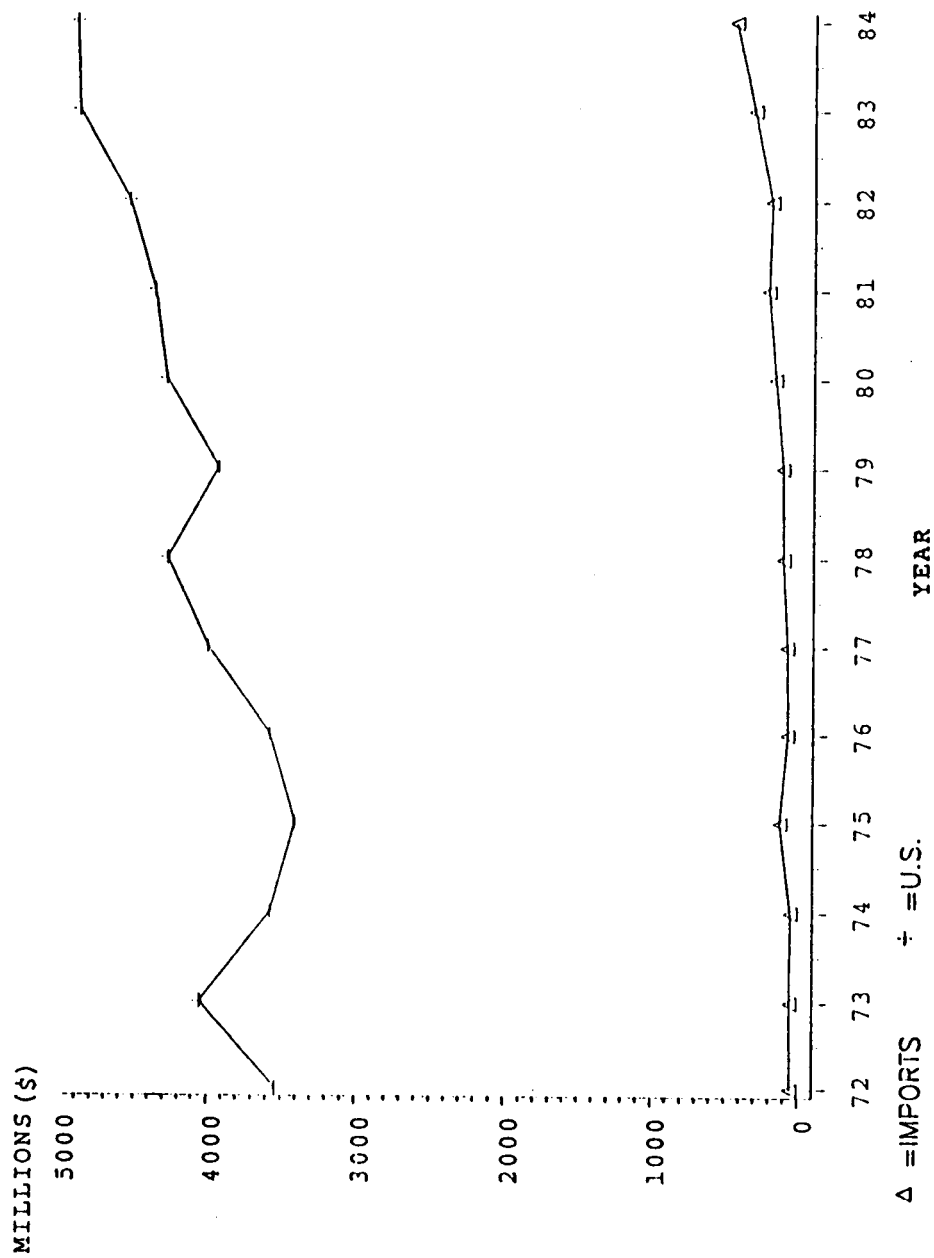


Figure 4.3. U.S. domestically produced dresses compared with dress imports, \$ millions by year.

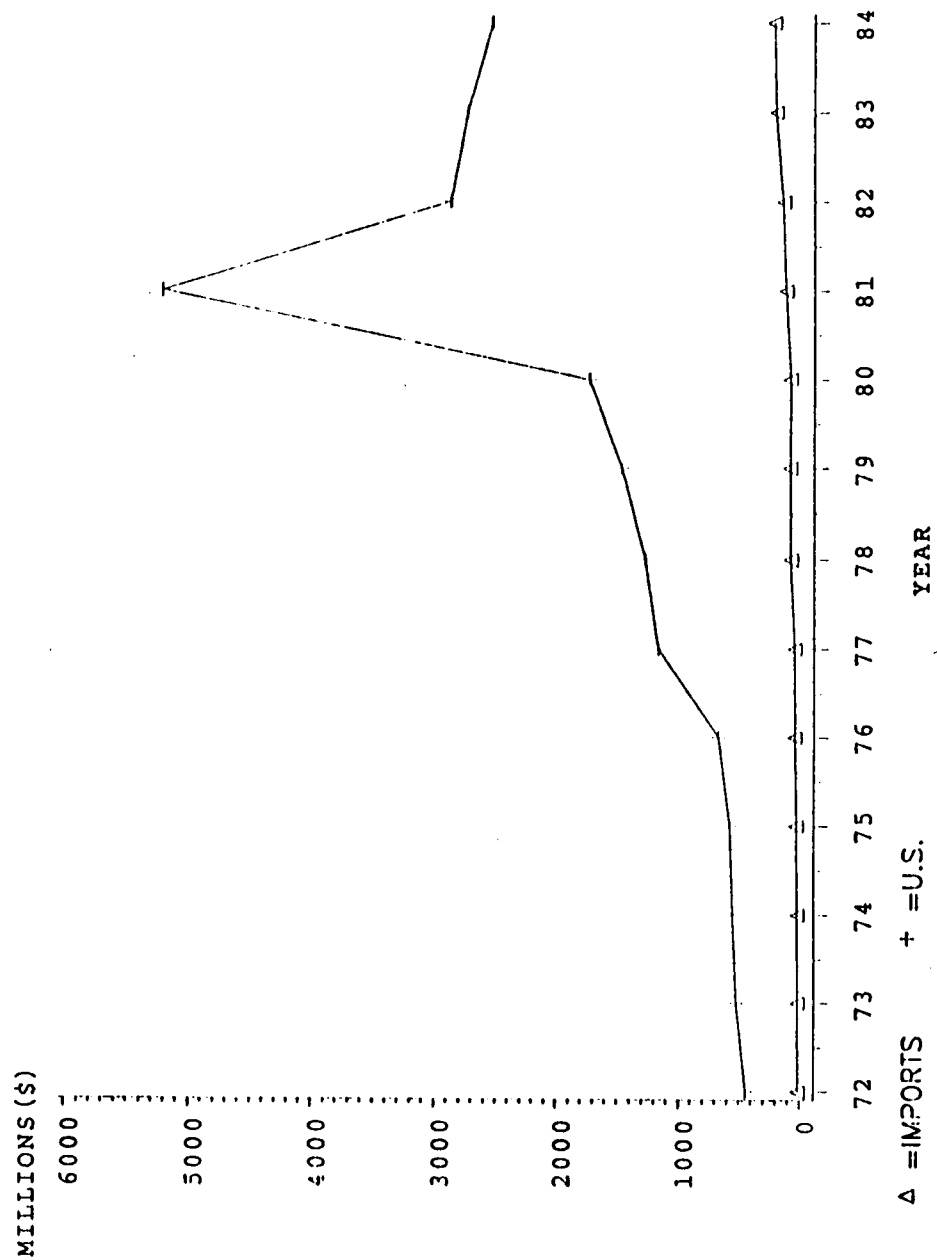


Figure 4.4. U.S. domestically produced skirts compared with skirt imports, \$ millions by year.

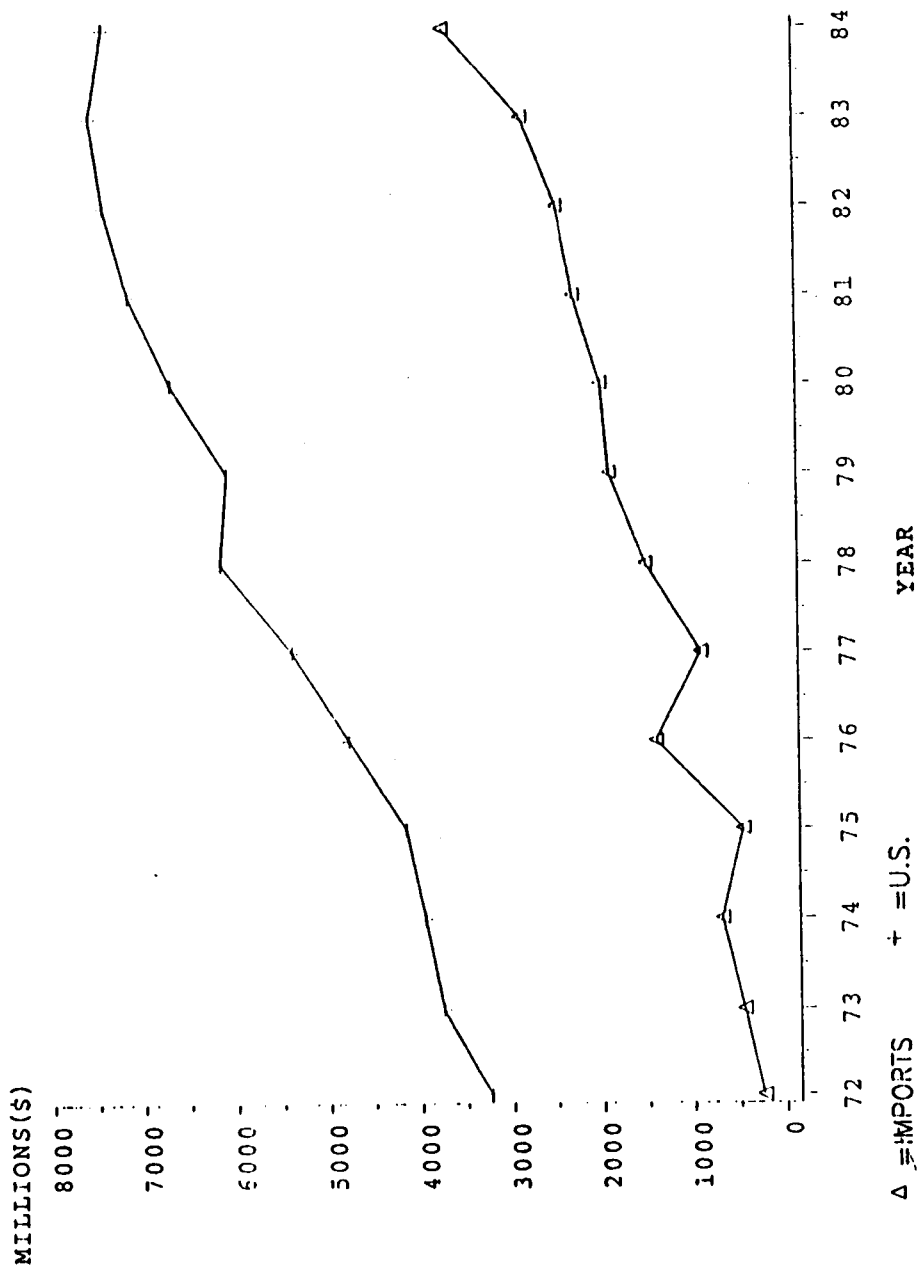


Figure 4.5. U.S. domestically produced shirts compared with shirt imports, \$ millions by year.

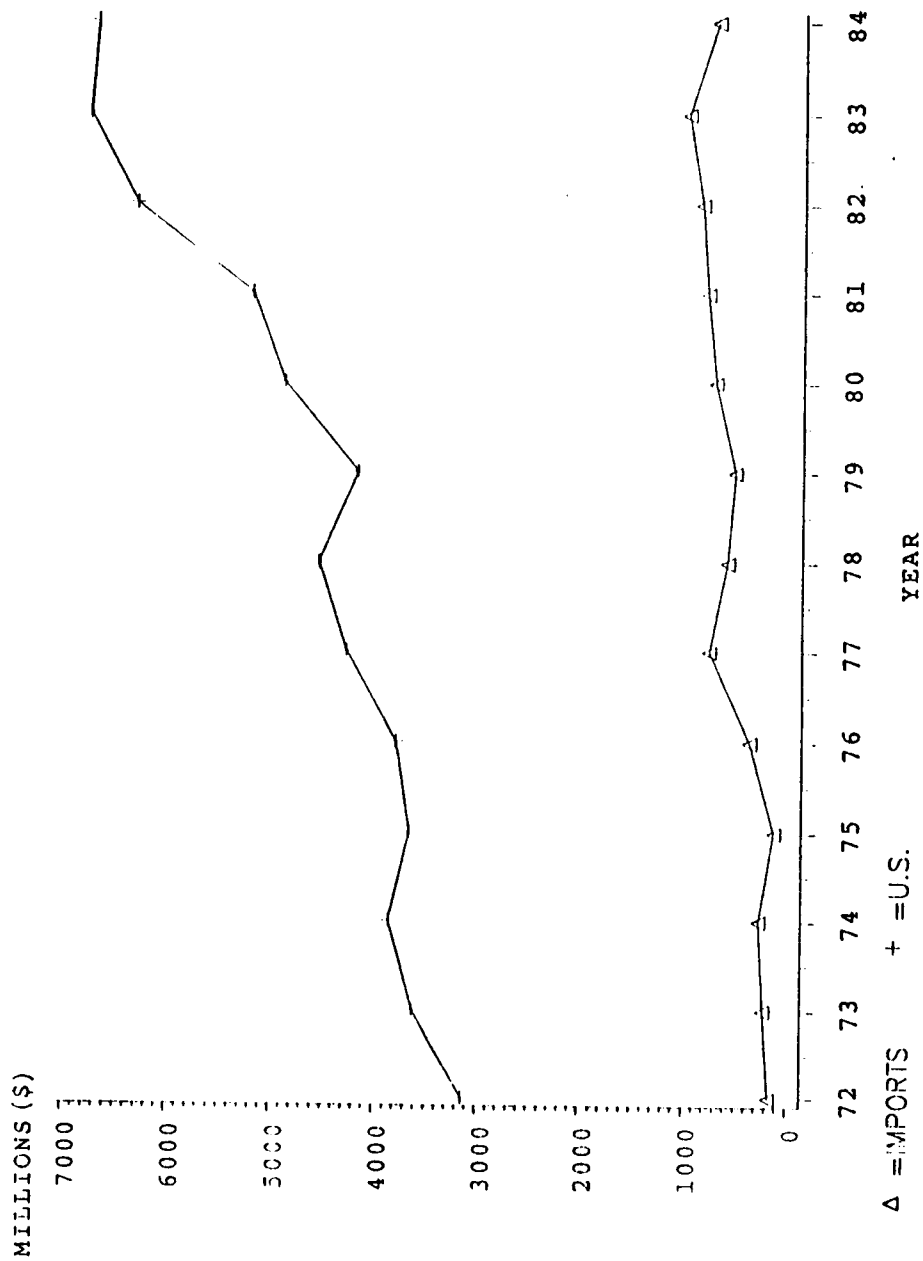


Figure 4.6. U.S. domestically produced sweaters compared with sweater imports, \$ millions by year.

The six apparel categories used in this study are:

1. Suit and Coats
2. Dresses
3. Shirts
4. Sweaters
5. Skirts
6. Slacks

The major world regions included in this study are:

1. Canada
2. Latin America
3. Other Western Hemisphere
4. E. E. C.
5. Other O.E.C.D
6. Communist Europe
7. China
8. Japan
9. North and South Asia
10. Southeast Asia
11. Africa
12. Australia

Apparel Demand Models

Economic theory suggests an inverse relationship between the quantity of imports and import price, and a direct relationship between quantity of imports and income. An increase in income would result in an increase in import demand and conversely, an increase in price would result in a decrease in quantity demanded of imports. Imported apparel is generally considered a substitute for domestic apparel and therefore has a positive cross price elasticity of demand. If some U.S. apparel items are compliments with other products, such as some apparel imports, the cross price elasticity of demand is negative.

This implies that if domestic apparel and imports are substitutes, an increase in price of apparel imports into the U.S. will increase the demand for domestic apparel, and the demand of domestic U.S. apparel. If some domestic apparel goods and imports are compliments, an increase in the price of U.S. imports will decrease the demand of domestically produced apparel in the United States.

There were two models used in this study. The first model is the basic single demand function:

$$Q_{ij} = f(PM_{ij}/PD_i, Y) \quad (4.1)$$

This translates to the regression equation:

$$Q_{ij} = \beta + \beta_1 (PM_{ij}/PD_i) + \beta_2 Y + \epsilon_{ij} \quad (4.2)$$

Where: Q_{ij} = the quantity imported of the i th item
from world region j ,

(PM_{ij}/PD_i) = the proxy import price of apparel
category i from world region j divided by
the price of the domestic apparel item i ,
and

Y = disposable income in the U.S.

The coefficients (β 's) are the parameters to be estimated by mathematical calculations when using natural numbers. By using the natural logarithms, the coefficients become the elasticities. ϵ_{ij} is the random error term. From economic theory, it is expected that $\beta_1 < 0$ and $\beta_2 > 0$. This model estimates effects between the ratio of the imported price and the domestic price and disposable income on quantities of apparel imported into the United States.

When using natural logarithms the equation will appear:

$$LQ_{ij} = \beta_0 + \beta_1 (LPM_{ij}/LPD_i) + \beta_2 LY + \epsilon_{ij} \quad (4.3)$$

Where: LQ_{ij} = the natural log of the quantity imported
of the i th item from world region j ,

$(LPM_{ij}/LPDi)$ = the proxy import price expressed in
 natural logarithms of apparel item i
 from world region j divided by the price
 expressed in natural logarithms of the
 domestic item i , and
 LY = disposable income expressed in natural
 logarithms.

A typical estimated equation, using ordinary least
 squares for apparel category coats from world region
 Southeast Asia, is:

$$LQ_{ij} = 6.487 - 1.226LPM_{ij} + 3.553LY \quad (4.4)$$

(.0007) (.0001)

The significance levels of the estimated parameters
 are shown in parenthesis below the coefficients. These
 results suggest that if the price of imported Asian coats
 should decrease by one percent, the quantity demanded would
 increase by 1.23 percent. If the price should increase by
 one percent, the quantity demanded would decrease by 1.23
 percent. Also, the income elasticity of import demand has
 the expected positive sign. This equation states that if
 the U.S. disposable income increased by one percent the
 demand for coats from Southeast Asia would increase by 3.55
 percent, and if U.S. disposable income should decrease by
 one percent, the demand for Southeast Asian coats would

decrease by 3.55 percent. This elasticity implies that coats from Southeast Asia are a luxury good since the income elasticity of demand is greater than unity.

The second model divided income and import quantity by population yielding a per-capita basis. The function appears mathematically as follows:

$$Q_{ij}/\text{Pop} = f(\text{PM}_{ij}/\text{PD}_i, Y/\text{Pop}) \quad (4.5)$$

Translating into the regression equation:

$$Q_{ij}/\text{Pop} = \beta_0 + \beta_1(\text{PM}_{ij}/\text{PD}_i) + \beta_2 Y/\text{Pop} + \epsilon_{ij} \quad (4.6)$$

Where: Q_{ij}/Pop = per capita imports of ith item from jth region (= the quantity imported of the ith item from world region j divided by U.S. population),

$(\text{PM}_{ij}/\text{PD}_i)$ = the proxy import price = price of apparel category i from world region j divided by the price of the corresponding domestic apparel item i in the U.S., and

Y/Pop = Per capita income in the U.S.

The natural logarithm function appears as follows:

$$\text{LQ}_{ij}/\text{LPop} = \beta_0 + \beta_1(\text{LPM}_{ij}/\text{LPD}_i) + \beta_2 \text{LY}/\text{Pop} + \text{L}\epsilon_{ij} \quad (4.7)$$

Where: LQ_{ij} = the natural log of the quantity
imported of the i th item from world
region j divided by the log of
population,

$(LPM_{ij}/LPDi)$ = the proxy import price expressed in
natural logarithms of apparel item i
from world region j divided by the
price expressed in natural logarithms
of the domestic item i , and

LY = disposable income expressed in
natural logarithms divided by the log
of population.

The coefficients of the two models are tabulated in the following tables. Since each model used the natural logarithm function, the coefficients presented are the elasticities. Overall, the positive relationship between quantity of imports and disposable income is consistent with economic theory. The negative relationship between prices and shipments to the United States (imports into the U.S.) is also consistent with economic theory. In the following section each apparel category model will be reviewed for significance for price and income by world region.

Aggregate Regression Models

Coats and Suits. The import demand relationship generally provided parameter estimates for price ratio and income that were expected (see Table 4.1). The coefficients for Southeast Asia were highly significant for both price ($p = .0003$) and income ($p = .0001$). This world region represents the exporters of Hong Kong, Taiwan and Korea. Thus, a change in either U.S. income or export price reflects significant changes in coat/suit imports into the United States from this region.

Overall the positive relationship between quantity of imports and disposable income is consistent with economic theory. The negative relationship between prices and

Table 4.1. Import Demand Elasticities for Coats/Suits.

Country of Origin	$P_{im} \backslash P_{us}$	Disp
Canada	-.81 (.4889)	-1.58 (.0293)
Latin America	-.49 (.1054)	1.93 (.0179)
Other Western Hemisphere	-.88 (.1884)	4.72 (.0515)
E.E.C.	-.93 (.0001)	1.14 (.0106)
Other O.E.C.D.	-.74 (.0388)	.72 (.3450)
Communist Europe	-.46 (.8229)	2.97 (.0062)
China	-1.00 (.2443)	6.8 (.0007)
Japan	-.78 (.0471)	1.28 (.0358)
North and South Asia	-.86 (.0228)	4.75 (.0001)
South-east Asia	-1.16 (.0003)	3.22 (.0001)
Australia	1.07 (.0006)	1.63 (.2959)
Africa	-.80 (.1680)	4.9 (.0107)

P_{im} = Price of imports dollars per unit.

P_{us} = Price of domestic dollars per unit.

Disp = Disposable income.

Pop = Population.

Figures in Parenthesis indicate significance probabilities.

shipments to the United States is also consistent with economic theory. The equation for Australia was significant for price ($p = .0006$) but not to income ($p = .2659$). The positive relationship indicates the Australian products must be specialized or luxury products. Other import price parameters that were significant for world regions at the .05 level include E.E.C., other O.E.C.D., Japan, and North/South Asia. Each of these countries' products have some U.S. reaction to changes in price but have inelastic demand for their products in the U.S., with elasticities ranging from $-.74$ to $-.93$.

Income displayed a positive relationship as expected with the exception of Canada. These elasticities range from $.72$ in other O.E.C.D to 6.8 in China. North/South Asia and Southeast Asia are significantly greater at a .0001 level which China was at the .0007 level. Communist Europe, Latin America, E.E.C., and Africa are significant at the .05 level.

Dresses. The coefficients for price and income are found in Table 4.2. The signs relating price to quantity are inversely related as expected for all twelve world regions. The signs for income are positively related except for Latin America where government policies could be affecting the market structure.

Table 4.2. Import Demand Elasticities for Dresses.

Country of Origin	P_{im}/P_{us}	Disp
Canada	-1.14 (.003)	3.27 (.0003)
Latin America	-.02 (.8097)	-.14 (.5227)
Other Western Hemisphere	-.71 (.58)	2.2 (.0195)
E.E.C.	-1.3 (.0001)	.789 (.0510)
Other O.E.C.D.	-.73 (.0388)	.71 (.3450)
Communist Europe	-.45 (.2229)	2.9 (.0062)
China	-.89 (.0541)	9.01 (.0001)
Japan	-1.9 (.0033)	1.35 (.0511)
North and South Asia	-1.5 (.0230)	1.84 (.0001)
South-east Asia	-1.2 (.0021)	2.05 (.0004)
Australia	-1.9 (.0040)	1.7 (.0165)
Africa	-.56 (.0982)	.523 (.1496)

P_{im} = Price of imports dollars per unit.

P_{us} = Price of domestic dollars per unit.

Disp = Disposable personal income.

Figures in Parenthesis indicate significance probabilities.

The world regions whose products displayed elastic demands for dresses in the U.S. are Canada, E.E.C., Japan, North/South Asia, Southeast Asia, and Australia. Each of these were significant at the .05 level, and ranged in value from 1.14 to 1.9 in absolute value. The coefficients for the other regions were all price inelastic.

Disposable income is a major factor for Canada, China, North/South Asia, Southeast Asia, and Australia at a significance level of .0165 or better. Imports from other world regions including Japan, W. Hemisphere, and Communist Europe also were statistically significant at approximately .05.

Shirts. The normal price quantity relationship (inverse) is present for all world regions except Communist Europe. The European Economic Commonwealth and Communist Europe also display an unexpected relationship with respect to income and quantity shipped. The remaining world regions reveal the expected positive relationships.

The major contenders include China, Australia, and Africa with both income and price being significant at a .01 level. Imports from Canada, other O.E.C.D. and Japan respond to price effects while Latin American, North and South Asia, and Southeast Asia respond to income at a .05 level or better. See Table 4.3 for results.

Table 4.3. Import Demand Elasticities for Shirts.

Country of	$P_{im} \backslash P_{us}$	Disp	Origin
Canada	-.68 (.0009)	.25 (.59)	
Latin America	-.10 (.5564)	1.47 (.0001)	
Other Western Hemisphere	-.56 (.1546)	.04 (.86)	
E.E.C.	-.14 (.6404)	-.43 (.4053)	
Other O.E.C.D.	-1.33 (.0012)	.95 (.0961)	
Communist Europe	.15 (.8820)	-.06 (.9507)	
China	-4.02 (.0008)	8.28 (.0001)	
Japan	-1.38 (.0271)	.77 (.1033)	
North and South Asia	-.08 (.59)	1.20 (.0001)	
South- east Asia	-.56 (.0765)	1.63 (.0005)	
Australia	-1.24 (.0083)	1.88 (.0001)	
Africa	-.85 (.0007)	2.25 (.0001)	

P_{im} = Price of imports dollars per unit.

P_{us} = Price of domestic dollars per unit.

Disp = Disposable income.

Pop = Population.

Figures in Parenthesis indicate significance probabilities.

Sweaters. One of the highest imported apparel categories, sweaters, is less sensitive to price and income elasticities than shirts, dresses and coats/suits. Income possesses a negative relationship regarding Canadian and Japanese imports. Imports from Africa maintain a positive relationship between price and imports indicating African sweaters may be specialty items.

Only Communist Europe and Australia imports are significant at the .05 level or better for both price and income. North and South Asia and other O.E.C.D. indicate luxury products are being shipped. Latin American, other Western Hemisphere, and E.E.C. suggest inelastic demands indicating normal products. Imports from Communist Europe, China, Japan, Southeast Asia, Africa, and Australia have significant income elasticities ranging from .46 to 9.06. See Table 4.4 for results.

Skirts. Income is significant for all world regions' imports with the exception of the European Economic Commonwealth and other O.E.C.D. countries. The E.E.C. and O.E.C.D., are not only non-significant but also inversely related.

In general import price elasticities were very small and insignificant for skirts. Only E.E.C. and North/South

Table 4.4. Import Demand Elasticities for Sweaters.

Country of Origin	P_{im}/P_{us}	Disp
Canada	- .56 (.6676)	-1.5 (.5162)
Latin America	- .64 (.0252)	.67 (.5450)
Other Western Hemisphere	-3.8 (.0028)	.87 (.5476)
E.E.C.	- .91 (.0081)	.33 (.5622)
Other O.E.C.D.	-1.56 (.0262)	1.31 (.1562)
Communist Europe	2.62 (.0350)	3.97 (.0036)
China	- .65 (.4186)	5.92 (.0006)
Japan	- .53 (.5711)	-1.72 (.0030)
North and South Asia	-1.32 (.0079)	1.62 (.1217)
South-east Asia	- .23 (.0510)	.46 (.0259)
Australia	- .53 (.0156)	9.06 (.0001)
Africa	.08 (.8392)	7.67 (.0013)

P_{im} = Price of imports dollars per unit.

P_{us} = Price of domestic dollars per unit.

Disp = Disposable personal income.

Figures in Parenthesis indicate significance probabilities.

Asia are significant at the .05 level. North/South Asia was significant for both income and price.

The coefficients for Canada, other Western Hemisphere, Communist Europe, and Africa are positively related indicating a change in price does not influence import quantities as expected. A decrease in price decreases shipments and an increase in price increases shipments. See Table 4.5 for results.

Slacks. The estimate of income elasticities of import demand were statistically strong. All the elasticities were positive and all were significant at the .05 level or better with the exception of Australia. Australia's insignificance can be a result of a small sample size. The import price elasticities did turn out as expected. Only Canada, E.E.C., other O.E.C.D. and Japan respond inversely See Table 4.6 for results.

Summary

In general, the sign of elasticities are as expected for both income (positive) and price (negative). Dresses and sweater imports displayed the most significance in response to price across all twelve world regions. The most significant were E.E.C., O.E.C.D., North/South Asia, and Australia.

Table 4.5. Import Demand Elasticities for Skirts.

Country of Origin	P_{im}/P_{us}	Disp
Canada	.36 (.2347)	2.06 (.0001)
Latin America	-.06 (.8032)	1.40 (.0065)
Other Western Hemisphere	1.09 (.0574)	4.10 (.0343)
E.E.C.	-.80 (.0039)	-.38 (.4301)
Other O.E.C.D.	-.64 (.3165)	-.47 (.5221)
Communist Europe	.12 (.8163)	6.39 (.0031)
China	-.31 (.4079)	12.08 (.0001)
Japan	-.39 (.6474)	1.11 (.0911)
North and South Asia	-.64 (.0018)	2.51 (.0001)
South-east Asia	-.55 (.0822)	1.09 (.0063)
Australia	-.45 (.2246)	2.24 (.0165)
Africa	.17 (.8540)	2.31 (.0231)

P_{im} = Price of imports dollars per unit.

P_{us} = Price of domestic dollars per unit.

Disp = Disposable personal income.

Figures in Parenthesis indicate significance probabilities.

Table 4.6. Import Demand Elasticities for Slacks.

Country Of Origin	P_{im}/P_{us}	Disp
Canada	-.88 (.0129)	1.22 (.0473)
Latin America	.71 (.3693)	4.44 (.0005)
Other Western Hemisphere	3.10 (.0001)	4.29 (.0215)
E.E.C.	-.66 (.0198)	1.34 (.0441)
Other O.E.C.D.	-.44 (.3907)	2.75 (.0145)
Communist Europe	3.41 (.0001)	2.58 (.0098)
China	4.31 (.0001)	5.07 (.0102)
Japan	-.98 (.0686)	4.45 (.0050)
North and South Asia	1.25 (.0560)	7.29 (.0036)
South- east Asia	.52 (.3896)	3.77 (.0002)
Australia	2.45 (.0001)	2.73 (.0772)
Africa	.11 (.6406)	11.9 (.0001)

P_{im} = Price of imports dollars per unit.

P_{us} = Price of domestic dollars per unit.

Disp = Disposable personal income.

Figures in Parenthesis indicate significance probabilities.

The import income elasticity of demand was most significant for coat/suits, skirts and slacks. Apparel imports from China and southwest Asia were consistently responsive to income, i.e., most apparel imports from those world regions has statistically significant income elasticities.

Per-Capita Models

The second model considered income and import quantities divided by population to provide import quantities on a per-capita basis. The model was executed for each apparel category. Findings by category are listed below.

Coats/Suits. In general the price coefficients range from $-.26$ to $-.61$. The signs are inversely related for price and positive for per-capita income in conjunction with economic theory. The world regions which are most consistent with theory at a significance level of .05 or better were E.E.C., Japan, North and South Asia, and Southeast Asia. Imports from other Western Hemisphere displayed a positive relationship with price indicating specialty coats or snob products.

Income on a per-capita basis is significant for all world regions except other Western Hemisphere, other O.E.C.D., and Australia. These three areas may not show

significance due to the small percentage of imports in the coat/suit category. Canada displays a negative relationship. This may be due to government regulations and restrictions between the United States and Canada. See Table 4.7 for results.

Dresses. Price is significant at the .05 level or greater for all world regions except Latin America, other Western Hemisphere, China, and Africa. The inverse relationship is maintained for all regions and the price elasticity of import demand in the U.S. for dresses was very inelastic.

Statistically significant per-capita income elasticities of import demand for dresses in the U.S. range from 1.99 to 10.6, but Canada, other O.E.C.D., and Communist Europe are inversely related indicating an increase in personal income does not increase imports from these countries. See Table 4.8 for results.

Shirts. Shirt imports are not as consistent regarding price elasticities. Only elasticities of imports from Canada, other O.E.C.D., China, Japan, Australia and Africa were significant at the .05 level.

Per-Capita income is highly significant ($p = .0008$) or less for imports from Latin American, China, North/South Asia, Southeast Asia, Australia, and Africa. The results

Table 4.7. Import Elasticities for Suits/Coats (Per Capita).

Country of Origin	P_{im}/P_{us}	Disp/Pop
Canada	-0.42 (.4874)	-1.96 (.0231)
Latin America	-0.26 (.0938)	2.27 (.0186)
Other Western Hemisphere	+0.46 (.1877)	5.52 (.0553)
E.E.C.	-0.48 (.0001)	1.28 (.0146)
Other O.E.C.D.	-0.38 (.0405)	.77 (.3946)
Communist Europe	-0.24 (.2149)	3.37 (.0070)
China	-0.54 (.2338)	8.05 (.0007)
Japan	-0.40 (.0423)	1.43 (.0467)
North and South Asia	-0.46 (.0232)	5.55 (.0001)
South- east Asia	-0.61 (.0003)	3.76 (.0001)
Australia	-0.56 (.0006)	1.84 (.3234)
Africa	-0.42 (.1619)	5.80 (.0111)

P_{im} = Price of imports dollars per unit.

P_{us} = Price of domestic dollars per unit.

Disp = Disposable personal income.

Pop = Population

Figures in Parenthesis indicate significance probabilities.

Table 4.8. Import Elasticities for Dresses (Per Capita).

Country of Origin	P_{im}/P_{us}	Disp/Pop
Canada	-5.60 (.0027)	-.06 (.0003)
Latin America	-0.012 (.8088)	.25 (.3470)
Other Western Hemisphere	-0.41 (.5392)	2.71 (.0178)
E.E.C.	-0.67 (.0001)	.86 (.0716)
Other O.E.C.D.	-0.79 (.0014)	-.26 (.4830)
Communist Europe	-0.46 (.0220)	-.14 (.8869)
China	-0.46 (.0621)	10.60 (.0001)
Japan	-1.01 (.0035)	1.50 (.0641)
North and South Asia	-0.84 (.0229)	2.11 (.0001)
South- east Asia	-0.66 (.0026)	2.34 (.0006)
Australia	-1.00 (.0039)	1.99 (.0177)
Africa	-0.29 (.0984)	.56 (.1871)

P_{im} = Price of imports dollars per unit.

P_{us} = Price of domestic dollars per unit.

Disp = Disposable personal income.

Pop = Population

Figures in Parenthesis indicate significance probabilities.

indicated that income was highly significant or not significant at all for imported shirts. See Table 4.9 for results.

Skirts. Skirt imports are not very responsive to price. Price elasticities were significant for only two world regions, E.E.C. and North/South Asia. Canada and other Western Hemisphere imply a positive relationship between price and quantity, these countries contribute very little to imported skirts.

Disposable income was a highly significant determination of import demand. Imports from all world regions had statistically significant income elasticities with the exception of E.E.C. and O.E.C.D. whose signs are reversed. See Table 4.10 for results.

Slacks. Results for price elasticity with the slack category were mixed, with five price elasticities having positive signs, but three were negative and significant. Per-capita income was highly significant. Imports from all world regions had income elasticities that were significant at a level of .05 or better with the exception of Australia which has a significance of .08 and all were positive. See Table 4.11 for results.

Table 4.9. Import Elasticities for Shirts (Per Capita).

Country of Origin	P_{im}/P_{us}	Disp/Pop
Canada	-0.36 (.0010)	.23 (.6823)
Latin America	-0.05 (.5526)	1.66 (.0001)
Other Western Hemisphere	-0.29 (.1535)	-.022 (.9475)
E.E.C.	-0.070 (.6615)	-.06 (.3248)
Other O.E.C.D.	-0.69 (.0011)	1.06 (.1164)
Communist Europe	0.052 (.9196)	-.09 (.9345)
China	-2.08 (.0006)	9.74 (.0001)
Japan	-0.71 (.0274)	.80 (.1446)
North and South Asia	-0.05 (.5727)	1.33 (.0001)
South- east Asia	-0.30 (.0762)	1.83 (.0008)
Australia	-0.65 (.0077)	2.18 (.0001)
Africa	-0.45 (.0006)	2.60 (.0001)

P_{im} = Price of imports dollars per unit.

P_{us} = Price of domestic dollars per unit.

Disp = Disposable personal income.

Pop = Population

Figures in Parenthesis indicate significance probabilities.

Table 4.10. Import Elasticities for Skirts (Per Capita).

Country of Origin	P_{im}/P_{us}	Disp/Pop
Canada	0.18 (.2417)	2.40 (.0001)
Latin America	-0.03 (.7971)	1.57 (.0091)
Other Western Hemisphere	+0.57 (.0565)	4.84 (.0352)
E.E.C.	-0.42 (.0041)	-.54 (.3488)
Other O.E.C.D.	-0.33 (.3241)	-.64 (.4620)
Communist Europe	0.059 (.8252)	7.50 (.0030)
China	-0.17 (.3895)	14.3 (.0001)
Japan	-0.19 (.6589)	1.21 (.1163)
North and South Asia	-3.33 (.0018)	2.89 (.0001)
South- east Asia	-0.28 (.0849)	1.20 (.0102)
Australia	-0.23 (.2242)	2.61 (.0184)
Africa	-0.09 (.8506)	2.70 (.0245)

P_{im} = Price of imports dollars per unit.

P_{us} = Price of domestic dollars per unit.

Disp = Disposable personal income.

Pop = Population

Figures in Parenthesis indicate significance probabilities.

Table 4.11. Import Elasticities for Slacks (Per Capita).

Country of Origin	P_{im}/P_{us}	Disp/Pop
Canada	-0.46 (.0126)	1.40 (.0545)
Latin America	0.45 (.3895)	5.20 (.0005)
Other Western Hemisphere	0.16 (.0001)	5.09 (.0221)
E.E.C.	-0.35 (.0189)	1.54 (.0510)
Other O.E.C.D.	-0.23 (.3823)	3.20 (.0165)
Communist Europe	1.78 (.0001)	3.005 (.0114)
China	2.24 (.0001)	5.95 (.0116)
Japan	-0.53 (.0649)	5.24 (.0054)
North and South Asia	-0.66 (.0544)	8.60 (.0038)
South- east Asia	-0.26 (.4105)	4.40 (.0003)
Australia	1.27 (.0001)	3.18 (.0851)
Africa	-0.06 (.6504)	14.14 (.0001)

P_{im} = Price of imports dollars per unit.

P_{us} = Price of domestic dollars per unit.

Disp = Disposable personal income.

Pop = Population

Figures in Parenthesis indicate significance probabilities.

Sweaters. Only Australian sweaters are significant for both price and income. Approximately half of the world regions are significant regarding price at the .05 level of significant or better and half are significant regarding per-capita income at the .05 level. Imports from Latin American, other Western Hemisphere, E.E.C., other O.E.C.D., North/South Asia and Australia responded to price while imports from Communist Europe, China, Japan, Southeast Asian, and Africa responded to per-capita income. See Table 4.12 for results.

Summary

The per-capita model fit well with respect to signs of parameters. The price elasticities were primarily negative while the income elasticities were positive.

Considering imports across world regions, dresses, sweaters, and suits/coats had the most consistently significant price elasticities. The world regions whose exports to the U.S. responded best included E.E.C., North/South Asia, and Australia. The price elasticities of import demands involved were small indicating inelastic import demand.

Income elasticities of import demand were most significant with the skirt and slack categories. Imports from the major world regions of China, North/South Asia,

Table 4.12. Import Elasticities for Sweaters (Per Capita).

Country of Origin	P_{im}/P_{us}	Disp/Pop
Canada	-0.25 (.7044)	-2.40 (.4594)
Latin America	-0.33 (.0263)	.697 (.5979)
Other Western Hemisphere	-1.99 (.0028)	1.00 (.5613)
E.E.C.	-0.47 (.0084)	.287 (.6676)
Other O.E.C.D.	-0.82 (.0269)	1.50 (.1756)
Communist Europe	1.36 (.0354)	4.66 (.0038)
China	-0.36 (.3929)	7.00 (.0006)
Japan	-0.28 (.5564)	-2.12 (.0021)
North and South Asia	-0.69 (.0080)	1.84 (.1364)
South- east Asia	-0.12 (.0515)	.44 (.0610)
Australia	-0.27 (.0153)	10.70 (.0001)
Africa	-0.04 (.8508)	9.024 (.0015)

P_{im} = Price of imports dollars per unit.

P_{us} = Price of domestic dollars per unit.

Disp = Disposable personal income.

Pop = Population

Figures in Parenthesis indicate significance probabilities.

and Southeast Asia had the most consistently significant income elasticities of import demand in the U.S., while the European Economic Commonwealth, Japan, and other O.E.C.D. had the least significance.

Summary and Hypotheses

The results of Hypothesis 1 and 2 will be given in this section. The remaining 8 hypothesis can be found at the conclusion of the results profitability analysis.

Hypothesis 1: Apparel classification does not affect apparel profitability.

Apparel was categorized into six classifications (1) suits and coats, (2) dresses, (3) shirts, (4) sweaters, (5) skirts, and (6) slacks. Each classification was tested separately to determine if differences existed between apparel classifications.

For the dress classification, import demand price was elastic for U.S. imports from Canada, E.E.C., Japan, North/South Asia, Southeast Asia, and Australia. Import demand price was inelastic for U.S. imports from the other exporting world regions (see Table 4.2).

Import price elasticities were shown for the shirt category from the exporting world regions Other O.E.C.D., China, Japan, and Australia (See Table 4.3). Import demand

for sweaters were price elastic from the world regions of other O.E.C.D., Communist Europe, and North/South Asia (see Table 4.4).

U.S. skirt imports were price elastic only for imports from "other Western Hemisphere" (see Table 4.5). Import demand for slacks did not respond as expected. None of the import demand functions for slacks except Japan ($p = .069$) had significant price elasticities with correct signs as shown in Table 4.6. A number were significant with positive signs suggesting that apparel imports from those regions could be snob, bandwagon or price (implies quality) goods. Regions represented here were Australia, China, Communist Europe and parts of the Western Hemisphere outside the E.E.C. and O.E.C.D. countries. Fiber composition of the apparel imports was not determined in this study, and that could be a very important consideration when dealing with small qualities and/or specialty products. Since import quantities of slacks into the U.S. from these regions have been small, the possibility of a positive price elasticity of demand for slack imports from these regions cannot be ruled out.

Since apparel categories did show differences among price elasticities from differing world region. Hypothesis

1 would be rejected. Apparel classification would be a factor in apparel profitability.

Hypothesis 2: Exporting world region does not affect apparel profitability.

Again since each apparel category was different with respect to the world regions, Hypothesis 2 was rejected and it was concluded that exporting world regions did affect apparel profitability.

CHAPTER V

RESULTS OF PROFITABILITY ANALYSIS: PRIMARY DATA

This chapter presents the profitability analysis based upon the primary summary data. The sample and respondents will be briefly described, each factor will be analyzed separately, and the factors will be combined to get an overall effect of their impact and importance on apparel profitability in the United States. The following hypotheses were examined and tested, with the supporting questions from the questionnaire given in parentheses:

H3: Brand type does not significantly affect apparel profitability. (Q3 & Q4)

H4: Different exporting world regions do not significantly affect apparel profitability. (Q8)

H5: Apparel Initial retail prices does not significantly affect retail profitability. (Q12)

H6: No differences exist between the levels of fashion and the profitability of domestic and imported apparel. (Q3)

H7: The type of item (New versus Basic/Staple) does not significantly affect apparel profitability. (Q2)

H8: The method of purchase does not significantly affect apparel profitability. (Q6 & Q7)

H9: The buyers perceived quality of apparel does not influence profitability. (Q1)

H10: Store type does not significantly affect apparel profitability. (Q26)

Description of Responses/Respondents

Three hundred and eight apparel buyers responded to the mail survey (39 percent), but due to the detailed nature of the questionnaire only 254 of the questionnaires were usable (32 percent). Since the buyers answered according to their buying responsibilities, all answers were not available for each question. Therefore the number of responses, n, will vary by apparel category.

Demographics

Demographic data included the store type, the buyer's age, the length of time in the buying occupation (overall), and the length of time buying for the current store.

Store type. Approximately one half (51%) of the buyers described their store as a Department Store, while 35% responded their store type was a specialty store. Only

7% were employed by a discount store and 4% for a chain store (see Table 5.1)

Age. The majority of respondents fell within the 25-35 years of age bracket (47%), although the sample included buyers whose ages ranged from below 25 years (1%) to over 50 years (13%). The median age range was 36-40 years (see Table 5.1). Seven buyers declined to disclose their ages.

Length of time buying. The overall length of time in the occupation ranged from 22 respondents who had bought for less than 2 years to 63 respondents who have bought for more than 15 years. The median buying range and the mode was in the 6 to 10 year span. Five of the respondents failed to respond to this question (see Table 5.1).

Length of time buying for this store. The majority of respondents were employed as buyers for their respective stores for less than 10 years (76%). The most frequent response range (36%) was between 2 - 5 years (see Table 5.1).

Summary. Of the 254 usable questionnaires approximately one half described their store as a department store. The age range varied from below 25 to over 50 years old with 47% falling in the 25 to 35 age bracket and 35% in the 36 to 45 age bracket.

Table 5.1. Demographic Characteristics of Respondents.

Characteristic	Frequency	Percent
<u>Store Type</u>		
1. Department	124	51%
2. Discount	17	7%
3. Specialty	85	35%
4. Chain	7	3%
5. Other	10	4%
No Answer	<u>11</u>	
	n = 254	<u>100%</u>
<u>Age (in years)</u>		
1. Below 25	2	1%
2. 25 - 30	54	22%
3. 31 - 35	63	25%
4. 36 - 40	42	17%
5. 41 - 45	31	13%
6. 46 - 50	22	9%
7. Over 50	33	13%
No Answer	<u>7</u>	
	n = 254	<u>100%</u>
<u>Length of time buying</u> (years in occupation)		
1. Less than 2 years	22	9%
2. 2 - 5 years	56	22%
3. 6 - 10 years	67	27%
4. 11 - 15 years	41	17%
5. Over 15 years	63	25%
No Answer	<u>5</u>	
	n = 254	<u>100%</u>
<u>Length of time buying</u> <u>for this store</u>		
1. Less than 2 years	36	15%
2. 2 - 5 years	89	36%
3. 6 - 10 years	63	25%
4. 11 - 15 years	25	10%
5. 16 - 20 years	13	5%
6. 21 - 25 years	10	4%
7. Over 25 years	13	5%
No Answer	<u>5</u>	
	n = 254	<u>100%</u>

Most of the respondents had more than 2 years experience as a buyer (91%) with 63 of the respondents (25%) with more than 15 years experience. While buyers had experience in the profession, only 36 had been buying for their current store for more than 15 years. The majority (61%) had been buying for their store for 2 - 10 years.

These demographics show the level of expertise involved with the survey participants. The sample group tends to represent experienced buyers who have bought for more than one store with the experience concentrated in department and specialty stores.

Sample Characteristics

Responses from questions 9 through 25 of the questionnaire (Appendix D) were used to calculate initial markup dollars and percentages as shown in Figure 5.1 and maintained markup dollars and percentages were calculated by the procedure shown in Figure 5.2. These results were then used as the dependent variable in analysis of variance models to determine if profitability differed from effects of the following variables: (1) Brand, (2) Country of Origin, (3) Fashion level, (4) Initial retail price, (5) Item type, (6) Purchase method, (7) Quality, and (8) Store type.

Initial Markup Dollars: $IMD = RP - CMS$

Where: IMD = Initial Markup Dollars

RP = Retail Price (Q12)

CMS = Cost of Merchandise sold (Q10)

Initial Markup Percent: $IMP = IMD / RP$

Where: IMP = Initial Markup Percent

IMD = Initial Markup Dollars

RP = Retail Price

Retail Selling Price: $RP = NP \times OP$

Where: RP = Retail Price

NP = Number Purchased (Q9)

OP = Original Retail Price (Q12)

Cost of Merchandise Sold: $CMS = NP \times PP$

Where: CMS = Cost of Merchandise Sold

NP = Number Purchased (Q9)

PP = Purchase Price (Q10)

Figure 5.1. Calculation of initial markup.

Maintained Markup Dollars: $MMD = (RP - RED) - CMS$

Where: $MMD =$ Maintained Markup Dollars

$RP =$ Retail Price

$RED =$ Reductions including

1) Shortages and Damages at retail

(Q15)

2) Advertised Markdowns (Q20) x

Number Sold at Advertised

price (Q21) and

3) Markdowns: {Original selling

price (Q12) - Markdown price

(Q23)} x Number of items

sold at markdown price (Q24).

$CMS =$ Cost of Merchandise Sold

Total Retail = Number of items

Purchased (Q9) X Original

retail price (Q12).

Maintained Markup Percent: $MMP = MMD / RP$

Where: $MMD =$ Maintained Markup Dollars

$RP =$ Retail Selling Price.

Figure 5.2. Formula for maintained markup.

Out of the 254 responses, 40 buyers indicated they did not stock any imported merchandise and 19 did not stock any domestic merchandise. Therefore, 195 respondents could not compare equivalent garments purchased both domestically and imported as requested in the introduction of the questionnaire. Figure 5.3 provides the frequencies of these responses.

Apparel types were sorted according to question one of the questionnaire, providing the following categories: (1) Coats, Jackets or Suits, (2) Dresses, (3) Shirts or Blouses, (4) Sweaters, and (5) Slacks or Trousers. A

Type of Purchase	Frequency
Did not have any imported merchandise in stock.	40
Did not have any domestic merchandise in stock.	19
Had both imported and domestic merchandise in stock.	195

Figure 5.3. Sample sourcing variations.

breakdown of response by category can be found in Figure 5.4. There are at least 36 responses for each apparel category.

Findings and Analysis

Both initial and maintained markups were used with each variable, grouped by exporting country and by either domestic or import, in sixteen two way Analysis of Variance models. Initially, total apparel by (all apparel categories combined) country and by import versus domestic was considered, i.e., individual apparel categories were not broken out and analyzed initially.

Apparel Category	Responses
Coats, & Suits	60
Dresses	43
Shirts	36
Sweaters	61
Slacks	48

Figure 5.4. Response Rates by Category.

In the aggregate (all apparel categories combined) the analysis of variance was not significant using initial markup and maintained markup as the dependent variables, and statistically significant differences were not found among variables across imported and domestic apparel. Using initial and maintained markup as the dependent variable, two-way, three-way and four-way analysis of variance models were used to determine differences in effects for each variable and interactions. The two-way models compared production location of apparel (domestic or imported) with the other variables of interest in this study, which were apparel retail price, brand, fashion level, store type, purchase method and quality. The three-way and four-way models included combinations of these variables and interactions.

The following hypotheses were tested for significant differences between levels:

H3: No differences exist between brand type and domestic and imported apparel.

H4: No differences exist in profitability between different exporting world regions.

H5: No differences exist between initial retail prices and profitability.

H6: No differences exist between the levels of fashion and the profitability of domestic and imported apparel.

H7: The type of item (new versus basic/staple) does not significantly affect apparel profitability.

H8: The method of purchase does not significantly affect apparel profitability.

H9: The buyers perceived quality of apparel does not influence profitability.

H10: The type of store does not significantly affect apparel profitability.

In this section, results for each apparel model (ANOVA) will be reported. These will include the level of significance for each variable, the significance of the model, the significance of interactions (if any), and the results of the Tukey test, a post hoc test.

Results for Two-Way Models

Sweaters. There were 66 responses to the sweater category. Using initial markup as the dependent variable and brand as one independent variable, statistically significant differences were found ($p = .0248$) between the three brand types. Significant differences were also found between the domestic and imported sweaters ($p = .0001$). No

interaction took place (see Table 5.2 for results summary). The model was significant at the $p = .0001$ level or greater. Those results indicate that profits on sweaters differed by brands across production location (domestic or imports).

A post hoc test, Tukey, was performed to indicate which brand level was different from the others. Off-brand was the one significantly different from the others two. Also the main effect between domestic and imported sweaters was found to differ. Imports had a calculated initial markup mean of 54 percent whereas the mean rate for domestic sweaters was 43 percent. Imports were anticipated to have higher initial markup than domestic sweaters. The other variables for sweaters were not significant with initial markup as the response variable. When maintained markup was used as the dependent variable very few factors were significant at all even though some were significant with initial markup percentage.

Shirts. Three models for shirts were significant, two at the $p = .0001$ level and one the $p = .0004$ level. In the first model, levels of fashion ($p = .0013$) and production location $p = .0001$ (domestic or import) were significant. Initial retail price ($p = .0001$) and quality ($p = .071$)

Table 5.2. Analysis of Variance Summary Table of Brand
Type Between Domestic and Imported Sweaters
(Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	5	0.2161	8.41	.0001
Brand (A)	2	0.0404	3.930	.0248
Domestic	1	0.1152	22.430	.0001
or Import (B)				
A X B	2	0.00895	0.870	.4234
Error	60	0.3082		
Total	65	0.5243		

were significant, respectively, in the second and third models. Production location was significant at approximately $p = .0001$ and $p = .05$ for the two models. Initial markup was the dependent variable (see Tables 5.3-5.5 for results summary). The other variables and interaction as well as maintained markup, were insignificant. Fashion, retail prices, and quality across imports and domestically produced shirts affect shirt profitability.

Coats and suits. The model for coats and suits was significant at the $p = .0001$ level, and there were 54 responses to coats and suits. Highly significant differences with regard to fashion ($p = .0001$) and production location ($p = .0001$), were found. Interaction also was significant ($p = .0001$). Differences did occur between the levels of fashion: (1) fashion, (2) mass fashion and (3) classic. Interaction between domestic and imported coats and levels of fashion was significant ($p = .0001$). This suggests that the level of fashion was not constant for imports versus domestic coats and suits.

The post hoc, Tukey test was performed to determine where the differences existed. The Tukey test with 90 percent confidence indicted the differences were between

Table 5.3. Analysis of Variance Summary Table of
Fashion Between Domestic and Imported Shirts
(Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	5	0.2786	9.520	.0001
Fashion (A)	2	0.0948	8.100	.0013
Domestic	1	0.1595	27.260	.0001
or Import (B)				
A X B	2	0.0123	1.050	.3603
Error	34	0.1989		
Total	39	0.4776		

Table 5.4. Analysis of Variance Summary Table of
Initial Retail Prices Between Domestic and
Imported Shirts (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	5	5864.2	99999.	.0001
Retail Price (A)	2	5808.3	99999.	.0001
Domestic	1	0.0536	7.770	.0086
or Import (B)				
A X B	2	0.0240	1.740	.1904
Error	34	0.2344		
Total	39	0.5864		

Table 5.5. Analysis of Variance Summary Table of
Quality Between Domestic and Imported Shirts
(Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	5	0.1820	6.74	.0004
Quality (A)	2	0.0317	2.940	.0708
Domestic or Import (B)	1	0.0237	4.390	.0461
A X B	2	0.0253	2.340	.1160
Error	26	0.1404		
Total	31	0.3224		

high fashion and the other fashion levels of fashion. Significant differences also existed between the fashion levels ($p = .0001$) and between domestic and imported coats and suits ($p = .0001$) using maintained markup as the dependent variable. This is a strong indication that fashion is a determining factor for coat and suit profitability (see Table 5.6). All other factors were not significant at reasonable levels.

Slacks. Significant variables for slack profitability were brand type ($p = .056$) and store type ($p = .082$) for two slack models using initial markup as the dependent variable. Differences in domestic versus imports were significant at the $p = .006$ and the $p = .0001$ levels for the two models. Both models were significant at the $p = .0001$ level. These results suggest that brand and store type are factors in the determination of the profitability of slacks in the United States, both for imports and for domestically produced slacks. See Table 5.7-5.8 for summaries of the results. Domestic slacks' initial markup averaged 55 percent ($n = 35$). The other variables were not significant factors in determining the profitability of imported slacks in the United States.

Table 5.6. Analysis of Variance Summary Table of
Fashion Between Domestic and Imported Coats
and Suits (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	7	5.6827	257.30	.0001
Fashion (A)	3	3.5659	376.74	.0001
Domestic	1	3.2291	1023.48	.0001
Or Import (B)				
A X B	3	3.8022	401.70	.0001
Error	46	0.1451		
Total	53	5.8278		

Table 5.7. Analysis of Variance Summary Table of Brand Type Between Domestic and Imported Slacks (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	5	0.29879	9.670	.0001
Brand (A)	2	0.03793	3.070	.0561
Domestic or or Import (B)	1	0.21355	34.550	.0001
A X B	2	0.00468	0.380	.6867
Error	46	0.2844		
Total	51	0.5831		

Table 5.8. Analysis of Variance Summary Table of Store
Type Between Domestic and Imported Slacks
(Initial markup Percentage).

SOURCE	df	SS	F	P
Model	6	0.3060	8.280	.0001
Store Type (A)	3	0.0441	2.390	.0816
Domestic	1	0.0521	8.470	.0056
or Import (B)				
A X B	2	0.0187	1.520	.2303
Error	45	0.2772		
Total	51	0.5832		

Results of Additional Models

In the preceding section, each factor was analyzed separately to determine if the levels among each factor was significant by itself. Since no one factor was significantly different with all apparel types or on apparel as a whole, combinations of factors were assembled and then analyzed.

Six of the strongest class variables were analyzed together, (1) brand (2) retail, (3) fashion, (4) store type (5) quality and (6) domestic/import. Due in part to missing values, significant differences were not found for the individual apparel categories or for the aggregate of all apparel categories combined in 6-way ANOVAs.

Models containing combinations of five of the six variables were then analyzed. Due to some correlation of the variables and some cells with missing values significant differences were not consistently found. Giving these limitations, particularly the missing value problem for cells in the 5-way and 6-way ANOVAs, models utilizing combinations of four variables were analyzed. Some interesting results were found with these models. This section will discuss the results of these models by apparel category.

Coats/Suits. Coats and Suits responded well to the four-way model involving store type, brand type, fashion, and import versus domestic (see Table 5.9). The most significant factors included fashion ($p = .0001$), domestic versus imports ($p = .0001$) and fashion with domestic/import interaction ($p = .0001$). The Tukey test indicated the differences in fashion to be between high fashion and the other fashion types.

Means from interactions ranged from mass fashion domestic coats and suits of 40.3 percent to high fashion imported suits and coats of 57.3 percent.

Dresses. The four-way model for dresses included the class variables: initial retail, store type, fashion, and quality. Several significant interactions were found such as retail and store type ($p = .0032$), retail and fashion ($P = .0812$), retail and quality ($P = .0812$), and fashion and quality ($P = .0399$).

The overall model had an overall F value of 15.7 with ($P = .0082$). The significant main effects were retail ($P = .0041$) and store type ($P = .0032$). The initial retail means varied from 50 percent in the low range to 52 percent in the moderate range. Store type means ranged from 43

Table 5.9. Analysis of Variance Summary Table Between Retail, Brand Type, Fashion, and Store Type for Coats (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	17	0.1743	2.43	.0618
Retail (A)	1	0.0187	4.430	.0570
Brand Type (B)	2	0.0474	5.600	.0191
Fashion (C)	2	0.0301	3.560	.0611
Store Type (D)	2	0.0066	0.780	.4787
A X C	1	0.0458	10.840	.0064
A X D	1	0.0091	2.150	.1681
A X D	1	0.0024	0.560	.4684
B x C	1	0.0021	0.500	.4929
B X D	1	0.0036	0.860	.3727
C X D	2	0.0084		.3993
Error	12	0.2249		
Total	29	0.2250		

percent in chain stores to 53 percent in specialty stores (see Table 5.10).

Shirts. Results from the most significant four-way ANOVA involved initial markup with fashion, brand type, initial retail and domestic/import are shown in Table 5.11. The only significant interaction took place between retail and domestic versus import, and it was only significant at $p = .0599$. Significant main effects included fashion ($p = .0029$), domestic versus import ($p = .0342$) and initial retail ($p = .0001$). A second less significant model (see Table 5.12) supported the significance of brand type and initial retail as factors and suggested store type ($p = .0028$) as a factor in profitability of shirts. A Tukey test was used on the first model to determine where differences occurred. The fashion levels which differed were between mass fashion and classic fashion. Differences occurred between all combinations of retail levels and between domestically produced and imported shirts.

Sweaters Two significant models were utilized for sweaters. The first model (Table 5.13) included the class variables fashion, brand type, store type, and domestic versus import. A significant main effect was found for brand type ($p = .0351$), store type ($p = .0227$) and domestic

Table 5.10. Analysis of Variance Summary Table Between Retail, Store Type, Fashion, and Quality for Dresses (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	17	0.0544	15.70	.0082
Retail (A)	2	0.0120	29.34	.0041
Store Type (B)	2	0.0136	33.43	.0032
Fashion (C)	3	0.0024	3.93	.1097
Quality (D)	2	0.0004	0.87	.4870
A X B	1	0.0082	40.31	.0032
A X C	1	0.0011	5.38	.0812
A X D	1	0.0054	26.32	.0068
C x D	1	0.0018	9.00	.0399
B X D	1	0.0007	3.49	.1351
Error	4	0.0008		
Total	21	0.0552		

Table 5.11. Analysis of Variance Summary Table of Fashion, Brand, and Retail Between Domestic and Imported Shirts (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	18	5864.3000	59801.900	.0015
Fashion (A)	2	0.0850	7.800	.0029
Brand (B)	2	0.0246	2.340	.1212
Retail (C)	2	4678.0000	99999.000	.0001
Domestic and Import (D)	1	0.0280	5.130	.0342
A X B	2	0.0072	1.970	.1649
A X D	2	0.0214	1.970	.1649
A X C	2	0.0015	0.140	.8708
B X D	2	0.0091	0.840	.4466
B X C	1	0.0027	0.490	.4909
C X D	1	0.0216	3.960	.0599
Error	21	0.1144		
Total	39	5864.4		

Table 5.12. Analysis of Variance Summary Table Between Retail, Brand Type, Store Type and Domestic and Imported Shirts (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	8	0.0561	5.520	.0015
Retail (A)	2	0.0181	7.130	.0056
Brand (B)	1	0.0051	4.050	.0602
Store Type (C)	3	0.0267	7.020	.0028
Domestic and Import (D)	1	0.0051	1.940	.1811
A X C	1	0.0096	7.530	.0138
Error	17	0.0216		
Total	25	0.0777		

Table 5.13. Analysis of Variance Summary Table of Fashion, Brand, and Store Type Between Domestic and Imported Sweaters (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	23	0.3369	3.280	.0004
Fashion (A)	3	0.0272	2.030	.1243
Brand (B)	2	0.0324	3.630	.0351
Store Type (C)	4	0.0548	3.180	.0227
Domestic and Import (D)	1	0.0340	7.620	.0085
A X B	3	0.0148	1.100	.3589
A X D	2	0.0133	1.490	.2377
A X C	3	0.0122	0.910	.4429
B X D	2	0.0287	3.220	.0500
C X D	3	0.0258	1.930	.1393
Error	42	0.1874		
Total	65	0.5243		

versus import ($p = .0085$). A significant interaction included brand type by domestic/import ($p = .0500$).

The Tukey test indicated differences occurred in the off-brand/unbranded merchandise when compared with national and private label merchandise. The means also varied significantly between imported merchandise, with mean = .54 and domestic merchandise with mean = .43. The interaction included means which varied from 39 percent in domestic national brand to 56 percent on imported private label.

The second sweater four-way ANOVA (Table 5.14) included main effects retail, brand, fashion and domestic/import. The significant main effects included initial retail price ($p = .0141$) and brand type ($p = .0424$). Interaction was found among retail and fashion ($p = .0437$).

The Tukey test, at a significance level of .10, did not indicate where the retail differences occurred. Brand differences occurred between off-brand/unbranded merchandise and national and private brands. The interaction ranged from 45 percent to 68 percent.

Slacks. The four-way model for slacks had a significance level of $p = .0003$. The main effects that were tested included retail, brand, store type, and

Table 5.14. Analysis of Variance Summary Table Between Retail, Brand Type, Fashion and Domestic and Imported Sweaters (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	22	0.3252	3.141	.0009
Retail (A)	2	0.0045	4.760	.0141
Brand (B)	2	0.0323	3.430	.0424
Fashion (C)	3	0.0140	0.990	.4075
Domestic and Import (D)	1	0.0122	2.590	.1156
A X B	2	0.0088	0.930	.4019
A X C	3	0.0419	2.960	.0437
A X D	2	0.0130	1.381	.2642
B X C	3	0.0034	0.240	.8673
B X D	2	0.0229	2.430	.1008
C X D	2	0.0182	1.930	.1589
Error	8	0.0134		
Total	21	5.4911		

domestic/import. No significant interactions were found. Among the main effects, store type ($p = .0828$) and domestic/import ($p = .0012$) were significant. Average markups with domestic slacks were 40 percent and average markup on imported slacks were 55 percent. The Tukey test indicated the store type differences were between department and specialty stores (Table 5.15).

Summary. When several class variables were grouped in a model, different significance combinations emerged for each apparel category. Dresses differed in initial retail and chain versus specialty stores. Shirts included important main effects of fashion, initial retail, and domestic/imports. Sweaters emerged with varying means between domestic national brands and imported private label merchandise. Finally, slacks indicated differences occurred between department and specialty stores and between domestically produced and import slacks.

These categories are extremely broad but conform to the secondary data. These findings indicate more primary research needs to be done by apparel category.

Adjustments in the Data Set

Buyers were asked to select items to compare from the Fall/Winter 1988 selling season. Since the questionnaire

Table 5.15. Analysis of Variance Summary Table Between Retail, Brand Type, Store Type, and Domestic and Imported Slacks (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	14	0.3559	4.140	.0003
Retail (A)	2	0.0028	0.230	.7966
Brand Type (B)	2	0.0030	0.250	.7826
Store Type (C)	3	0.0443	2.410	.0828
Domestic or Import (D)	1	0.0703	11.450	.0017
A X B	2	0.0027	0.220	.8045
B X C	2	0.0030	0.025	.7806
C X D	2	0.0292	2.380	.1070
Error	37	0.2272		
Total	51	0.5832		

was administered Spring of 1989, it was anticipated that the merchandise would have a fairly complete sell-through. Many of the apparel items compared contained significant quantities in questionnaire question number 25, "Number of Units Not Sold." This lack of sell-through created unusually low maintained markups.

The data was therefore adjusted by segregating responses which did possess a 90 percent or better sell through from those which did not. A subset of the data was formed and the Analysis of Variance tests were executed using the two-way ANOVA models described previously.

The maintained markups that resulted from this adjustment increased dramatically from the previous data. Both domestic and imported apparel maintained markups increased proportionately. When averaged, the maintained markups correspond with NRMA's published financial data found in Tables 2.2 and 2.3.

In the two-way ANOVAs run on these adjusted data very few significant differences were found. Country of Origin did differentiate itself using 142 aggregate apparel responses at significance level $p = .0040$. The differences appeared between the following pairs of countries and world regions:

Other O.E.C.D. and E.E.C
Other O.E.C.D. and China
Other O.E.C.D. and Communist Europe
Southeast Asia and China.

These differences include most of the major countries or regions of origin for most apparel imports into the U.S. by apparel category and in terms of total apparel.

Summary and Hypotheses

In this section, each hypothesis (H3 through H10) will be stated and how each hypotheses was tested will be given as will the decision about each hypothesis. Results of Hypotheses 1 and 2 were given at the conclusion of Chapter 4.

Hypothesis 3: No differences exist between brand type and domestic and imported apparel.

There were three class levels with brand as a factor: (1) national, (2) private, and (3) off-branded/unbranded. In using the 2-way ANOVAS significant differences existed between brand types in the sweater and slack categories. The Tukey test indicated off-brand or nonbranded sweaters differed significantly than national and privately branded sweaters.

The 3-way ANOVA model compared sweater's brand types with item types and domestic versus imports. Off-brand sweaters' averaged an initial markup of 42 for domestic and 43 percent for imports. When brands were national and private the initial markup ranged from 48 to 54 percent respectively. Imports were significantly higher with mean scores of 54 percent while domestic sweaters had average scores of approximately 43 percent.

The four-way ANOVA also indicated significant differences occurred for the main effect brand when compared with fashion store type and domestic versus import (see Table 5.13) for the apparel category sweater. With these four main effects the differences occurred between off-brand/unbranded merchandise and national and private brands.

Hypothesis 3 was rejected for the sweater and slack categories. However, significant differences were not found between brands for apparel categories, shirts, coats/suits and dresses.

Hypothesis 4: No differences exists in profitability between different exporting world regions.

The exporting countries of the imported apparel were divided into twelve world regions to be consistent with the

aggregate data testing Hypotheses 1 and 2. The frequency of each region are listed in Table 5.16. Since many of the world regions were not well represented and were not evenly distributed among the sample categories, analysis of a variance could not be readily performed. The hypothesis that no differences exist in profitability between different exporting world regions could not be adequately tested for this sample.

Hypothesis 5: No differences exist between initial retail prices and profitability.

Initial retail prices were merged into three classifications by grouping merchandise into generalized price levels. Since the apparel categories are very broad, the categories were described as:

- lower price - retails below \$10.00,
- moderate price - retails between \$10.01 and \$30.00,
- higher price - retails greater than \$30.01.

When comparing all apparel categories with initial retail price and initial markup percent, retail price levels did exhibit significant differences. Whether the apparel was imported or manufactured domestically as a whole was not significant.

Table 5.16. Distribution of Exporting World Regions from Questionnaire.

Exporting Region	Coats	Dresses	Shirts	Sweaters	Slacks	Suits	Total
Canada	0	0	0	0	0	0	0
Latin America	0	2	0	4	4	2	8
Other O.E.C.D	0	0	0	2	0	0	2
Europe (E.E.C.)	4	2	0	2	0	6	12
Other W. Europe	0	2	0	0	2	0	4
Communist Europe	0	0	0	2	0	0	2
Communist Asia	4	2	4	14	2	6	32
Japan	0	0	0	4	2	0	6
North or South Asia	2	6	6	2	2	0	18
Southeast Asia	38	32	44	74	46	18	252

Using 2-way anovas comparing initial retail prices and domestic and imported apparel, the shirt category was the only apparel category where initial markup was significantly different ($p = .0001$). See Table 5.4 for details.

When using four-way ANOVA models shirts still indicated significant differences when compared with fashion, brand type, initial retail and domestic versus imports. All three retail levels were used for the shirt category. Differences occurred between all combinations of retail levels and between domestically produced and imported shirts (see Table 5.11). With initial markup as the dependent variable, Hypothesis 5 was rejected for the shirt category. It was not rejected for the other apparel categories.

Hypothesis 6: No differences exist between the levels of fashion and the profitability of domestic and imported apparel.

Two-way, three-way and four-way analysis of variance models were used to test for significant differences between the fashion levels and domestic and imported apparel. For total apparel (all apparel categories combined) no significant differences were found between the

fashion levels and domestic and imported apparel for either initial or maintained markup.

Using initial markup percentages with two-way ANOVAS, fashion was a significant factor for coats/suits and for dresses. For the coat/suit category the results indicated that significant differences did exist between three levels of fashion ($p = .0001$) and between domestic and imported coats ($p = .0001$). The levels of fashion included (1) fashion, (2) mass fashion, and (3) classic. The Tukey test indicated differences existed between high fashion and the other fashion levels.

On the overall dress model differences existed between four fashion levels. But when using the post hoc Tukey test, these differences did not appear with a 10 percent significance level.

When three-way ANOVAS were used, fashion was important for the coat/suit category when compared with initial retail prices and imports versus domestically produced coats/suits. Initial retail was not significant by itself.

Differences occurred between mass fashion and the other levels, fashion and classic. The average initial markup was 56 percent for imported mass fashion and 39 percent for domestic mass fashion. The range of initial

markup for fashion and classic suits were between 45 percent and 46 percent (see Table 5.17).

The four-way ANOVAs indicated fashion differences occurred in the coat/suit and shirt categories. With coats and suits the Tukey test indicated differences in fashion was between high fashion and the other fashion types. For the shirt category, fashion differences occurred between mass fashion and classic fashion.

Therefore, Hypothesis 6 is rejected for initial markup for the suit/coat apparel category and the shirt category. It was not rejected for the other apparel categories.

Hypothesis 7: The type of item (new versus basic/staple) does not significantly affect apparel profitability.

Two responses were available in this class variable: new item and basic/staple item. Out of the total responses, both domestic and import apparel, 202 comparisons were made among new items and 158 were made among basic/staple items. This class effect appeared insignificant to the initial and maintained markup percentages. Hypothesis 7 could not be rejected on this basis. Consequently, it was concluded that item type does not significantly affect initial or maintained profitability.

Table 5.17. Analysis of Variance Summary Table Between Fashion, Brand, Retail, Domestic and Import for Coats (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	15	0.1733	3.13	.0195
Fashion (A)	2	0.0297	4.03	.0414
Brand (B)	2	0.0033	0.45	.6486
Retail (C)	1	0.0014	0.39	.5423
Domestic and Import (D)	1	0.0282	7.64	.0152
A X B	1	0.0009	0.25	.6219
A X C	1	0.0045	1.22	.2887
A X D	1	0.0000	0.00	.9693
B X C	1	0.0100	2.72	.1211
B X D	2	0.0053	0.71	.5067
Error	14	0.0516		
Total	29	0.2250		

Hypothesis 8: The method of purchase does not significantly affect apparel profitability.

The class variable "purchase method" involved three classes. The first method was buying directly from the manufacturer or directly from specifications. The second level was buying through an American wholesaler, and the third level was purchasing through a buying office. Two, three and four-way ANOVAs were used to detect differences between initial and maintained markup percentages. None of the models indicated that significant differences occurred between methods of purchase and apparel. Therefore, Hypothesis 8 was not rejected, and it was concluded that no profitability differences exist due to the method of purchase of domestic versus imported apparel.

Hypothesis 9: The buyers perceived quality of apparel does not influence profitability.

Buyers were asked to determine the quality level of the domestic and imported merchandise they chose to compare for this study, and the buyers were to choose apparel items in which no differences existed between the domestic and imported items being compared. However, differences could appear between the initial and maintained markups of the different items. The available quality levels of this

study were: (1) excellent, (2) above average, (3) average, (4) poor, and (5) unsatisfactory.

Using 2-way ANOVA models, significant differences did occur between domestic and imported shirts with quality. Only three levels of quality occurred in the 32 observations involving shirts. The levels represented were excellent, above average, and average. Significant differences occurred among the quality levels at significance of $p = .0708$ and among domestic and imports with significance $p = .0461$.

Using 3 way ANOVA models comparing fashion and quality with domestic and imported shirts, perceived quality was a significant factor. Using the Tukey test, significance was found between each level of quality. High quality fashion shirts average an initial markup of 54 percent whereas average quality fashion shirts averaged a higher initial markup of 57 percent. Mass fashion above average quality shirts averaged the highest initial markup of 61 percent. The four-way ANOVAs did not indicate quality to be a factor with initial or maintained markup.

Hypothesis 9 was rejected for the shirt category, but it could not be rejected for the other apparel categories. Thus, it was concluded that for these categories of

apparel, other than imported shirts, perceived quality of apparel does not influence profitability.

Hypothesis 10: The type of store does not significantly affect apparel profitability.

Buyers were asked to identify their store type according to a list of responses from question 26 in the questionnaire. The store categories were department, discount, specialty and chain.

When using initial markup as the dependent variable with two-way ANOVAs only two apparel categories, slacks and shirts, indicated that store type was significant. In both cases the differences occurred between department and specialty stores.

Using three-way ANOVA models with store types, brand types and domestic versus import, significance differences occurred for sweaters and slacks. The highest initial markup occurred with chain stores and imported sweaters. Significant differences occurred between discount and department and specialty stores. Discount stores obtained only a 39 percent initial markup on imported sweaters. The four-way ANOVA indicated differences in store type to occur between department and specialty stores (see Table 5.18).

Table 5.18. Analysis of Variance Summary Table Between Brand, Store Type, Domestic and Import for Sweaters (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	16	0.3150	4.61	.0001
Brand (A)	2	0.0157	1.83	.1709
Store Type (B)	4	0.0595	3.48	.0140
Domestic and Import (C)	1	0.0462	10.82	.0019
A X B	3	0.1927	1.50	.2254
A X C	2	0.0194	2.26	.1146
B X C	2	0.0143	1.68	.1976
A X B X C	1	0.0047	1.11	.2976
Error	49	0.2094		
Total	65	0.5243		

For the slacks category, department, discount and specialty stores were represented. Significant differences occurred between store types, department and specialty with domestic slacks initial markup, which ranged from 38 percent in department store to 50 percent in specialty stores (see Table 5.19).

Hypothesis 10 was rejected for sweaters and slacks using initial markup as the dependent variable. Store type was not significant for the other apparel categories, so Hypothesis 10 could not be rejected for these categories of apparel.

It is apparent that the hypotheses (H3 through H10) could not be uniformly rejected and could not be rejected for any given apparel category across the hypotheses. Typically, each hypothesis could be rejected for one or two apparel categories but not for all categories, so conclusions were drawn by apparel category. It is also apparent that the nature of apparel profitability for imports is very complex and requires more detailed analysis in future studies.

Table 5.19. Analysis of Variance Summary Table Between Brand, Store Type, Domestic and Import for Slacks (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	13	0.3536	4.50	.0001
Brand (A)	2	0.0183	1.51	.2335
Store Type (B)	3	0.0456	2.51	.0729
Domestic and Import (C)	1	0.0877	14.52	.0005
A X B	2	0.0023	0.19	.8278
A X C	2	0.0003	0.03	.9752
B X C	2	0.0200	1.65	.2048
A X B X C	1	0.0029	0.47	.4960
Error	38	0.2296		
Total	51	0.5832		

CHAPTER VI

SUMMARY AND CONCLUSIONS

While there are many ways to evaluate the profitability of apparel, only two basic methods were utilized in this study. Retailers generally measure profitability in terms of gross margins, return-on-investment, stock-turns and sales per square foot. Each of these calculations begins with initial markup or cumulative mark-on (gross margins). These terms coincide with the initial markup and maintained markup obtained from the primary data.

Several factors were considered to determine if differences occurred between domestic and imported apparel. Preliminary findings did indicate that imported apparel did have a higher initial markup than domestic apparel.

Apparel was studied in aggregate to determine which countries displayed price and income elasticity tendencies enabling a greater understanding of world imports for specific apparel categories.

Price elasticities were determined according to Johnstons' 1988 demand model for textiles and apparel. This method is supported by Houthakker and Magee (1969)

concerning the general demand variables and by Kahn and Ross (1977) and Boylan et al. (1979) on the preference for using the log-linear form over natural numbers.

The findings were expected to indicate a negative relationship between quantity of U.S. apparel imports from each world region and the price ratio between imported and domestic apparel prices in the United States. The magnitude of price elasticities of import demand was expected to be generally between negative one and zero indicating inelastic demand for apparel imports into the United States. Similarly, theory suggested income elasticities of apparel import demand were expected to be positive, indicating an increase in income would increase U.S. apparel imports and a decrease in income would cause a decrease in U.S. apparel imports.

The findings in general, support these expectations. Due to small quantities of imports within specific apparel categories, some of the relationships were reversed. This may be an indication of specialty products, snob goods, or goods' quality being indexed by price by consumers being imported into the U.S. from these regions. Government regulations and trade agreements may also have an affect on both income and price elasticities.

Primary data were obtained from United States retailers. A return rate of 25% usable questionnaires created a broad range of retailers. Representative store types included major department stores, specialty stores, mass merchants and chain stores from 35 states. The apparel categories were dispersed fairly evenly across store types, generalizing the results.

Eight class variables were considered as factors influencing apparel profitability. The factors included: (1) country of origin, (2) item type, (3) brand type, (4) quality, (5) store type, (6) fashion, (7) initial retail price, and 8) purchase method.

Dardis and Sul (1974) divided importing markets into five world regions to study trends in importing. Their results indicated which world regions were increasing imports and which were remaining stable. As a result of their findings, this study was divided into twelve major apparel markets to determine trends. Due to the skewed distribution of imports arriving from Southeast Asia, analysis of variance was not an appropriate test for this variable.

Item type, whether the apparel was a new item or a basic item, was not an effective variable since the buyers considered most of their purchases as new items.

Brand was an effective variable. Buyers listed their purchases as national, private or off-brand/unbranded merchandise. Brand was important for sweaters and slacks with differences between off-brand and national and unbranded apparel. These findings are consistent with Dardis, Spivak and Shih (1985) who studied men's oxford cloth shirts for workmanship when purchased and after many washings. Their findings indicated the imported shirts were of better quality and less expensive initially. Private label shirts were less expensive, often imported, and were promoted more offering value to the customer. National branded, especially domestically produced shirts, were the most expensive and did not maintain their appearance after numerous washings. Promoting imported private brands reduce the higher initial markup which justifies the insignificance of the maintained markup for retailers.

Dickerson (1982) studied perceived quality of imported and domestic apparel by consumers. Generally consumers perceived domestic apparel to be of superior quality.

Sternquist and Tolbert (1986) found that retailers perceived imports to be equal or superior to domestic apparel in quality but sometimes experienced great losses with imports. The inability to return defective products sometimes encouraged buyers to initially mark imported products higher to compensate for unexpected losses. In this dissertation, the quality variable was only significant on initial markup for shirts. Quality, as measured in this study, was not found to significantly affect profitability in the other categories of apparel.

Fashion, usually studied in conjunction with fashion innovators, reference groups or reference persons, has seldom been examined empirically without a person being involved. No studies were found concerning the fashionability of an item and retail profits.

Delong, Minshall and Loantz used Fishbeins Behavior Model to predict purchasing behavior for a fashion item (jeans). Their methodology included a pretest ranking the fashionability of jeans forming a continuum. Similarly, the fashion class in this study lists levels of fashion. Each buyer selected the most appropriate level.

Fashion was found in this dissertation to be a factor in the coat/suit category, especially between high fashion

and other fashion levels. It was not a factor for the other apparel categories, which was a somewhat surprising result.

Store type was identified according to buyers perceptions among four choices. Consumers (Sternquist & Davis, 1986) have been found to place higher quality and price standards for higher prestige department stores and lower cost and quality for discount stores. Country of origin was not a factor in the price/quality relationships.

While consumers were not involved in this study with placing judgments on the quality and price relationships, findings of this were not significant among store type and between domestic and imports for most apparel types. This finding is in conjunction with Sternquist and Davis' consumer findings.

No previous studies were found concerning the original price of a product and its affect on initial and maintained markup. This was tested to discover if any differences existed among low, medium and high priced apparel. These findings were generally insignificant.

The method of procurement, including merchandise purchased through buying offices, direct from manufacturers

and through American wholesalers, was not significant for the apparel categories.

While each variable alone was not generally significant, models were designed by apparel category which did indicate significant differences. A subset representing apparel categories with a 90 percent sell-through was analyzed, and country of origin was found to be a significant factor in profitability. This significance occurred primarily between domestically produced and imported apparel.

These findings support Katz's findings as reported in Lettich (1986). When comparing gross margins of domestic and imported sweaters, he found only a 3.8 percent increase in imports, signifying insignificant differences between domestic and imported sweater profitability.

Future studies could test these models and refine them by apparel category. The apparel categories were broad due to paralleling the aggregate data. With finer divisions of each category, the factors examined may become more significant.

Price elasticities by apparel category indicate how sensitive import quantities are to changes in price. Items highly sensitive to price change include: coats and suits

exported from China, Southeast Asia, and Australia; dresses from Canada, E.E.C., Japan, North and South Asia, Southeast Asia, and Australia. Shirts which responded strongly to price included other O.E.C.D. countries, China, Japan, and Australia. Imports from other Western Hemisphere, other O.E.C.D., and North and South Asia were sensitive to the price of sweaters. For slacks, imports from other Western Hemisphere, Communist Europe, China, North/South Asia, and Australia are price sensitive.

Income elasticities indicated normal goods were imported to the United States from most of the exporting regions. Only Canadian coats and suits, Latin American dresses, and sweaters from the E.E.C., Communist Europe, Canada, and Japan were found to be inferior economic goods. The remaining exporting world regions exported normal or luxury apparel products to the United States.

The primary data indicated significant differences existed among average initial markups with five of the class variables. Brand, initial retail price, fashion, quantity, and type of store were significant for select apparel categories. No class variables were significant for all apparel.

Initial markup was the only dependent variable which indicated significant differences. Differences occurred regularly between the imported and domestic apparel when measuring initial markup. However, differences among initial markups were not significant when maintained markup was compared.

Although the apparel categories were extremely broad including men's, ladies, boy's and girl's apparel for each apparel category, imports initially were marked with higher initial markups. According to the sample tested, the initial markup was not maintained. This can be an important finding for retailers. With this information, retailers should analyze their inventory by direct product profitability to determine how profitable imports are.

Future Studies

With current or additional questionnaire response, several studies could be achieved. Retail outlets could be separated by volume and each profitability factor could be tested. This would especially help small retail businesses who do not have access to private overseas manufacturers.

A second study could examine the relationship that country of origin has on quality. European

apparel imports are usually considered higher quality than Asian imports. Several countries could be factored out to examine perceived quality and average price points. Profitability can also be determined by country of origin.

Different store types, specialty, department, and discount can be examined in another study. The consumer's income and information level may have a determining effect on substitutions, as well as different qualities of merchandise.

A follow-up concerning non-traditional purchasing variables such as lead time on orders placed, return privileges, advertising/co-op allowances, and salesmen's servicing of accounts can be a fourth study.

Stores can be divided by region to test for regional affects on domestic and imported apparel. Most of these studies can be obtained from the retail buyer's data. A follow up with buyers can be done by phone if additional information is needed.

LIST OF REFERENCES

LIST OF REFERENCES

- American Apparel Manufacturers Association (1987). Focus: Economic Profile of the Apparel Industry. Arlington, VA.
- American Apparel Manufacturers Association (1989). Focus: Economic Profile of the Apparel Industry. Arlington, VA.
- American Textile Manufacturers Institute (1986). 1986 Annual Report. Washington, D.C.
- American Textile Manufacturers Association (1972). Textile Highlights. Quarterly Publication: Washington, D.C.
- American Textile Manufacturers Association (1974). Textile Highlights. Quarterly Publication: Washington, D.C.
- American Textile Manufacturers Association (1976). Textile Highlights. Quarterly Publication: Washington, D.C.
- American Textile Manufacturers Association (1978). Textile Highlights. Quarterly Publication: Washington, D.C.
- American Textile Manufacturers Association (1980). Textile Highlights. Quarterly Publication: Washington, D.C.
- American Textile Manufacturers Association (1982). Textile Highlights. Quarterly Publication: Washington, D.C.
- American Textile Manufacturers Association (1984). Textile Highlights. Quarterly Publication: Washington, D.C.
- Andres, W. A. (1984, September). Protectionism: The hidden pricetag. Vital Speeches of the Day, 51(1), 13-16.
- Arpan, J. S., De La Torre, J., & Toyne, B. (1981). International developments and the U.S. apparel industry. Journal of International Business Studies, 49-64.
- Boylan, Cuddy & O'Muircheartaigh (1980, November). The functional form of the aggregate import demand equation. Journal of International Economics, 10, 561-566.

- Burgess, D. F. (1974, May). A cost minimization approach to import demand equations. Review of Economics and Statistics, 56, 225-234.
- Cain, L. (1984, March). Imports out of control. Textile World, 63-74.
- Children's imports face growing pains. (1984, March). Apparel Merchandising, 55-60.
- Courtless, J. C. (1986). Recent trends in clothing and textiles. Family Economics Review, (2), 17-26.
- Dardis, R., Derrick, F., & Lehfeld, A. (1983). Clothing demand in the united states: A cross-sectional analysis. Home Economics Research Journal, 10(2), 212-222.
- Dardis, R., Spivak, S. M., & Shih, C. (1985, June). Price and quality differences for imported and domestic men's dress shirts. Home Economics Research Journal, 13(4), 391-399.
- Dardis, R., & Sul, J. (1983). Competition in the U.S. apparel import market. Home Economics Research Journal, 12(2), 237-248.
- Das, B. (1983). The GATT Multi-Fibre Arrangement. Journal of World Trade Law, 17(2), 95-105.
- DeLong, M. R., Minshall, B., & Larntz, K. (1987, December). Predicting Consumer response to fashion apparel. Home Economics Research Journal, 150-160.
- Dickerson, K. G. (1982). Import versus U.S. produced apparel: Consumer views and buying patterns. Home Economics Research Journal, 10(3), 241-252.
- Dillman, D. A. (1978). Mail and telephone surveys. New York: John Wiley & Sons.
- Dlaboha, I. (1986, March). Private label benefits manufacturer, retailer. Apparel World, 33-34.
- Eastwood, D. E. (1985). The economics of consumer behavior. Newton, MA: Allyn & Bacon Inc.

- Executive Office of the President, U. S. Department of the Budget (1987). Standard Industrial Code Manual. Springfield, VA: National Technical Information Service.
- Fiber Fabric and Apparel Coalition for Trade (1986). Give America a fighting chance. Washington, DC: FFACT.
- Fitzpatrick, J. (1983). Why textile and clothing industries are shifting to the third world. Long Range Planning, 16(4), 42-45.
- Goldstein, Kahn & Officer (1980, May). Prices of tradable and non-tradable goods in the demand for total imports. Review of Economics and Statistics, 62, 190-199.
- Heller, M. (1986). Retailing. Forbes, 127(1), 200-202.
- Hickman & Lau (1973). Elasticities of substitution and export demands in a world trade model. European Economic Review, 4, 347-380.
- Houthakker & Magee (1969, May). Income and price elasticities in world trade. Review of Economics and Statistics, 51, 111-125.
- Johnston, J. A. (1988). Formulation of models and estimation of selected textile and apparel import, output and employment elasticities for the United States. Unpublished masters thesis, The University of Tennessee, Knoxville.
- Kahn, Mohsin & Ross (1977, May). The functional form of the import demand equation. Journal of International Economics, 7, 149-160.
- Kaln, J. P., & Pearlstein, S. (1987, June). Merchant prince Stanly Marcus. Inc, 9(7), 41-48.
- Kortbech-Olesen, R. (1986, July-September). Honey exports: Possibilities in a highly competitive market. International Trade Forum, 4-30.
- Krieger, M. (1980). The Complete Dictionary of Buying and Merchandising. New York: National Retail Merchants Association.

- Lettich, J. (1985, July). Imports, inventories blamed for dormant year at apparel firms. Apparel World, 62-64.
- Lettich, J. (1986, January). Import seminar: Speed and flexibility key to domestic survival. Apparel World, 36-37.
- Lewison D. M., & DeLozier, M. W. (1986). Retailing, (2nd Ed.). Ohio: Merrill.
- Magnusson, P. (1989, February 27). Trade will we ever close the gap? Business Week.
- Mangone, D. M. (1984, October). How to Measure Merchandise Profitability. Retail Control, 11-21.
- Mansour-Khabiri, A. (1987). Estimation of import demand elasticities with products differentiated by place of production. Unpublished doctoral dissertation, Tufts University.
- National Retail Merchants Association (1979). The Buyers Manual. NY: NRMA.
- National Retail Merchants Association (1986-1988). Management Operating Results. NY: NRMA.
- Nordquist, B. K. (1984-1985). International trade in textiles and clothing: Implication for the future. Clothing and Textiles Research Journal, 3(2), 35-39.
- Pearce, D. W. (1986). McMillan dictionary of modern economics. (3rd ed.). New York: Macmillan.
- PL Sweaters may come back home (1985, January). Apparel Merchandising, 17-18.
- Robinson, D. E. (1959, March). The rules of fashion cycles Horizon, 4.
- Rousslang & Parker (1984, August). Cross price elasticities of U.S. Import demand. Review of Economics and Statistics, 66, 518-523.
- Salmon, W. J., & Cmar, K. A. (1987, May). Private labels are back in fashion. Harvard Business Review, 99-106.

- Sheldon's retail directory of the US and Canada and Phelon's resident buyers and merchandise brokers (1988). New York: Phelon, Sheldon & Marsar.
- Schwartz, J. (1987, September 21). Apparel makers shift tactics. The New York Times. 33.
- Seidel, L. E. (1983). Sweater production conquers import competition. Textile Industries, 147(11), 36-39.
- Shuch, M. (1988). Retail Buying and Mechanisms, Englewood Cliffs: Prentice-Hall, 1988, 160.
- Solomon, M.R. (Ed). (1985). The Psychology of Fashion, Lexington, MA: Lexington Books.
- Stein, J., (ed) (1984). The Random House College Dictionary (rev. ed). New York: Random House, Inc.
- Sternquist, B., & Davis, B. (1986, December). Store status and country of origin as information cues: Consumer's perception of sweater price and quality. Home Economics Research Journal, 124-131.
- Sternquist, B., & Tolbert, S. (1986). Survey: Retailers shun apparel industry's buy American program. Marketing News, 20, 8.
- Thursby & Thursby (1984, February). How reliable are simple single equation specifications of import demand. Review of Economics and Statistics. 66, 120-128.
- Troxell, M. D. (1980). Retail Merchandising Mathematics. New Jersey: Prentice-Hall.
- United States Department of Commerce (1983, May). U.S. production, imports & import production ratios for cotton, wool & man-made textiles & apparel. Washington, DC: U.S. Printing Office.
- United States Department of Commerce, Bureau of the Census (1975-1976). Annual Survey of Manufacturers. Washington, DC: U.S. Government Printing Office.
- United States Department of Commerce, Bureau of the Census (1980-1981). Annual Survey of Manufacturers. Washington, DC: U.S. Government Printing Office.

United States Department of Commerce, Bureau of the Census
(1985-1986). Annual Survey of Manufacturers.
Washington, DC: U.S. Government Printing Office.

United States Department of Commerce, Bureau of the Census
(1972). U.S. Imports for Consumption (FT 246).
Washington, DC: U.S. Government Printing Office.

United States Department of Commerce, Bureau of the Census
(1973). U.S. Imports for Consumption (FT 246).
Washington, DC: U.S. Government Printing Office.

United States Department of Commerce, Bureau of the Census
(1974). U.S. Imports for Consumption (FT 246).
Washington, DC: U.S. Government Printing Office.

United States Department of Commerce, Bureau of the Census
(1975). U.S. Imports for Consumption (FT 246).
Washington, DC: U.S. Government Printing Office.

United States Department of Commerce, Bureau of the Census
(1976). U.S. Imports for Consumption (FT 246).
Washington, DC: U.S. Government Printing Office.

United States Department of Commerce, Bureau of the Census
(1977). U.S. Imports for Consumption (FT 246).
Washington, DC: U.S. Government Printing Office.

United States Department of Commerce, Bureau of the Census
(1978). U.S. Imports for Consumption (FT 246).
Washington, DC: U.S. Government Printing Office.

United States Department of Commerce, Bureau of the Census
(1979). U.S. Imports for Consumption (FT 246).
Washington, DC: U.S. Government Printing Office.

United States Department of Commerce, Bureau of the Census
(1980). U.S. Imports for Consumption (FT 246).
Washington, DC: U.S. Government Printing Office.

United States Department of Commerce, Bureau of the Census
(1972). U.S. Imports for Consumption and General
Imports (FT 210). Washington, DC: U.S. Government
Printing Office.

United States Department of Commerce, Bureau of the Census
(1973). U.S. Imports for Consumption and General
Imports (FT 210). Washington, DC: U.S. Government
Printing Office.

United States Department of Commerce, Bureau of the Census
(1974). U.S. Imports for Consumption and General
Imports (FT 210). Washington, DC: U.S. Government
Printing Office.

United States Department of Commerce, Bureau of the Census
(1975). U.S. Imports for Consumption and General
Imports (FT 210). Washington, DC: U.S. Government
Printing Office.

United States Department of Commerce, Bureau of the Census
(1976). U.S. Imports for Consumption and General
Imports (FT 210). Washington, DC: U.S. Government
Printing Office.

United States Department of Commerce, Bureau of the Census
(1977). U.S. Imports for Consumption and General
Imports (FT 210). Washington, DC: U.S. Government
Printing Office.

United States Department of Commerce, Bureau of the Census
(1978). U.S. Imports for Consumption and General
Imports (FT 210). Washington, DC: U.S. Government
Printing Office.

United States Department of Commerce, Bureau of the Census
(1979). U.S. Imports for Consumption and General
Imports (FT 210). Washington, DC: U.S. Government
Printing Office.

United States Department of Commerce, Bureau of the Census
(1980). U.S. Imports for Consumption and General
Imports (FT 210). Washington, DC: U.S. Government
Printing Office.

United States Department of Commerce, Bureau of the Census
(1981). U.S. Imports for Consumption and General
Imports (FT 210). Washington, DC: U.S. Government
Printing Office.

United States Department of Commerce, Bureau of the Census
(1982). U.S. Imports for Consumption and General
Imports (FT 210). Washington, DC: U.S. Government
Printing Office.

United States Department of Commerce, Bureau of the Census
(1983). U.S. Imports for Consumption and General
Imports (FT 210). Washington, DC: U.S. Government
Printing Office.

United States Department of Commerce, Bureau of the Census
(1984). U.S. Imports for Consumption and General
Imports (FT 210). Washington, DC: U.S. Government
Printing Office.

Webster's Dictionary (1981). Long Island, NY: Spindex
Publisher.

Workman, J. E. (1987, Spring). Fashionable versus out-of-
date clothing and interpersonal distance. Clothing and
Textiles Research Journal, 5(3), 31-35.

APPENDICES

APPENDIX A

Standard Industrial Classification Codes

Table A.1. Standard Industrial Classification Codes
Used in Study.

Category	S.I.C.	
Coats/Suits	23371XC 45	2311XC 30
	2337aXC 70	23317C 60
	23317C 25	23371C 60
	23371C 25	
Dresses	23317C 49	23317C 16
	23317C 24	23317C 14
Sweaters	23690J 16	23690J 08
	23690J 17	23690D 05
	23690J 19	23690D 08
	23690J 05	
	23690J 06	
	23690J 07	
Shirts	23212D 10	23212D 19
	23212D 30	23317C 71
	23317C 79	23212D 40
	232810 00	232140 20
	232140 10	232140 20
	232140 25	232140 35
	232140 40	
Slacks	23890J 30	23283B 00

Source: Commerce Department, Bureau of the Census.
(1972-1984) U.S. Imports for Consumption and General
Imports.

APPENDIX B

World Areas and Countries

Appendix

Table A.1 World Areas and Countries

Area and Country Description	
World Region	Countries Included
Canada	Canada
Latin America	Central American Common Market Guatemala El Salvador Honduras Nicaragua Costa Rica Latin American Free Trade Association Mexico Colombia Venezuela Equador Peru Bolivia Chile Brazil Paraguay Uruguay Argentina Other Latin American Republics Panama Cuba Haiti Dominican Republic
Other Western Hemisphere	Greenland Miquelon St. Pierre Islands British Honduras Canal Zone Bermuda Bahamas Jamaica Leeward and Windward

Table B.1 Continued

Area and Country Description	
World Region	Countries Included
Other Western Hemisphere (Continued)	Leeward and Windward Islands Barbados Trinidad and Tobago Netherlands Antilles French West Indies Surinam French Guiana Falkland Islands Guyana
European Economic Community	Netherlands Belgium and Luxembourg France West Germany Italy European Free Trade Association United Kingdom Iceland Sweden Norway Finland Denmark Austria Switzerland Portugal
Other OECD Countries	Ireland Spain Greece Turkey Other Western Europe Azores Gibraltar Malta and Gozo Yugoslavia

Table B.1 Continued

Area and Country Description	
World Region	Countries Included
Other OECD Countries (Continued)	Cyprus
Communist Areas in Europe	East Germany Czechoslovakia Hungary Estonia Latvia Lithuania Poland Union of Soviet Socialist Republics Albania Romania Bulgaria
China (Communist Asia)	Communist Areas in Asia North Vietnam China (Mainland) Outer Mongolia North Korea
Japan	Japan
Near East and South Asia	Near East Asia Syrian Arab Republic Lebanon Iraq Iran Israel Jordan Gaza Strip Kuwait Saudi Arabia Arabia Peninsula States Southern Yemen Bahrain

Table B.1 Continued

Area and Country Description	
World Region	Countries Included
Near East and South Asia (Continued)	South Asia Afghanistan India Pakistan Nepal Ceylon
South East Asia	Burma Thailand South Vietnam Laos Cambodia Malaysia Singapore Indonesia Philippines Macao Southern and Southeastern Asia Republic of Korea Hong Kong Republic of China (Taiwan) Nansei Islands
Australia and Oceania	Australia New Guinea New Zealand and Western Samoa British Pacific Islands French Pacific Islands Trust Territory of the Pacific Islands Other Pacific Islands
Africa	Morocco Algeria Tunisia

Table B.1 Continued

Area and Country Description	
World Region	Countries Included
Africa (Continued)	Libya
	United Arab Republic
	Sudan
	Canary Islands
	Spanish Africa
	Equatorial Guinea
	Mauritania
	Federal Republic of Cameroon
	Senegal
	Mali
	Guinea
	Sierra Leone
	Ivory Coast
	Ghana
	Gambia
	Nigeria
	Togo
	Niger
	Central African Republic
	Gabon
	Chad
	British West Africa
	Madeira Islands
	Upper Volta
	Dohomey
	Angola
	Congo (Brazzaville)
	Western Portuguese Africa
	Liberia
	Congo (Kinshasa)
	Burundi
	Rwanda
	Somali Republic
	Ethiopia
	Afars and Issas (French)
	Uganda

Table B.1 Continued

Area and Country Description	
World Region	Countries Included
Africa (Continued)	Kenya Seychelles and Dependencies Tanzania Mauritius and Dependencies Mozambique Malagasy Republic French Indian Ocean Areas Republic of South Africa Botswana Zambia Swaziland Rhodesia Malawi Lesotho

Source: Adapted from The United States Bureau of
Census 1972 U.S. Imports for Consumption and General
Imports (FT 210). p VII-VIII.

APPENDIX C

Calculation of Initial and Maintained Markup

Initial Markup Dollars: $IMD = RP - CMS$

Where: IMD = Initial Markup Dollars

RP = Retail Price (Q12)

CMS = Cost of Merchandise sold (Q10)

Initial Markup Percent: $IMP = IMD / RP$

Where: IMP = Initial Markup Percent

IMD = Initial Markup Dollars

RP = Retail Price

Retail Selling Price: $RP = NP \times OP$

Where: RP = Retail Price

NP = Number Purchased (Q9)

OP = Original Retail Price (Q12)

Cost of Merchandise Sold: $CMS = NP \times PP$

Where: CMS = Cost of Merchandise Sold

NP = Number Purchased (Q9)

PP = Purchase Price (Q10)

Figure C.1. Calculation of initial markup.

Maintained Markup Dollars: $MMD = (RP - RED) - CMS$

Where: MMD = Maintained Markup Dollars

RP = Retail Price

RED = Reductions including

1) Shortages and Damages at retail

(Q15)

2) Advertised Markdowns (Q20) x

Number Sold at Advertised

price (Q21) and

3) Markdowns: {Original selling

price (Q12) - Markdown price

(Q23)} x Number of items

sold at markdown price (Q24).

CMS = Cost of Merchandise Sold

Total Retail = Number of items

Purchased (Q9) X Original retail

price (Q12).

Maintained Markup Percent: $MMP = MMD / RP$

Where: MMD = Maintained Markup Dollars

RP = Retail Selling Price.

Figure C.2. Formula for maintained markup.

APPENDIX D

Survey Instrument

THE UNIVERSITY OF TENNESSEE
KNOXVILLE

February 27, 1989



College of
Human Ecology

Textiles,
Merchandising
and Design

Mr. John Smith
Men's Department
ABC Department Store
1234 Main Street
Knoxville, TN 37922

Dear Mr. Smith:

Three weeks ago I wrote to you seeking information concerning apparel profitability. As of today I have not received your completed questionnaire.

This study will examine the factors influencing the profitability of both domestic and imported apparel. Country of origin will be taken into account as well as brand and store type, fashionability, and department.

Your input is genuinely needed if this research is to be of the high quality. Although the questionnaire is not long, I would very much appreciate the time and effort you spend completing it. Since the profitability of apparel varies by store and department, I very much want your information to be represented as well.

Again let me assure you of the confidentiality of your responses. Specific store or department profit is not the concern of this research and will never be released to anyone. If you have any questions at all, please feel free to contact me at (615) 966-6472 or Dr. Carl Dyer at (615) 974-2141. In the event that your questionnaire has been misplaced, a replacement is enclosed.

Sincerely,

Jan Hathcote
Doctoral Candidate

Carl Dyer, Ph.D.
Major Professor

Apparel/Interior Design/Merchandising/Textile Science
1215 West Cumberland Avenue, Room 230/Knoxville, Tennessee, 37996-1900/(615) 974-2141

THE UNIVERSITY OF TENNESSEE
KNOXVILLE

February 6, 1989



College of
Human Ecology

Textiles,
Merchandising
and Design

Mr John Smith
ABC Department Store
Men's Department
1234 Main Street
Knoxville, TN 37922

Dear Mr. Smith:

I have written Mr. Jones asking for assistance in completion of this study. You are one of a select number of buyers chosen to participate in the research concerning domestic and imported apparel. In order that the results will truly represent the different store types and buying classifications, it is important that each questionnaire be completed and returned by the person responsible for buying in the Men's Department. If the buying responsibility has recently changed, please forward this questionnaire to the appropriate buyer.

I am not asking information about your total department or store profit. I am only interested in comparing two similar items purchased both domestically and imported in the Fall/Winter 1988 selling season. Your answers will remain strictly confidential. The questionnaire has an identification number for mailing purposes only. This is so I may check your name off of my mailing list when your questionnaire is returned. Your store, department, and name will not be identified with your responses.

The results of this research will be made available to you. To receive a summary of results mark the "results requested" box on the return envelope.

I will be happy to answer any questions you have concerning the questionnaire. Please write or call (615) 966-6472.

Thank you for your assistance.

Sincerely,

Jan M. Hathcote
Doctoral Candidate

Carl Dyer, Ph. D.
Major Professor

Apparel/Interior Design/Merchandising/Textile Science
1215 West Cumberland Avenue, Room 230/Knoxville, Tennessee, 37996-1900/(615) 974-2141

THE UNIVERSITY OF TENNESSEE
KNOXVILLE

February 1, 1989



College of
Human Ecology

Textiles,
Merchandising
and Design

Mr. Joe Jones
General Merchandise Manager
ABC Department Store
1234 Main Street
Knoxville, TN 37922

Dear Mr. Jones:

The ABC Department Store has been selected to participate in a national study involving the profitability of domestic and imported apparel. This study will examine the factors influencing the profitability of both domestic and imported apparel.

Within the next few days, the following department buyers will receive questionnaires which can be completed in approximately 15 minutes.

Mr. John Smith, Men's Department
Mrs. Sue Buyer, Children's Department

I ask that you not only approve ABC's participation, but also that you encourage your buyers to promptly complete and return the questionnaire.

I emphasize that all information is confidential. This study does not seek department or store profit information. Each questionnaire is numerically coded for clerical purposes only.

The results of this research will be made available to interested respondents. Your buyers may receive a summary of results by marking the "results requested" box on the return envelope.

Your cooperation is sincerely appreciated. If you have any questions concerning the questionnaire, please write or call (615) 966-6472.

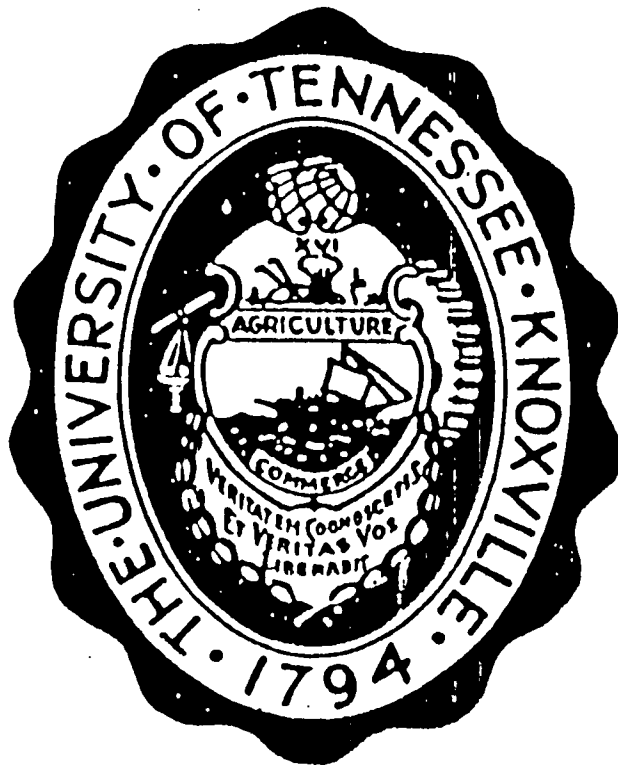
Sincerely,

Jan M. Hathcote
Doctoral Candidate

Carl Dyer Ph. D.
Major Professor

Apparel/Interior Design/Merchandising/Textile Science
1215 West Cumberland Avenue, Room 230/Knoxville, Tennessee, 37996-1900/(615) 974-2141

APPAREL PROFITABILITY SURVEY



Jon M. Holthcole
University of Tennessee
230 Jessie Harris Bldg.
Knoxville, TN 37996-1900

Apparel Profitability

This study compares the profitability of two garments of equal quality, one you purchased domestically (Made in the U.S.A.), and one you imported.

Part I

From the circled category below, select two **EQUIVALENT** garments fairly typical of your department's price lines and quality, purchased for the Fall/Winter 1988 selling season. One garment must have been a **DOMESTIC** purchase, and the other garment an **IMPORTED** purchase.

If your inventory contains only domestic or imported apparel, please check the appropriate box and skip to part III.

- ☐ I do not have any imported apparel in stock.
☐ I do not have any domestic (Made in the U.S.A.) apparel in stock.

Q 1. The quality of the domestic and imported garments should be equal. Please rate the quality of the garments by circling the appropriate number.

1. EXCELLENT
2. ABOVE AVERAGE
3. AVERAGE
4. POOR
5. UNSATISFACTORY

CATEGORIES OF APPAREL

1. COATS OR JACKETS
2. DRESSES
3. SHIRTS OR BLOUSES
4. SWEATERS
5. SLACKS OR TROUSERS
6. SUITS

IF THE CIRCLED CATEGORY IS NOT A MAJOR SEGMENT OF YOUR DEPARTMENT, PLEASE SELECT A CATEGORY WHICH DOES REPRESENT YOUR DEPARTMENT AND WRITE THE NUMBER IN THE BLANK _____. USE THE NEW CATEGORY TO RESPOND TO THE FOLLOWING QUESTIONS.

Q 2. Are the items (Circle the appropriate number)

1. NEW ITEMS
2. BASIC/STAPLE ITEMS

- Q 3. Would you consider the garment (Circle the appropriate number)
1. HIGH FASHION
 2. FASHION
 3. MASS FASHION
 4. CLASSIC
 5. PASSE (OUT OF FASHION)
- Q 4. Is the DOMESTIC item a (Circle the appropriate number)
1. NATIONAL BRAND
 2. PRIVATE LABEL
 3. OFF-BRAND/UNBRANDED
- Q 5. Is the IMPORTED item a (Circle the appropriate number)
1. NATIONAL BRAND
 2. PRIVATE LABEL
 3. OFF-BRAND/UNBRANDED
- Q 6. How was the DOMESTIC garment purchased? (Circle number)
1. DIRECT FROM THE MANUFACTURER
 2. THROUGH AN AMERICAN WHOLESALER
 3. THROUGH A BUYING OFFICE
 4. OTHER (please specify) _____
- Q 7. How was the IMPORTED garment purchased? (Circle number)
1. DIRECT FROM SPECIFICATIONS
 2. DIRECT FROM THE MANUFACTURER OVERSEAS
 3. THROUGH AN AMERICAN WHOLESALER
 4. THROUGH A BUYING OFFICE
 5. OTHER (please specify) _____
- Q 8. WHAT IS THE COUNTRY OF ORIGIN FOR THE IMPORTED GARMENT?
-

Part II

The following information will be used to determine the profitability of the garment purchased for the Fall/Winter 1988 selling season. Select one purchase order involving a domestic garment from the category listed below and another purchase order which involves a similar imported item and fill out the information in the appropriate column which pertains to each method of purchase. Should a question not be applicable, please skip.

CATEGORY _____

	DOMESTIC Item	IMPORT Item
Q 9. NUMBER OF ITEMS PURCHASED ON PURCHASE ORDER (e.g., total number received)		
Q10. PURCHASE PRICE PER ITEM (e.g., \$9.50 ea.)		
Q11. TRANSPORTATION/INSURANCE COST (Dollar amount paid to transfer goods from source to you)		
Q12. ORIGINAL RETAIL PRICE (Book selling price for each unit expressed in dollars and cents e.g., \$19.99 ea.)		
Q13. DATE ORDERED (month/day/year)		
Q14. DELIVERY DATE (Date merchandise was received) (month/day/year)		
Q15. SHORTAGES AND DAMAGES AT RETAIL (Total dollar amount)		

	DOMESTIC Item	IMPORT Item
Q16. ADVERTISING ALLOWANCE (Total dollars available from vendor to promote merchandise)		
Q17. RETURN PRIVILEGE/RTV (Please circle availability)	Yes No	Yes No
Q18. NUMBER OF ITEMS SOLD AT FULL RETAIL PRICE FROM THIS ORDER		
Q19. WAS THIS ITEM PROMOTED (e.g., TV, Newspaper)	Yes No	Yes No
Q20. ADVERTISED/PROMOTIONAL PRICE (e.g., Advertised for \$12.99 ea.)		
Q21. NUMBER OF ITEMS SOLD AT ADVERTISED/PROMOTIONAL PRICE		
Q22. DATE OF FIRST MARKDOWN (If appropriate)		
Q23. MARKDOWN/CLEARANCE PRICE (e.g., reduced to \$5.00 ea.)		
Q24. NUMBER OF ITEMS SOLD AT MARKDOWN PRICE		
Q25. NUMBER OF UNITS NOT SOLD		

Part III

The following demographic information is for classification purposes only. It is important to group responses by store type and buyer responsibilities.

Q26. For what type of store do you buy? (Circle number)

1. DEPARTMENT

2. DISCOUNT

3. SPECIALTY

4. CHAIN

5. OTHER (please specify) _____

Q27. What is your age? (Circle number)

1. BELOW 25
2. 25 - 30
3. 31 - 35
4. 36 - 40
5. 41 - 45
6. 46 - 50
7. OVER 50

Q28. How long have you been a buyer?
(Total number of years in occupation)
(Circle number)

1. LESS THAN 2 YEARS
2. 2 - 5 YEARS
3. 6 - 10 YEARS
4. 11 - 15 YEARS
5. OVER 16 YEARS

Q29. How long have you been buying for this store?
(Circle number)

1. LESS THAN 2 YEARS
2. 2 - 5 YEARS
3. 6 - 10 YEARS
4. 11 - 15 YEARS
5. 16 - 20 YEARS
6. 21 - 25 YEARS
7. OVER 25 YEARS

Q30. For which departments do you buy?
(Circle all that apply)

1. INFANTS
2. CHILDRENS
3. JUNIORS
4. MISSES SPORTSWEAR, DRESSES OR OUTERWEAR
5. WOMEN'S OR HALF SIZES
6. YOUNG MEN'S
7. MEN'S ACTIVE WEAR
8. MEN'S TRADITIONAL
9. OTHER (please specify) _____

Is there anything else you would like to tell us about the purchasing of domestic or imported apparel? Please use this space for that purpose.

Your contribution to this study is greatly appreciated. If you would like to receive a summary of the results, please mark the box on the return envelope labeled "RESULTS REQUESTED."

APPENDIX E

Apparel Imports Compared with American
Production and/or Consumption

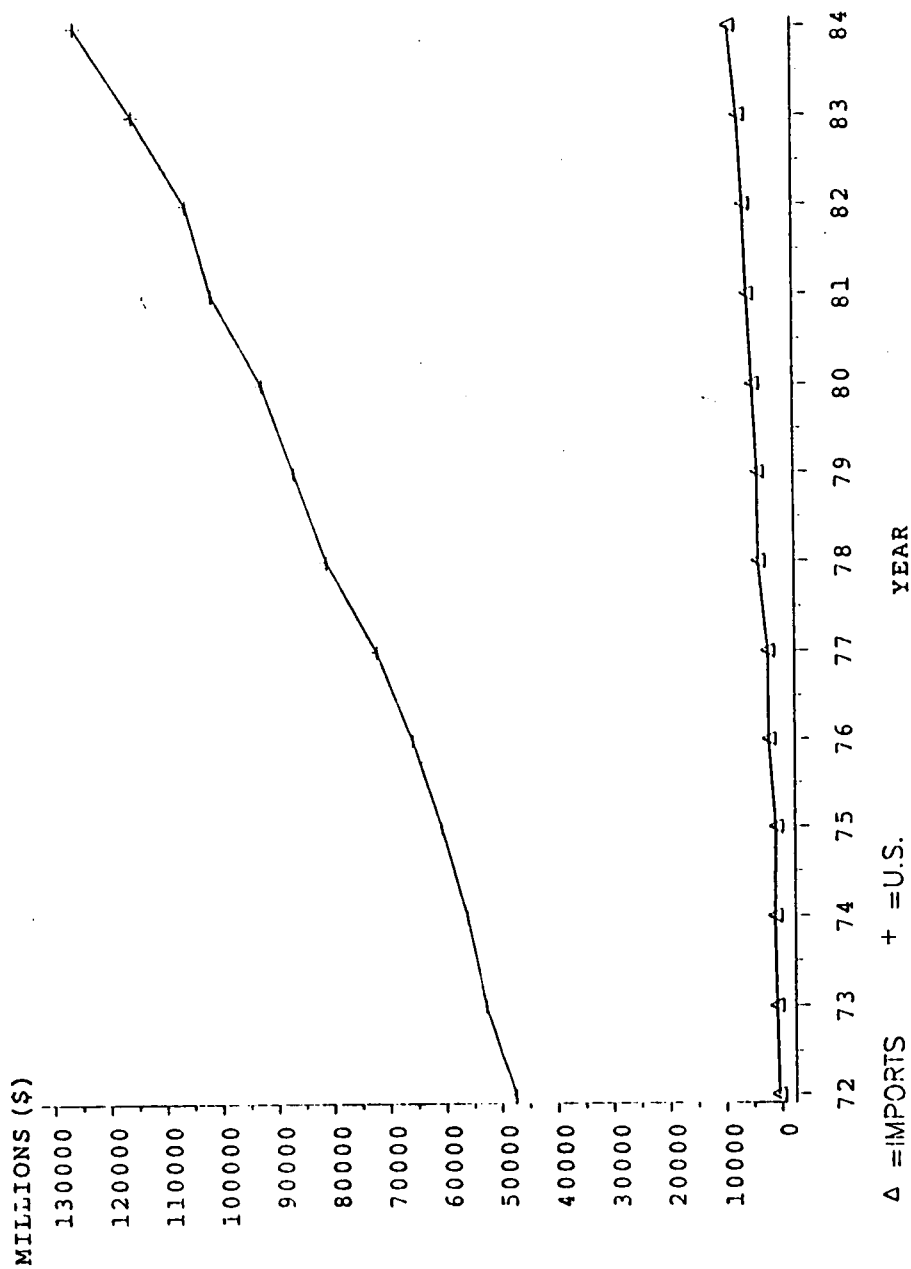


Figure E.1. Comparison of U.S. apparel consumption with total U.S. apparel imports, \$ millions by year.

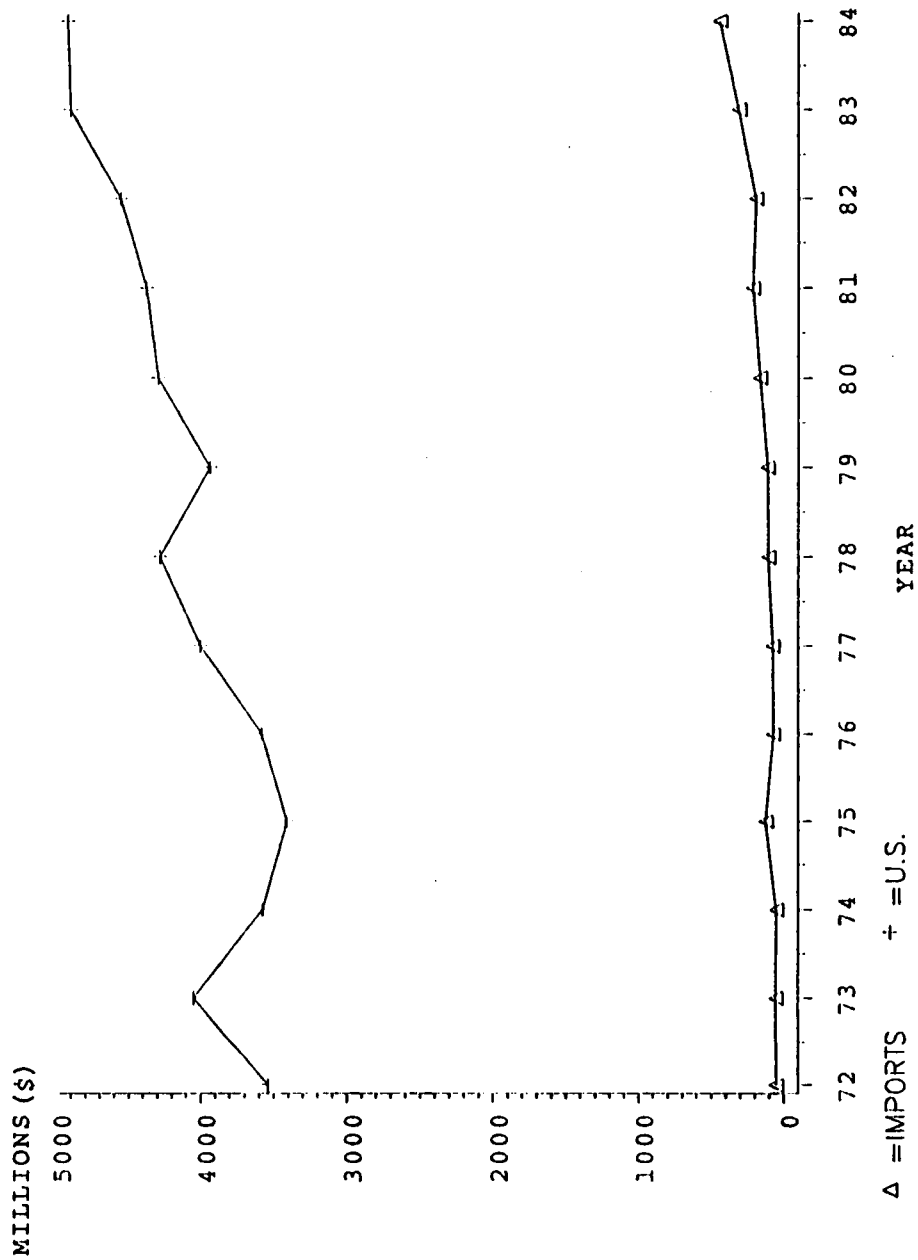


Figure E.2. U.S. domestically produced dresses compared with dress imports, \$ millions by year.

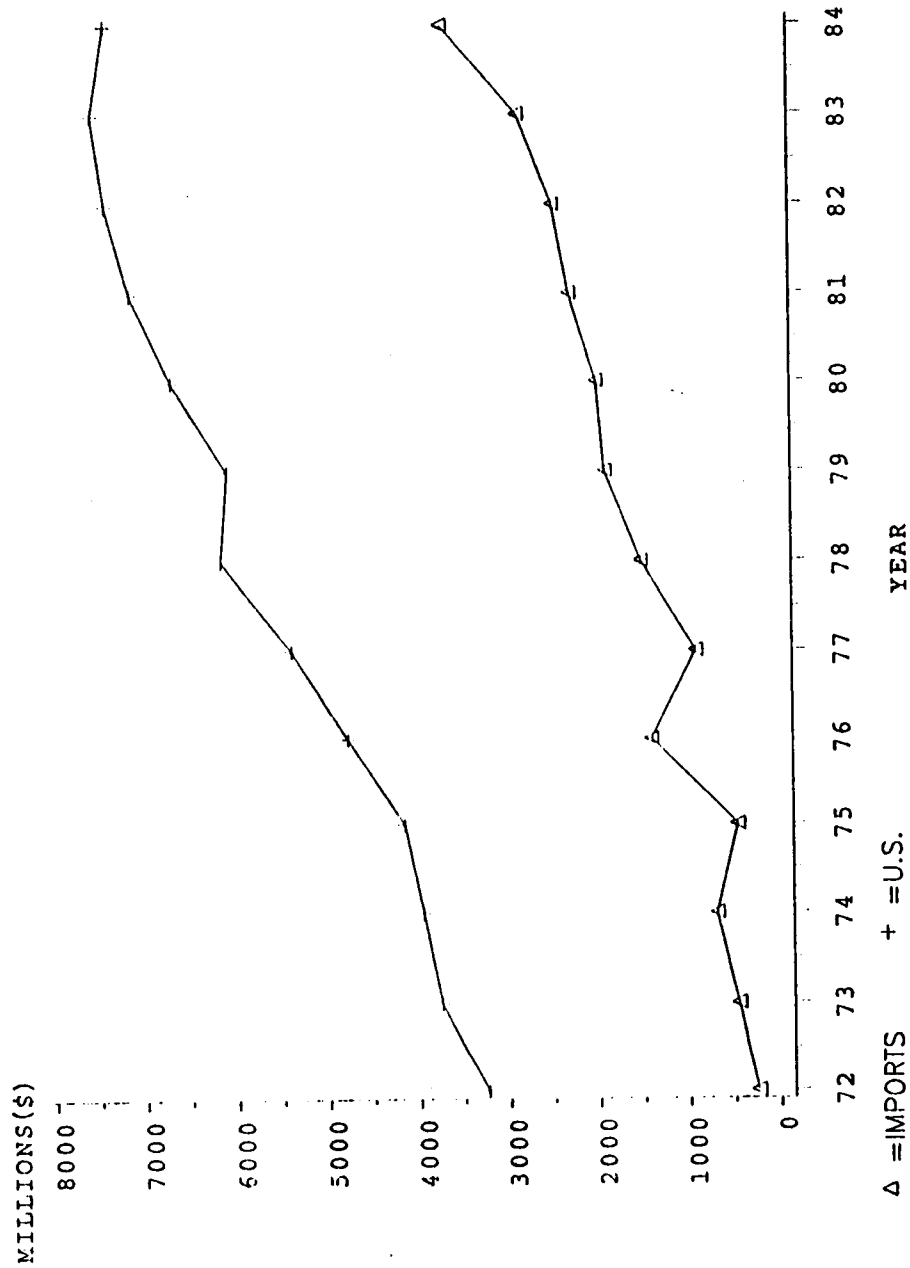


Figure E.3. U.S. domestically produced shirts compared with shirt imports, \$ millions by year.

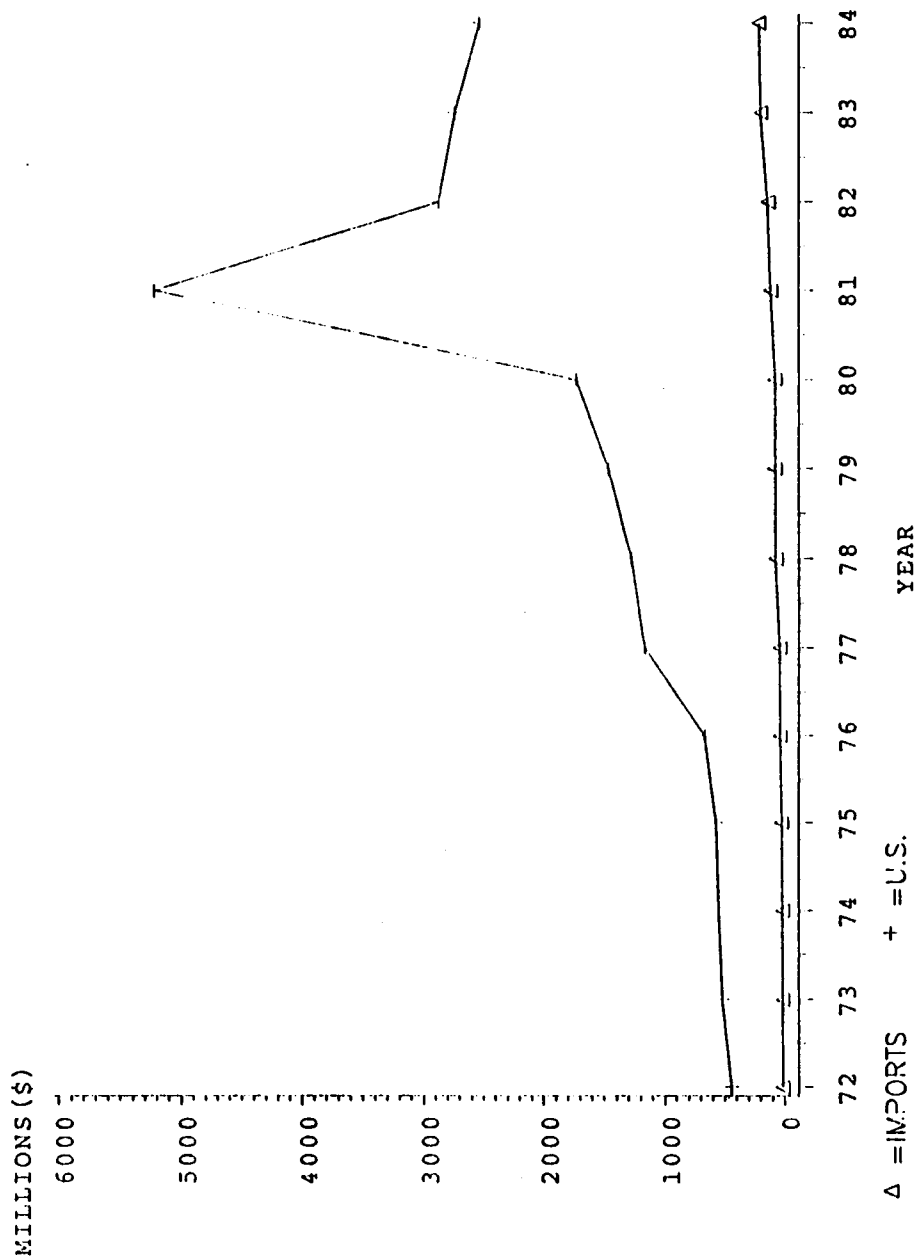


Figure E.4. U.S. domestically produced skirts compared with skirt imports, \$ millions by year.

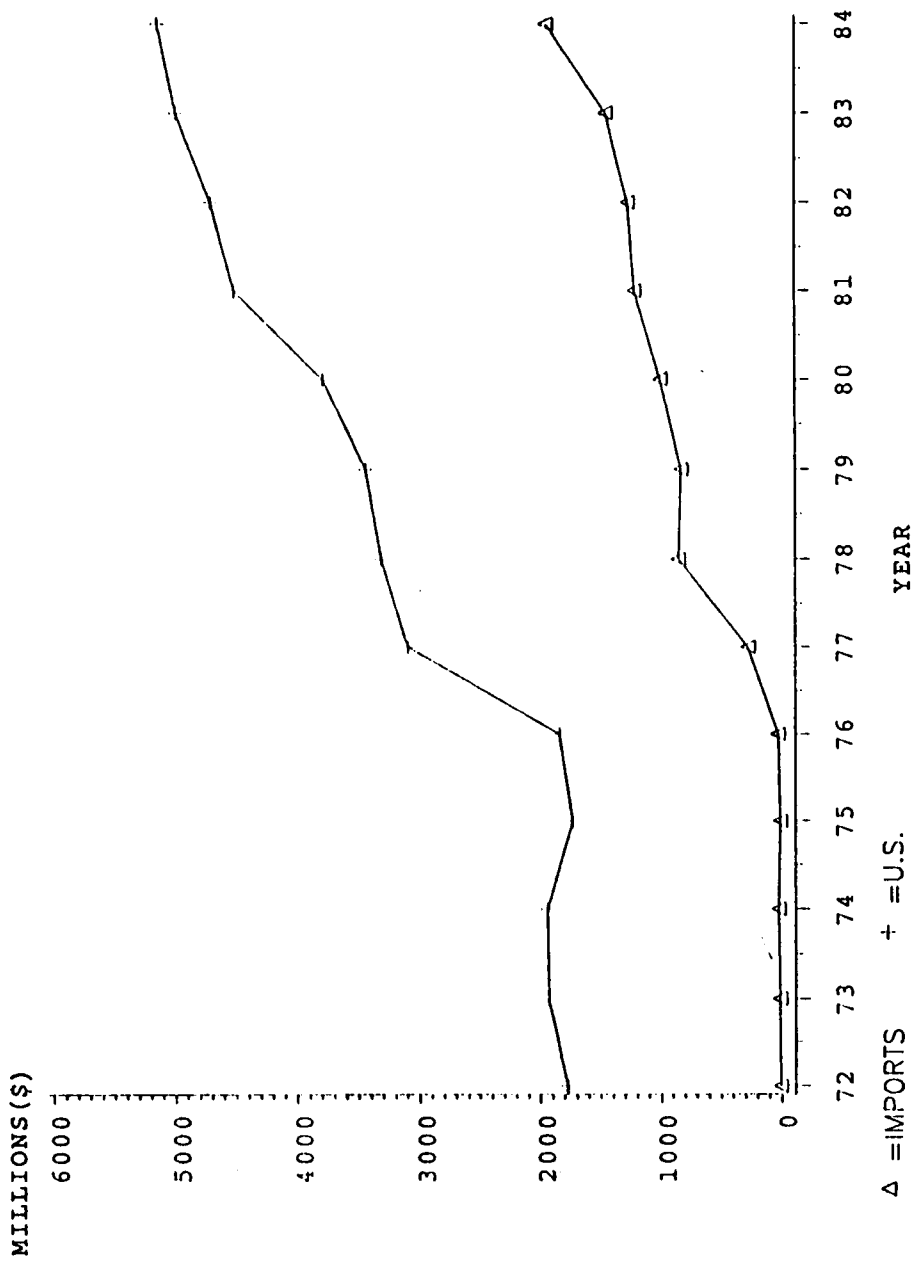


Figure E.5. U.S. domestically produced slacks compared with slack imports, \$ millions by year.

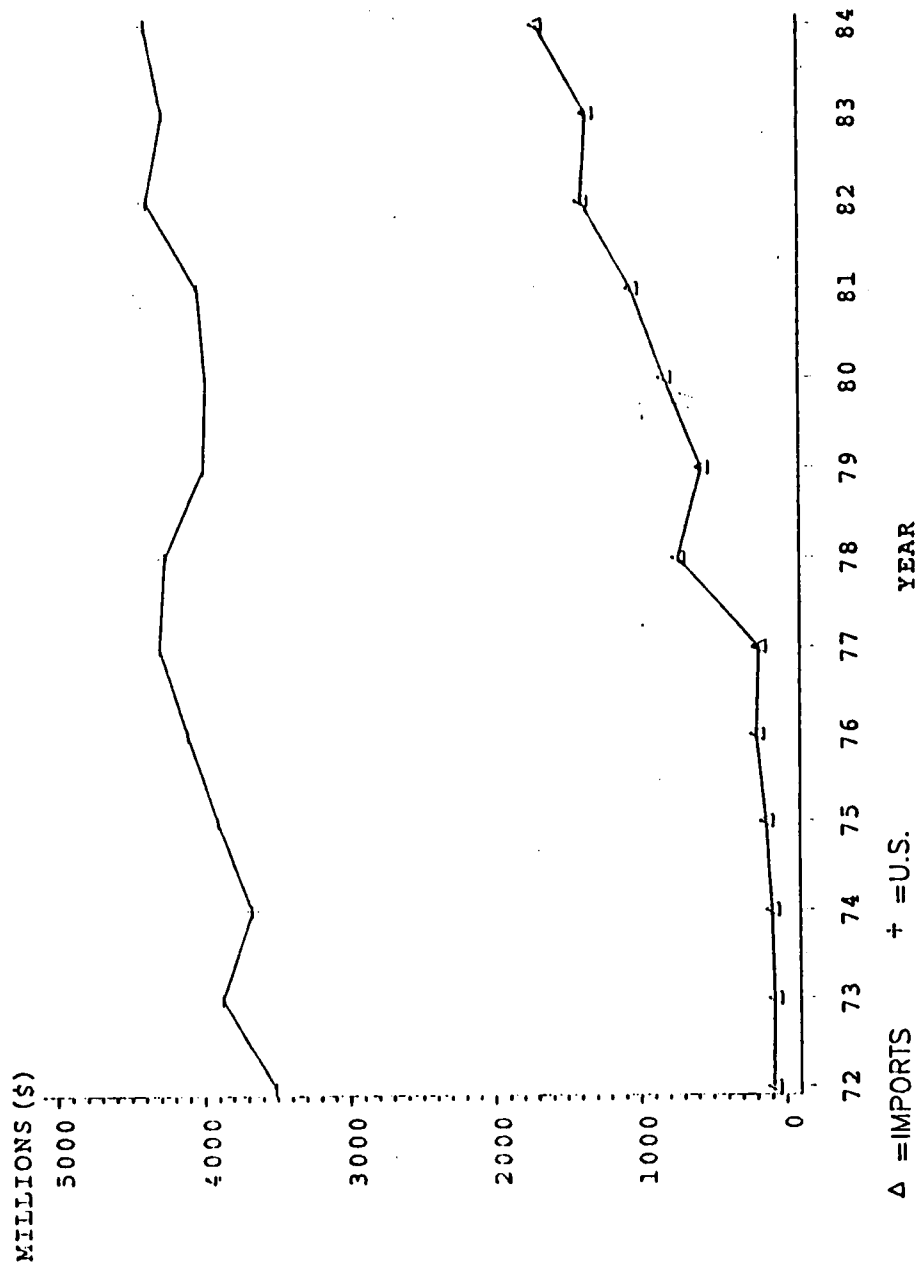


Figure E.6. U.S. domestically produced suits and coats compared with suit and coat imports, \$ million by year.

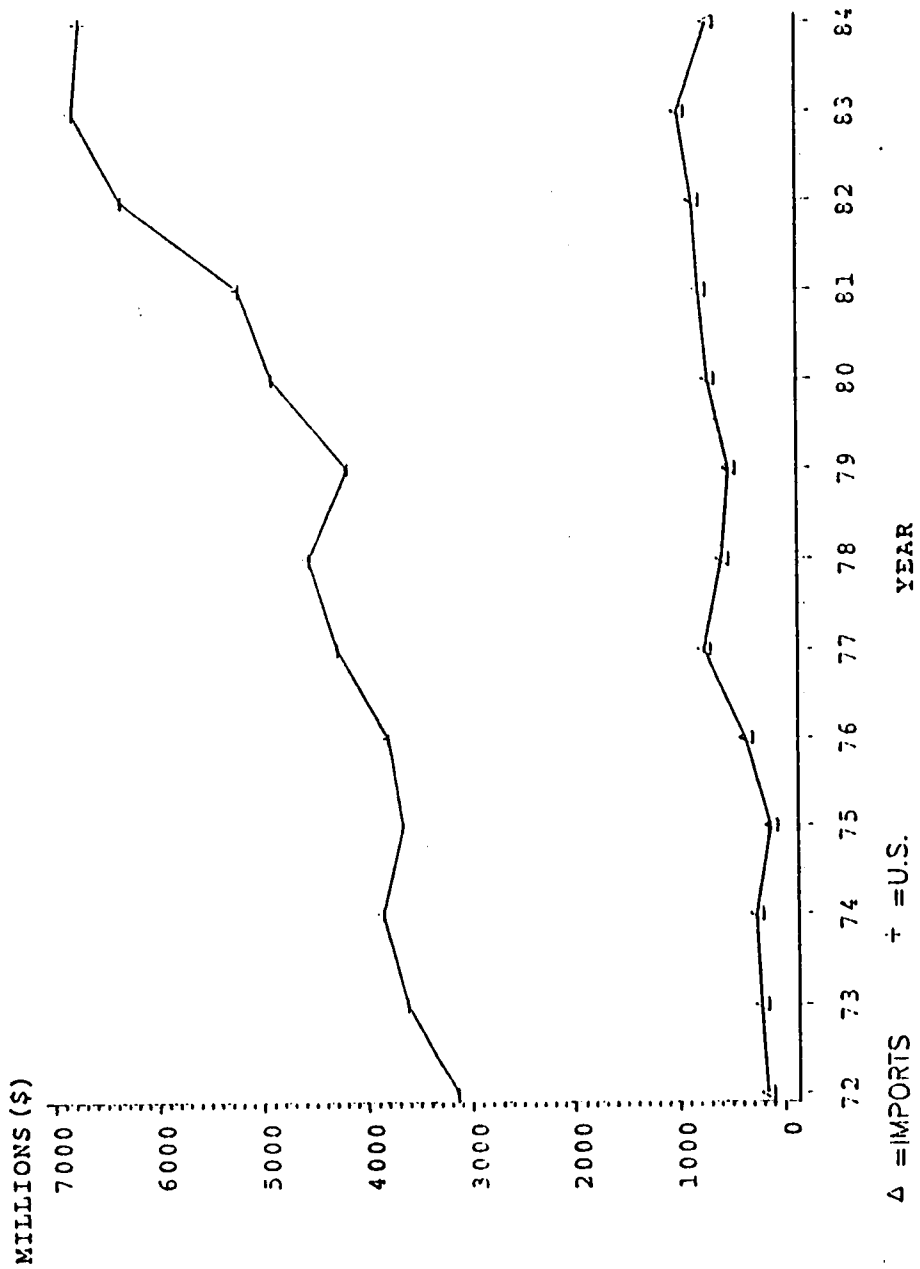


Figure E.7. U.S. domestically produced sweaters compared with sweater imports, \$ millions by year.

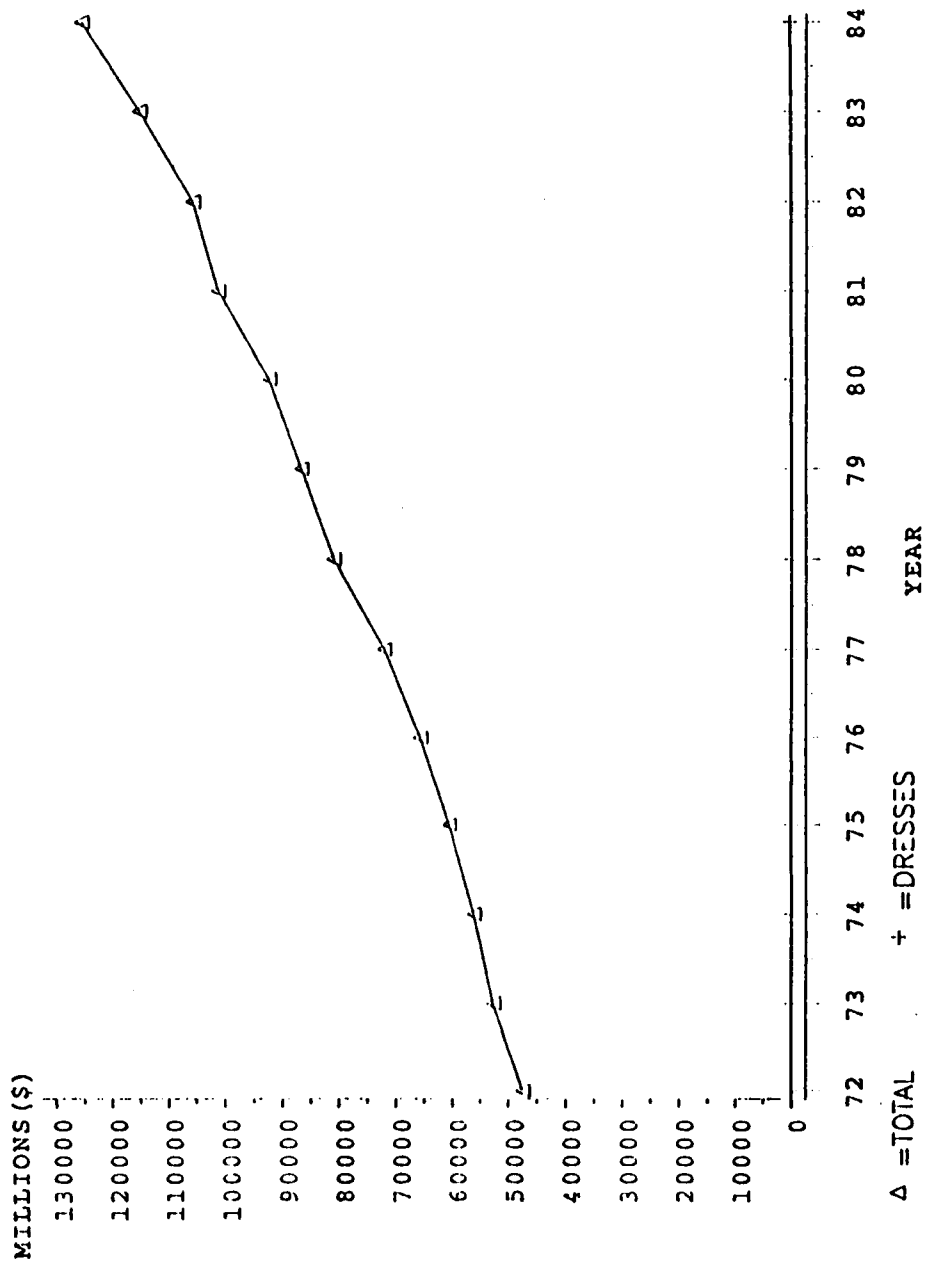


Figure E.8. U.S. apparel consumption compared with dresses imported into the U.S., \$ million by year.

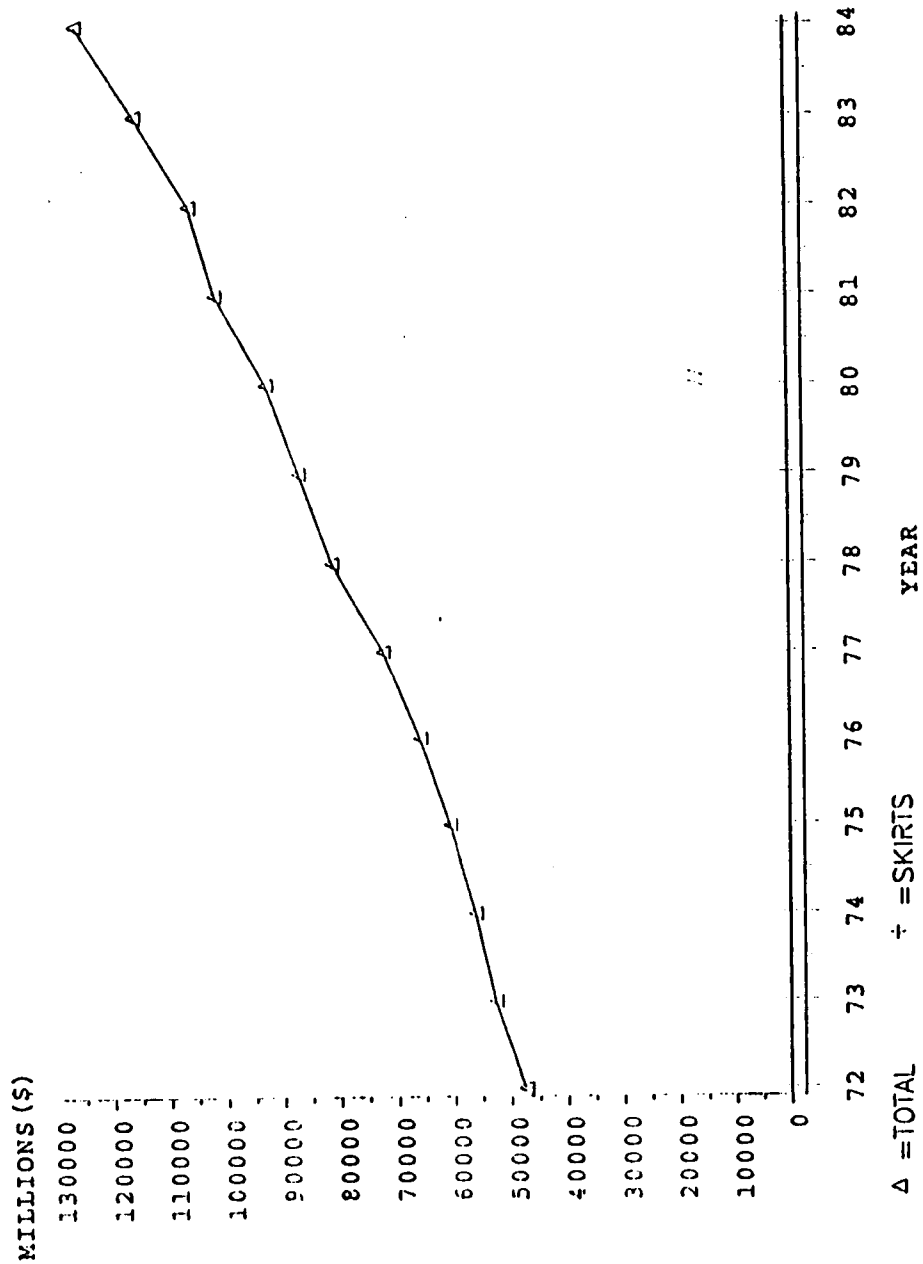


Figure E.9. U.S. apparel consumption compared with skirts imported into the U.S., \$ millions by year.

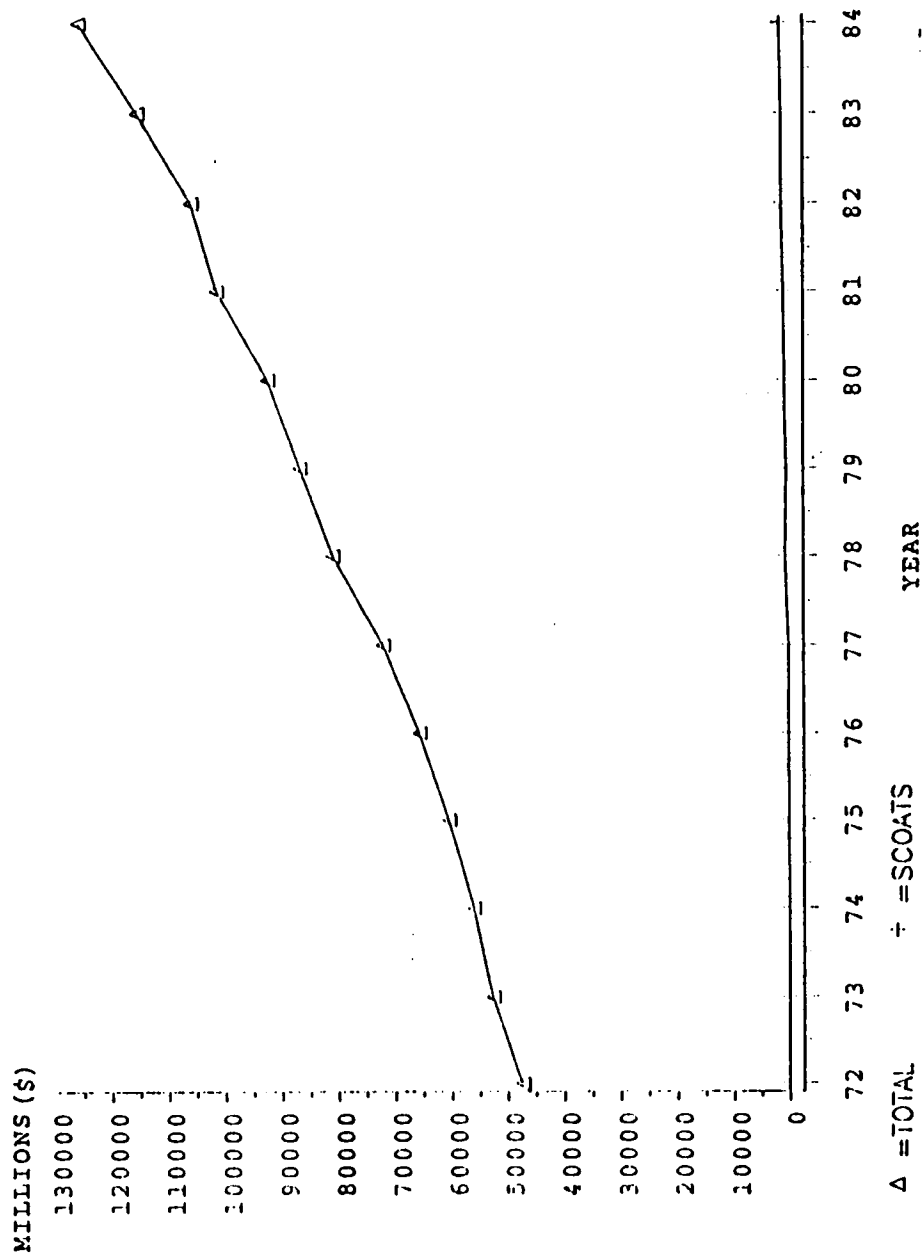


Figure E.10. U.S. apparel consumption compared with slacks imported into the U.S., \$ million by year.

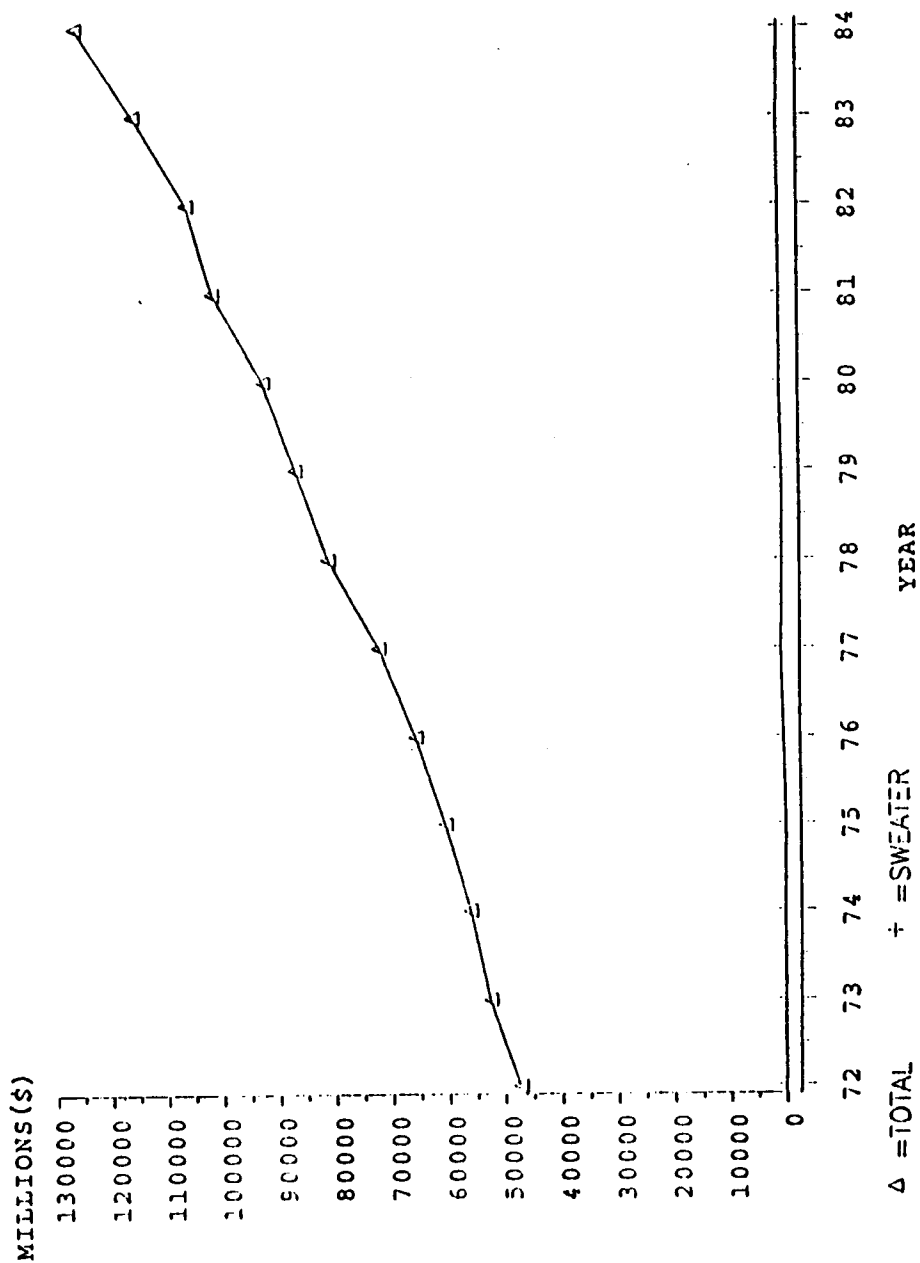


Figure E.11. U.S. apparel consumption compared with sweaters imported into the U.S., \$ million by year.

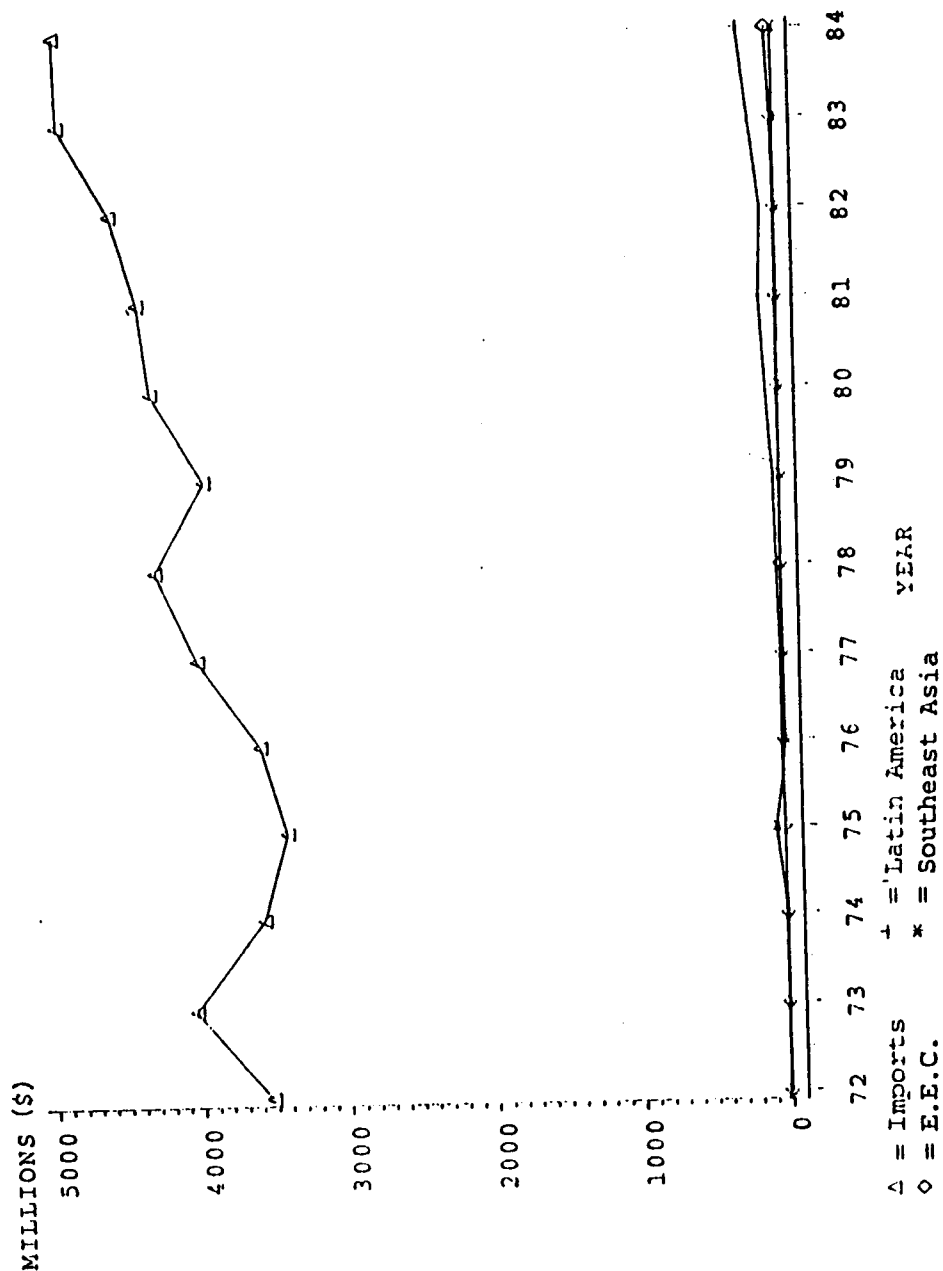


Figure E.12. U.S. domestically produced dresses compared with imported dresses from exporting world regions: European Economic Commonwealth, Latin America, and Southeast Asia, \$ millions by year.

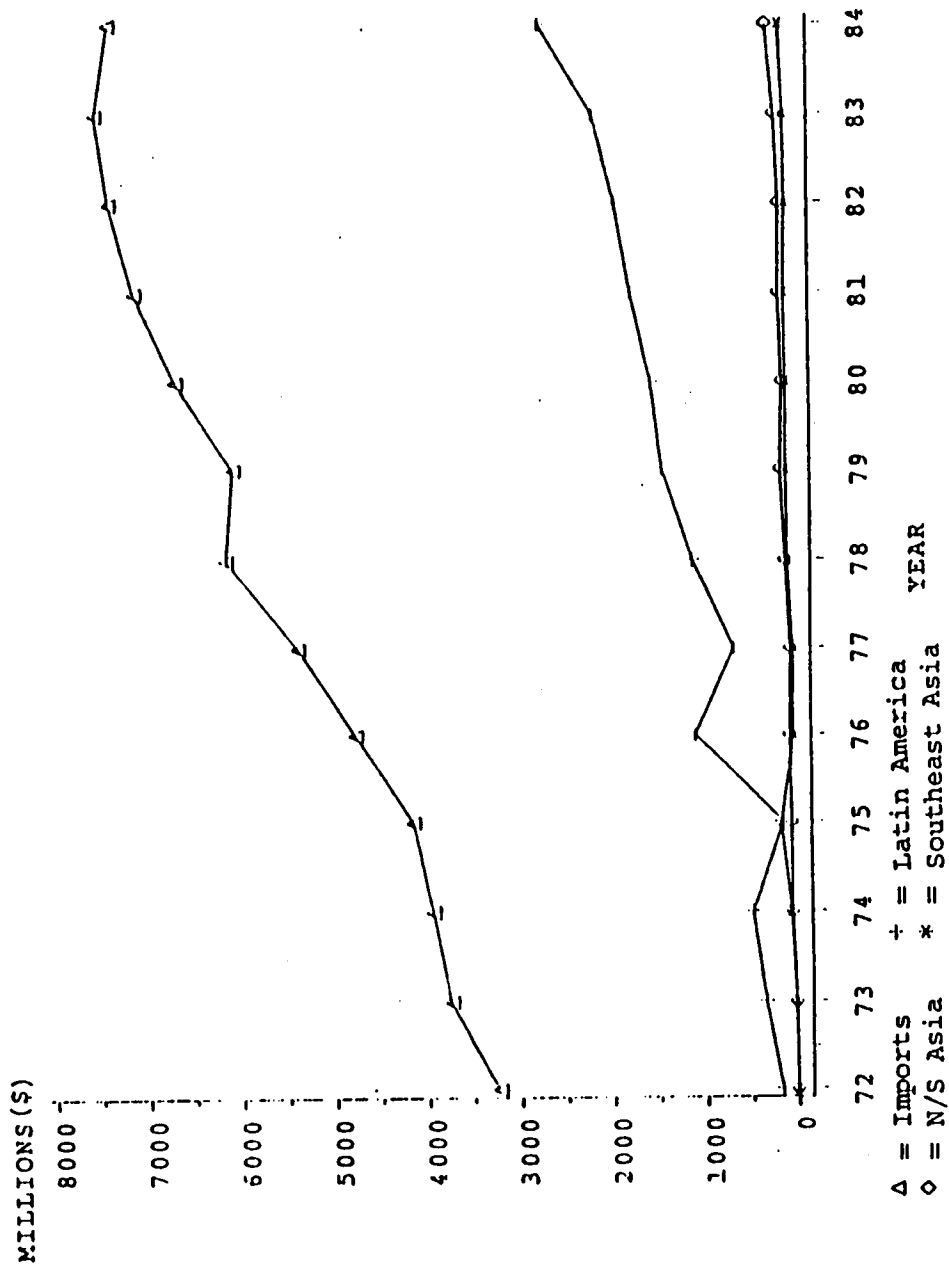


Figure E.13. U.S. domestically produced shirts compared with imported shirts from major exporting world regions: North/South Asia, Latin America, and Southeast Asia, \$ millions by year.

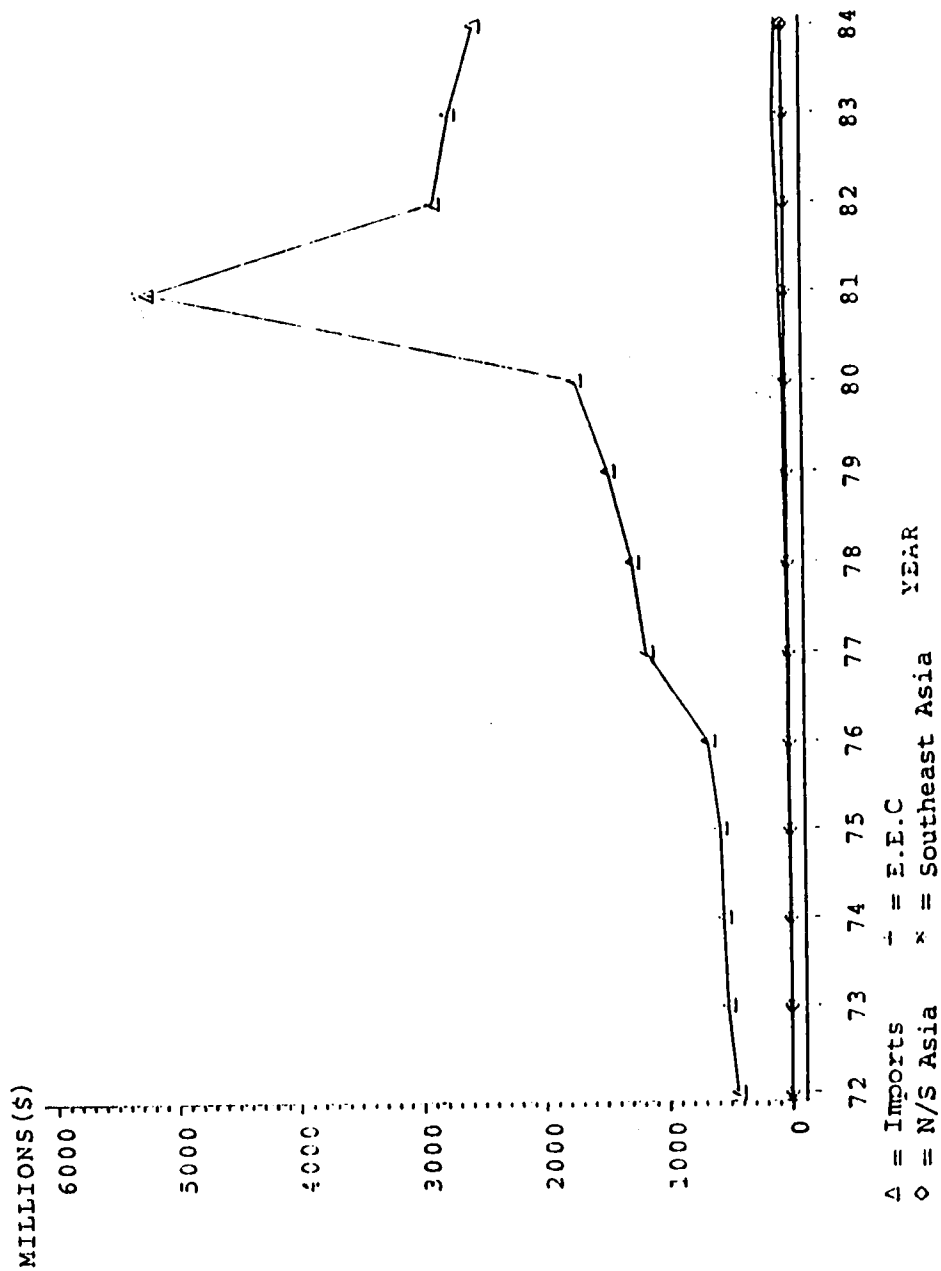


Figure E.14. U.S. domestically produced skirts compared with imported skirts from exporting world regions: North/South Asia, European Economic Commonwealth, and Southeast Asia, \$ millions by year.

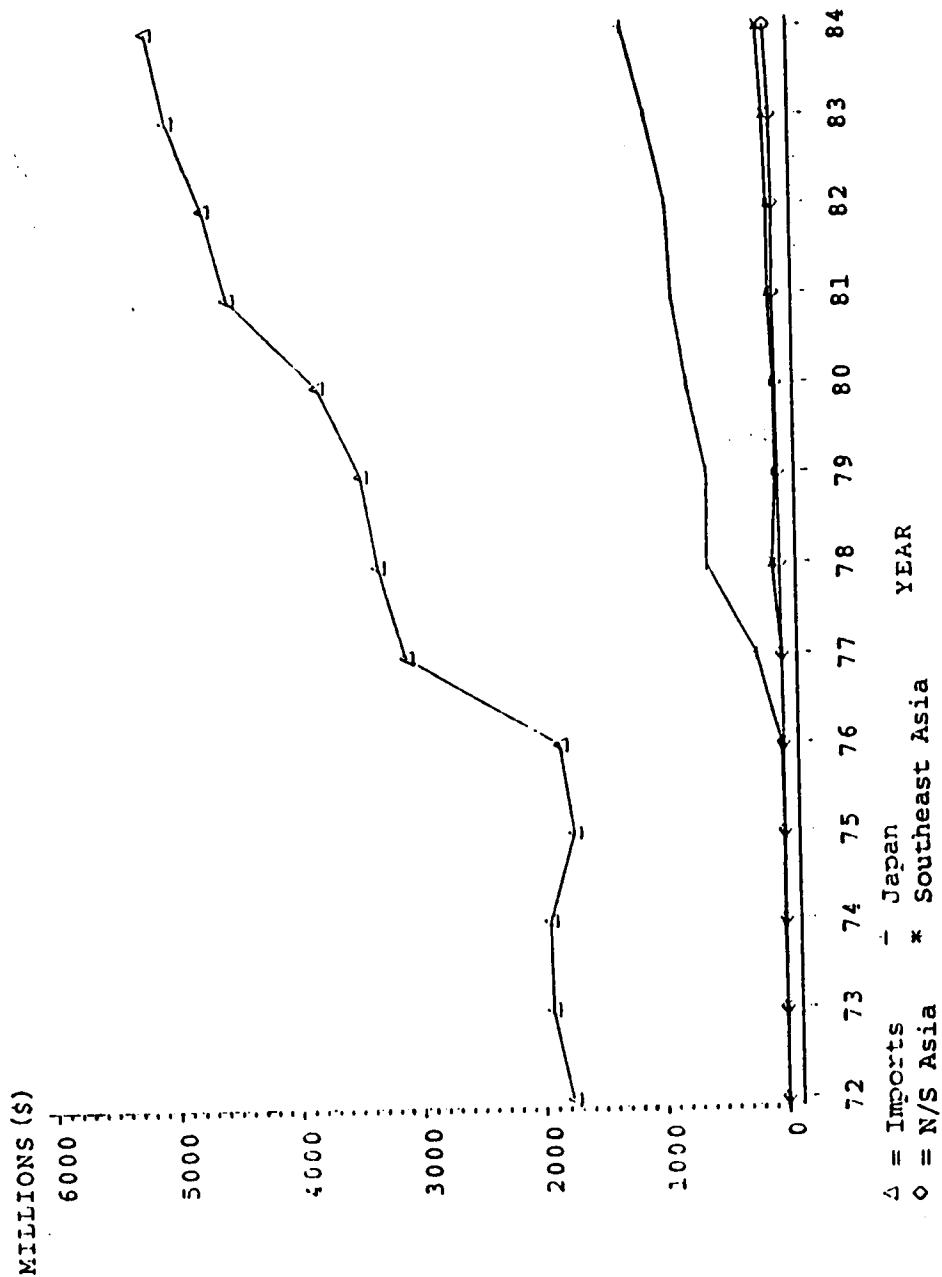


Figure E.15. U.S. domestically produced slacks compared with imported slacks from exporting world regions: North/South Asia, Japan and Southeast Asia.

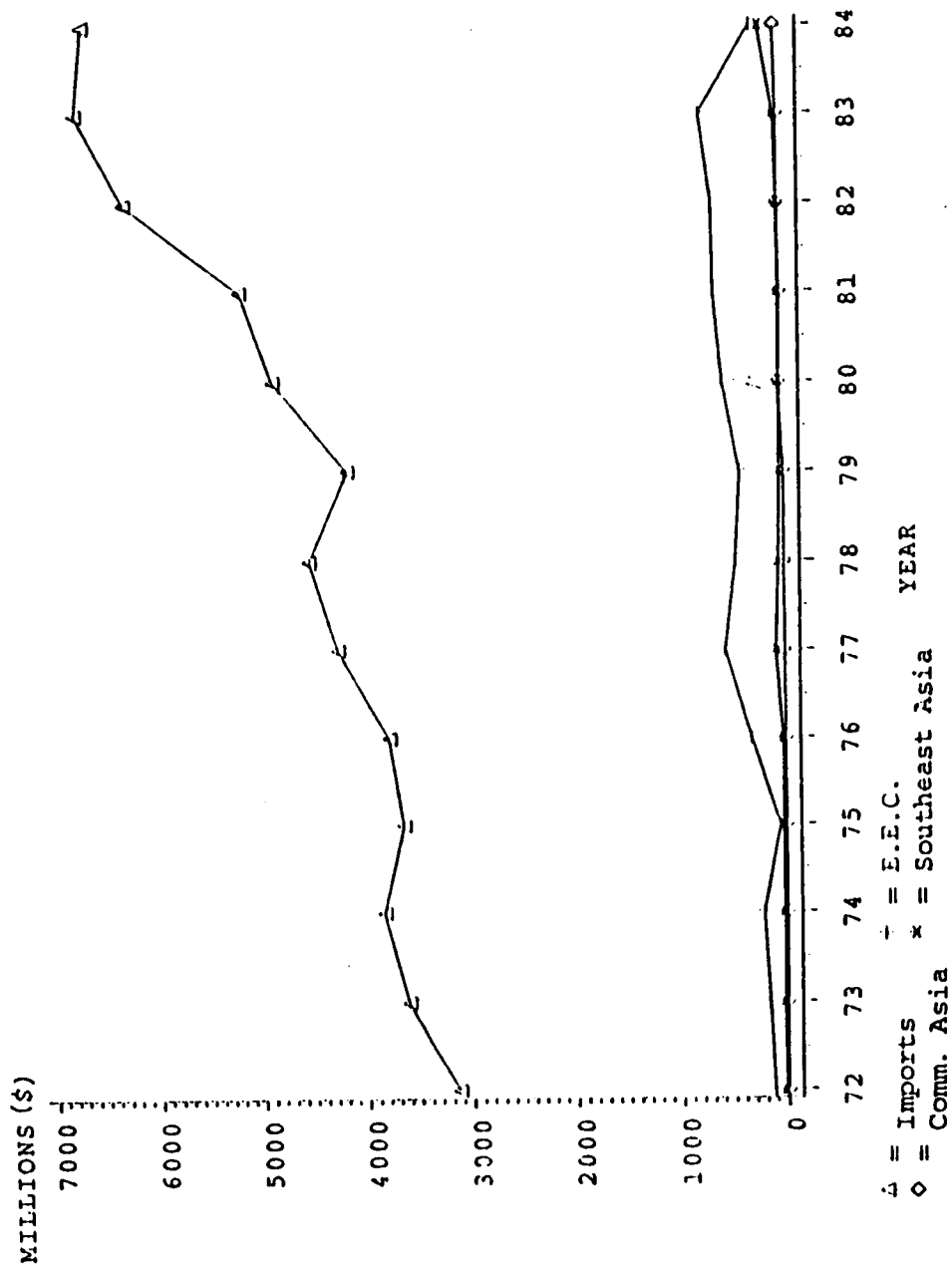


Figure E.16. U.S. domestically produced sweaters compared with imported sweaters from exporting world regions: Communist Asia, European Economic Commonwealth, and Southeast Asia.

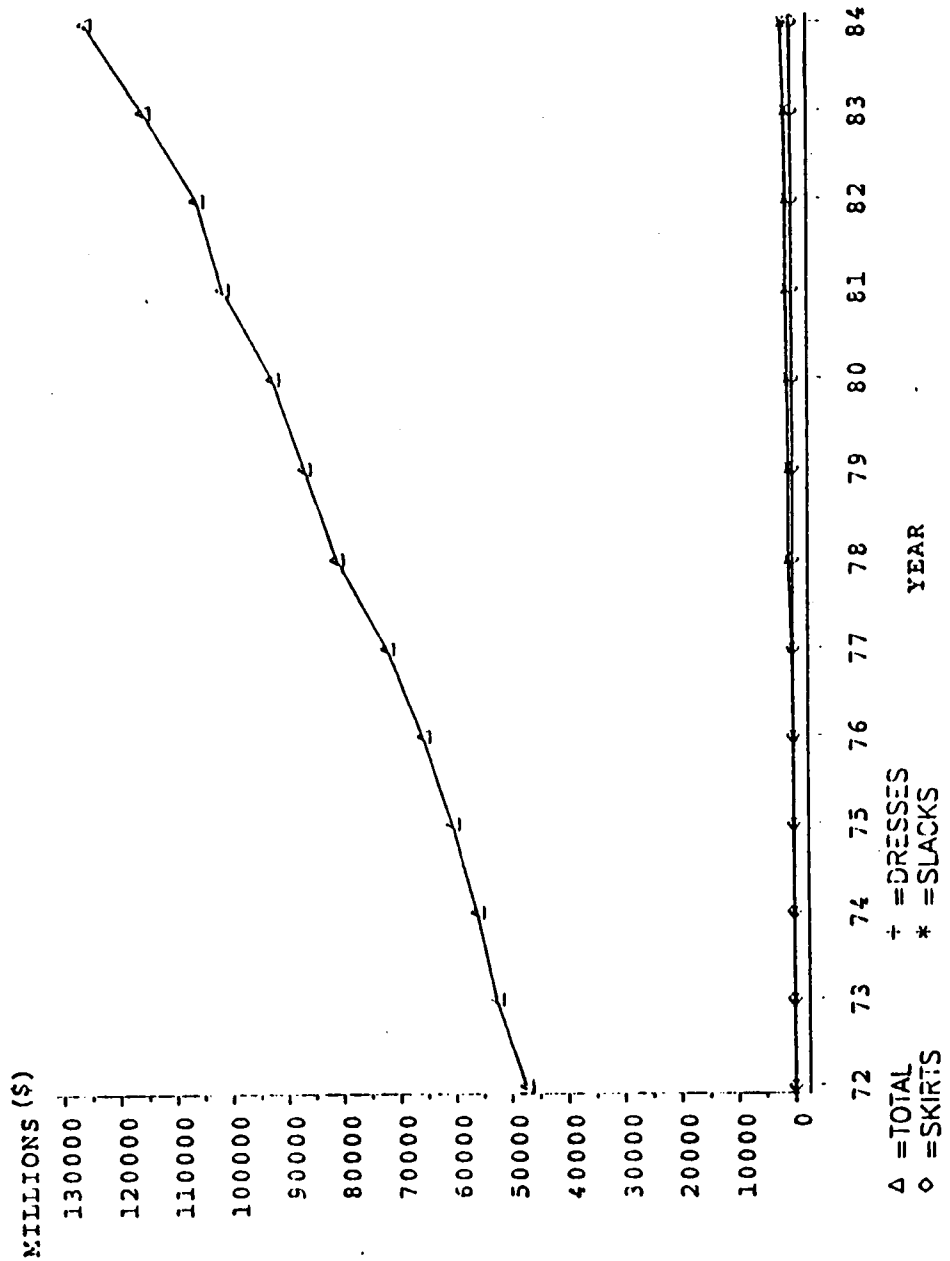


Figure E.17. U.S. domestically produced dresses, skirts, and slacks compared with U.S. apparel consumption.

APPENDIX F

Analysis of Variance Summary Tables

Table F.1. Analysis of Variance Summary Table of Brand
Type Between Domestic and Imported Dresses
(Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	3	0.0131	1.540	.2308
Brand (A)	1	0.0037	1.300	.2652
Domestic	1	0.0064	2.250	.1471
or Import (B)				
A X B	1	0.0033	1.180	.2890
Error	23	0.0650		
Total	26	0.0780		

Table F.2. Analysis of Variance Summary Table of
Country of Origin Between Domestic and
Imported Dresses (Initial Markup
Percentage).

SOURCE	df	SS	F	P
Model	5	0.0050	0.250	.9358
Country (A)	4	0.0032	0.200	.9364
Domestic	1	0.0017	0.430	.5212
Or Import (B)				
A X B	0	0.0000	.	.
Error	18	0.0725		
Total	23	0.0774		

Table F.3. Analysis of Variance Summary Table of
Fashion Between Domestic and Imported
Dresses (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	6	0.0107	0.067	.6728
Fashion (A)	3	0.0045	0.570	.6713
Domestic	1	0.0015	0.480	.4971
Or Import (B)				
A X B	2	0.0001	0.010	.9328
Error	18	0.0476		
Total	24	0.0583		

Table F.4. Analysis of Variance Summary Table of Item
Type Between Domestic and Imported Dresses
(Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	2	0.0010	0.160	.8517
Item Type (A)	1	0.0000	0.000	.9994
Domestic	1	0.0010	0.032	.5803
Or Import (B)				
A X B	0	0.0000	.	.
Error	17	0.0513		
Total	19	0.0523		

Table F.5.

Analysis of Variance Summary Table of
Purchase Method Between Domestic and
Imported Dresses (Initial Markup
Percentage).

SOURCE	df	SS	F	P
Model	4	0.0087	0.660	.6233
Purchase Mtd. (A)	2	0.0065	0.980	.3907
Domestic	1	0.0033	1.000	.3279
or Import (B)				
A X B	1	0.0025	0.080	.7855
Error	21	0.0690		
Total	25	0.0777		

Table F.6. Analysis of Variance Summary Table of
Quality Between Domestic and Imported
Dresses (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	4	0.0081	0.610	.6591
Quality (A)	2	0.0060	0.880	.4285
Domestic	1	0.0000005	0.000	.9692
or Import (B)				
A X B	1	0.0034	1.030	.3212
Error	20	0.0666		
Total	24	0.0747		

Table F.7. Analysis of Variance Summary Table of
Initial Retail Prices Between Domestic and
Imported Dresses (Initial Markup
Percentage).

SOURCE	df	SS	F	P
Model	5	0.0183	1.230	.3325
Retail Price (A)	2	0.0068	1.140	.3397
Domestic	1	0.00002	0.010	.9352
or Import				
A X B	2	0.0039	0.660	.5274
Error	20	0.0595		
Total	25	0.0777		

Table F.8. Analysis of Variance Summary Table of Store Type Between Domestic and Imported Dresses (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	6	0.0128	0.650	.6866
Store Type (A)	4	0.0068	0.520	.7195
Domestic	1	0.0013	0.390	.5377
or Import (B)				
A X B	1	0.0015	0.460	.5061
Error	20	0.0653		
Total	26	0.0781		

Table F.9. Analysis of Variance Summary Table of Brand
Type Between Domestic and Imported Coats and
Suits (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	5	1.0975	2.310	.0574
Brand (A)	2	0.2206	1.160	.3209
Domestic	1	0.1347	1.420	.2390
or Import (B)				
A X B	2	0.2429	1.280	.2869
Error	50	4.7424		
Total	55	5.8402		

Table F.10. Analysis of Variance Summary Table of Country of Origin Between Domestic and Imported Coats and Suits (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	8	0.1587	4.930	.0002
Country (A)	4	0.0053	0.330	.8565
Domestic	1	0.0770	19.140	.0001
or Import (B)				
A X B	3	0.0065	0.540	.6588
Error	42	0.1690		
Total	50	0.3277		

Table F.11. Analysis of Variance Summary Table of Item Type Between Domestic and Imported Coats and Suits (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	3	0.9940	3.160	.0333
Item Type (A)	1	0.1786	1.700	.1982
Domestic	1	0.5901	5.634	.0219
Or Import (B)				
A X B	1	0.1016	1.610	.2071
Error	46	4.8278		
Total	49	5.8149		

Table F.12. Analysis of Variance Summary Table of
Purchase Method Between Domestic and
Imported Coats and Suits (Initial Markup
Percentage).

SOURCE	df	SS	F	P
Model	56	0.9646	1.980	.0981
Purchase Mtd. (A)	2	0.0196	0.160	.9345
Domestic	1	0.2037	2.090	.1546
or Import (B)				
A X B	2	0.0197	0.500	.6098
Error	50	4.8756		
Total	55	5.8408		

Table F.13. Analysis of Variance Summary Table of
Quality Between Domestic and Imported Coats
and Suits (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	5	1.1830	2.130	.0814
Quality (A)	2	0.3096	1.390	.2602
Domestic	1	0.2837	2.550	.1179
or Import (B)				
A X B	2	0.2711	1.220	.3061
Error	41	4.5603		
Total	46	5.7433		

Table F.14. Analysis of Variance Summary Table of Initial Retail Prices Between Domestic and Imported Coats and Suits (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	3	0.9753	3.650	.0179
Retail Price (A)	1	0.1183	1.330	.2540
Domestic	1	0.4423	4.970	.0299
or Import (B)				
A X B	1	0.1794	2.020	.1612
Error	55	4.8942		
Total	58	5.8695		

Table F.15. Analysis of Variance Summary Table of Store Type Between Domestic and Imported Coats and Suits (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	6	0.9119	1.590	.1680
Store Type (A)	3	0.0629	7.220	.8822
Domestic	1	0.2327	2.440	.1243
or Import (B)				
A X B	2	0.1388	0.730	.4879
Error	52	4.9583		
Total	58	5.8695		

Table F.16. Analysis of Variance Summary Table of Brand Type Between Domestic and Imported Shirts (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	5	0.1839	4.26	.0041
Brand (A)	2	0.0006	0.040	.9626
Domestic or or Import (B)	1	0.0763	8.830	.0054
A X B	1	0.00002	0.000	.9986
Error	34	0.2936		
Total	39	0.4776		

Table F.17. Analysis of Variance Summary Table of
Country of Origin Between Domestic and
Imported Shirts (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	4	0.1934	5.830	.0012
Country (A)	2	0.0110	0.660	.5217
Domestic	1	0.0818	9.860	.0035
or Import (B)				
A X B	1	0.0005	0.060	.8056
Error	33	0.2738		
Total	37	0.4672		

Table F.18. Analysis of Variance Summary Table of Item Type Between Domestic and Imported Shirts (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	3	0.1566	5.970	.0024
Item Type (A)	1	0.0019	0.220	.6432
Domestic	1	0.1478	16.910	.0003
Or Import (B)				
A X B	1	0.0020	0.230	.6375
Error	32	0.0279		
Total	35	0.4364		

Table F.19. Analysis of Variance Summary Table of
Purchase Method Between Domestic and
Imported Shirts (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	5	303.62	0.370	.8647
Purchase Mtd. (A)	2	75.080	0.230	.7961
Domestic	1	18.823	0.120	.7365
or Import (B)				
A X B	2	153.76	0.470	.6290
Error	34	5660.8		
Total	39	5864.4		

Table F.20. Analysis of Variance Summary Table of Store Type Between Domestic and Imported Shirts (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	7	0.2784	6.390	.0001
Store Type (A)	3	0.0296	1.580	.2128
Domestic	1	0.0343	5.510	.0253
or Import (B)				
A X B	3	0.0646	3.460	.0277
Error	32	0.1992		
Total	39	0.4776		

Table F.21. Analysis of Variance Summary Table of
Country of Origin Between Domestic and
Imported Slacks (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	9	0.2627	3.630	.0031
Country (A)	5	0.0284	0.710	.6232
Domestic	1	0.0515	0.641	.0163
Or Import (B)				
A X B	3	0.0131	0.540	.6564
Error	33	0.2653		
Total	42	0.5280		

Table F.22. Analysis of Variance Summary Table of
Fashion Between Domestic and Imported Slacks
(Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	5	0.2977	9.590	.0001
Fashion (A)	2	0.0033	0.260	.7702
Domestic	1	0.2601	41.920	.0001
Or Import (B)				
A X B	2	0.0366	2.940	.0626
Error	46	0.2855		
Total	51	0.5832		

Table F.23. Analysis of Variance Summary Table of Item Type Between Domestic and Imported Slacks (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	3	0.2896	14.52	.0001
Item Type (A)	1	0.0067	1.020	.3193
Domestic	1	0.2825	42.500	.0001
A X B	1	0.0162	2.440	.1258
Error	42	0.2792		
Total	45	0.5689		

Table F.24. Analysis of Variance Summary Table of
Purchase Method Between Domestic and
Imported Slacks (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	6	0.2842	7.080	.0001
Purchase Mtd. (A)	3	0.0265	1.320	.2792
Domestic	1	0.1053	15.730	.0003
or Import (B)				
A X B	2	0.0010	0.080	.9255
Error	44	0.2945		
Total	50	0.5787		

Table F.25. Analysis of Variance Summary Table of
Quality Between Domestic and Imported Slacks
(Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	5	0.2667	7.970	.0001
Quality (A)	2	0.0124	0.920	.4051
Domestic or Import (B)	1	0.1272	19.010	.0001
A X B	2	0.0068	0.510	.6042
Error	42	0.2811		
Total	47	0.5478		

Table F.26. Analysis of Variance Summary Table of
Initial Retail Prices Between Domestic and
Imported Slacks (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	4	0.2640	9.720	.0001
Retail Price (A)	2	0.0038	0.280	.7599
Domestic	1	0.0896	13.200	.0007
or Import (B)				
A X B	1	0.0013	0.200	.6601
Error	47	0.3192		
Total	51	0.5831		

Table F.27. Analysis of Variance Summary Table of Country of Origin Between Domestic and Imported Sweaters (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	9	22.4200	0.100	.9996
Country (A)	6	5.2969	0.030	.9998
Domestic	1	0.6644	0.030	.8739
or Import (B)				
A X B	2	4.9213	0.090	.9102
Error	54	1410.1		
Total	63	1432.5		

Table F.28. Analysis of Variance Summary Table of Fashion Between Domestic and Imported Sweaters (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	6	41.876	0.300	.9341
Fashion (A)	3	11.707	0.170	.9174
Domestic	1	2.272	0.100	.7554
Or Import (B)				
A X B	2	10.187	0.220	.8035
Error	60	1391.8		
Total	66	1433.7		

Table F.29. Analysis of Variance Summary Table of Item Type Between Domestic and Imported Sweaters (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	3	46.123	0.630	.5971
Item Type (A)	1	11.613	0.480	.4922
Domestic	1	9.237	0.380	.5401
or Import (B)				
A X B	1	11.951	0.490	.4860
Error	57	1385.5		
Total	60	1431.6		

Table F.30. Analysis of Variance Summary Table of
Purchase Method Between Domestic and
Imported Sweaters (Initial Markup
Percentage).

SOURCE	df	SS	F	P
Model	5	20.125	0.170	.9714
Purchase Mtd. (A)	2	1.0651	0.020	.9773
Domestic	1	0.4224	0.020	.8931
or Import (B)				
A X B	2	1.2746	0.030	.9729
Error	61	1413.6		
Total	66	1433.7		

Table F.31. Analysis of Variance Summary Table of
Quality Between Domestic and Imported
Sweaters (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	5	46.695	0.320	.8958
Quality (A)	2	11.251	0.200	.8231
Domestic	1	1.535	0.050	.8183
or Import (B)				
A X B	2	10.712	0.190	.8308
Error	48	1381.3		
Total	53	1428.0		

Table F.32. Analysis of Variance Summary Table of Initial Retail Prices Between Domestic and Imported Sweaters (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	5	22.747	0.180	.9675
Retail Price (A)	2	5.2250	0.110	.8999
Domestic or Import (B)	1	0.4806	0.020	.8896
A X B	2	4.8851	0.100	.9061
Error	57	1409.3		
Total	62	1432.1		

Table F.33. Analysis of Variance Summary Table of Store Type Between Domestic and Imported Sweaters (Initial Markup Percentage).

SOURCE	df	SS	F	P
Model	8	25.5660	0.130	.9976
Store Type (A)	4	4.0416	0.040	.9966
Domestic	1	0.1202	0.000	.9441
or Import (B)				
A X B	3	3.8031	0.050	.9841
Error	58	1408.1		
Total	66	1433.7		

VITA

Jan Montgomery Hathcote grew up in Atlanta, Georgia where she attended public schools. She received her B.S. degree in Home Economics Education from The University of Georgia, Athens, Georgia.

Mrs. Hathcote worked in store management in Nashville Tennessee for one year. She then moved to Knoxville, Tennessee and worked for a bank for a year. She has seven additional years of retail management experience working for a department store chain as a buyer.

Mrs. Hathcote began graduate school to renew her Tennessee teaching certification and decided to continue through the Ph.D. program.

She is a member of The Association of College Professors of Textiles and Clothing, The American Home Economics Association, Omicron Nu Honor Society and The University of Georgia Bulldog Club.

Currently Mrs. Hathcote holds a temporary faculty position at The University of Tennessee, Knoxville.