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AN EXPLORATORY STUDY OF THE APPLICATION OF
MARKET SEGMENTATION TO CONSUMERS OF PANTYHOSE

A Thesis

Submitted to the Department of Clothing and Textiles
of the University of Manitoba

by

Doris Mattner

In Partial Fulfillment
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AN EXPLORATORY STUDY OF THE APPLICATION OF
MARKET SEGMENTATION TO CONSUMERS OF PANTYHOSE

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DORIS MATTNER

A dissertation submitted to the Faculty of Graduate Studies of
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MARKET SEGMENTATION APPLIED TO THE CONSUMER OF PANTYHOSE
ABSTRACT

Market segmentation, a type of marketing strategy, has been successfully applied to many products. Little market segmentation research, however, has been done for apparel items. The overall purpose of this study was to determine if consumers of pantyhose could be segmented based on the purchasing behaviour of private and national brands.

Ninety-eight women, members of an existing consumer panel in Winnipeg, were requested to maintain records of their pantyhose purchases for six months. Of the ninety-eight women, forty-nine were classified as light buyers and forty-nine were classified as heavy buyers. The purchasing behaviour of the heavy buyers was examined and analyzed to determine which segments existed, of which segment each respondent was a member, and which demographic, socioeconomic and purchasing behaviour characteristics distinguished one segment from another.

Seven segments were found in this study. They were the High National Brand Loyal segment, the National Brand Loyal segment, the High Private Brand Loyal segment, the Private Brand Loyal segment, the National Brand Switcher segment, the Private Brand Switcher segment and the National/Private Brand Switcher segment. Each of the forty-nine heavy buyers could be classified into one of the seven segments. This classification was conducted using an index adapted for consumer classification, and visual examination.

The following demographic and socioeconomic characteristics were examined: age of the respondent, education of the respondent, occupation of the respondent and occupation of the husband of the respondent. None proved useful in distinguishing between the pantyhose purchase segments.

Two purchasing behaviour characteristics were examined to determine if they could be used to distinguish between the pantyhose purchase segments. They were degree of store shopping consistency for pantyhose purchases exhibited by the respondent and importance of brand names for pantyhose purchases to the respondent. Of these two, only the degree of store shopping consistency proved useful in distinguishing between pantyhose purchase segments. The results indicated that as degree of store shopping consistency increased, so did degree of loyalty to a type of brand, that is, a national or private brand. As brand and type of brand switching increased, so did store switching.

The results of the study showed that the consumer of pantyhose may be segmented based on the purchasing behaviour of private and national brands. Demographic and socioeconomic characteristics did not prove useful in distinguishing between pantyhose purchase segments. One purchasing behaviour characteristic, degree of store shopping consistency for pantyhose purchases, could be used to distinguish between pantyhose purchase segments.

Implementation of market segmentation strategy for marketers of pantyhose may result in greater cost savings for their firms. The pantyhose market consists of many different

submarkets with each submarket homogeneous in its purchasing behaviour. Aiming promotion and/or pricing policies at only those submarkets concerned with either or both of those marketing variables may result in a more efficient marketing strategy.

CHAPTER I INTRODUCTION

The multitude of products available on the market today has resulted in many approaches to marketing. Apparel, one product classification, is influenced not only by changes in demand, but also by changes in fashion, thus making this market more unpredictable. The marketing of apparel may be further complicated because most apparel items are designed six months to a year before they are available in retail outlets.

Since apparel items are designed so far in advance, the manufacturer and retailer face a certain amount of risk. If the consumer does not accept certain styles, both time and financial investment are lost. Certain types of research may be helpful in decreasing time and financial risk. Research may be conducted to determine if consumers are satisfied with presently available products, if they are willing to accept some changes, and what changes they would like to see or accept.

One method of research which may improve the marketing of apparel is market segmentation. Little segmentation research and/or implementation, however, has been done in the

apparel market. The long advanced planning of these products and the unpredictability of consumer acceptance have discouraged market segmentation. It has been found helpful, however, for many packaged convenience products. If different consumer segments exist for different apparel items, marketing strategies may be developed for individual segments which will result in greater cost savings for the firm.

One study, presented by Richards and Sturman (1977), gives the results of life style segmentation of an apparel item, brassieres. They examined attitude and behaviour characteristics of consumers of brassieres and developed five consumer segments. An overall conclusion drawn from the project was "that packaged goods market segmentation techniques properly applied to the apparel industry can reduce risk and increase profits by broadening the knowledge of the market, thereby reducing the areas of unpredictability inherent in decision making," (1977:89).

The study by Richards and Sturman shows that segmentation is possible with positive results for some apparel items. Pantyhose are packaged apparel products similar to brassieres. It, therefore, may be possible to apply segmentation strategy to pantyhose. They are also similar to convenience products where marketers have used market segmentation strategy successfully.

Blattberg and Sen (1974) suggest a method for market segmentation utilizing both personal characteristics of the

individual and purchasing behaviour. Their method applied to pantyhose may give the marketer information about the existence of market segments, the size of each segment, the purchasing behaviour of the segment, and the marketer may be able to predict segment membership based on consumer characteristics.

PURPOSE

The overall purpose of the study is to determine if consumers of pantyhose can be segmented based on the purchasing behaviour of private and national brands.

SPECIFIC OBJECTIVES

1. To determine which market segments, based on the purchasing behaviour of private and national brands, can be established for the consumer of pantyhose.
2. To determine if an index, adapted for consumer classification, can be used to predict the market segment into which the consumer of pantyhose can be classified.
3. To determine if the characteristics: age group of the respondent, education of the respondent, occupation of the respondent and occupation of the husband of the respondent, can be used to identify the pantyhose purchase segments.
4. To determine of the purchasing behaviours: degree of store shopping consistency for pantyhose purchases exhibited by the respondent and importance of brand names for pantyhose purchases to the respondent, can be used to identify the pantyhose purchase segments.

The specific objectives were further developed into two operationalized objectives and six hypotheses and analyzed.

OPERATIONALIZED OBJECTIVES

1. Market segments, based on the purchasing behaviour of private and national brands, can be established for the consumer of pantyhose.
2. Each consumer of pantyhose can be classified into one market segment by using an index adapted for consumer classification.

HYPOTHESES STATED IN NULL FORM

3. The age group of the respondent cannot be used to distinguish between pantyhose purchase segments.
4. The education of the respondent cannot be used to distinguish between pantyhose purchase segments.
5. The occupation of the respondent cannot be used to distinguish between pantyhose purchase segments.
6. The occupation of the husband of the respondent cannot be used to distinguish between pantyhose purchase segments.
7. The degree of store shopping consistency for pantyhose purchases exhibited by the respondent cannot be used to distinguish between pantyhose purchase segments.
8. The importance of brand names for pantyhose purchases to the respondent cannot be used to distinguish between pantyhose purchase segments.

DEFINITIONS OF TERMS

For the purpose of the study relevant terms were defined.

Market Segmentation is defined as the division of a market into smaller groups of individuals, or, conversely, aggregate individuals into groups (Burger and Venkatesh: 1977:15).

Brand Loyalty is defined as the tendency of some consumers to purchase a particular type of brand consistently (developed from Engel, Kollat and Blackwell:1968:547).

Store Shopping Consistency is defined as the tendency of some consumers to shop in a particular store consistently (developed from Engel, Kollat and Blackwell:1968:547).

A Manufacturer (National) Brand is defined as one owned by a company whose primary or traditional business is production (Muse and Hartung:1973:25).

A Distributor (Private) Brand is defined as one owned by a company whose primary or traditional business is distribution (Muse and Hartung:1973:25).

A Convenience Purchase is defined as one that a consumer purchases immediately with minimum of shopping effort (McCarthy:1971:302).

The following definitions of market segments are based on Blattberg and Sen:1976:35-37.

The High National Brand Loyal Segment is defined as a segment whose members are highly loyal to one national brand with 90 to 100 per cent of their purchases being of their favorite brand.

The National Brand Loyal Segment is defined as a segment whose members are loyal to one national brand, however, not

as loyal as the High National Brand Loyal consumer. At least 67 per cent of their purchases are of their favorite brand. They switch occasionally to another brand but return to their favorite brand usually after a single trial of another brand.

The Private Label Loyal Segment is defined as a segment whose members are loyal to the private brand of the store they usually visit.

The National Brand Switcher Segment is defined as a segment whose members switch between only national brands and are not loyal to any one brand.

The Private Label Switcher Segment is defined as a segment whose members switch between only private brands and are not loyal to any one brand.

The National/Private Switcher Segment is defined as a segment whose members switch between both national and private brands and are not loyal to any one brand.

The National Brand Switcher (Deal) Segment is defined as a segment whose members have similar purchasing behaviours to the National Brand Switcher Segment, but most of their purchases of national brands are made on deal.

The Deal-Oriented Segment is defined as a segment whose members buy almost exclusively on deal. They have no brand preference and generally buy the lowest priced brand.

The Last Purchase Loyal Segment is defined as a segment whose members buy one brand continuously on several occasions, switch to another brand, buy that one continuously on several

occasions. This switching may be between both national and private brands. They are loyal to the last brand purchased.

ASSUMPTION

The records of pantyhose purchases maintained by the consumer panel are an accurate indication of their pantyhose purchasing behaviour.

LIMITATIONS

1. Due to the time restraints, cost, and difficulty of establishing a consumer panel, an existing consumer panel in Winnipeg was used. The consumer panel may not be totally representative of the population of Winnipeg because of the unwillingness of some consumers to serve on consumer panels.
2. The small sample size limits the generalizations to be made from the results of the study.

CHAPTER II

REVIEW OF LITERATURE

In this Chapter a review of literature relating to the study will be given. Market segmentation as a marketing strategy will be discussed. All market segments are established according to one or more criteria and these bases for market segmentation will be examined. Of interest to marketers are the heavy buyers, and the division of the market into light and heavy buyers will be presented. Methods of determining to which segment a consumer belongs will follow the discussion of light and heavy buyers. Segment membership may be determined through the use of stochastic brand choice models or an index of continuity of care adapted for consumer classification.

Consumer panels, as a method of obtaining purchasing behaviour data, will be presented. After consumer panels, pantyhose will be discussed. Pantyhose may be sold under private or national brands and research examining this type of classification will be reviewed. To be reviewed are consumer perceptions and purchasing characteristics of private brand buyers and national brand buyers, price and performance of private and national brands, and brand loyalty.

MARKET SEGMENTATION

Every marketer has to decide whether or not to follow market segmentation strategy. "The strategy of market segmentation is the overall decision to divide or not to divide markets into sub-groups and to develop distinct marketing programs for one or more of the sub-groups chosen as target segments such that the emergent segments are maximally useful for the manager," (Berger and Venkatesh:1977:15). The decision to utilize market segmentation is based upon whether a product's market consists of heterogeneous or homogeneous customers. "The logic of market segmentation is that no market, however defined, is entirely homogeneous or entirely heterogeneous. On the other hand, it contains elements both of homogeneity and heterogeneity. Segmentation follows the well-known 'unity in diversity' logic and is operationalized by increasing within group homogeneity and between group heterogeneity," (Burger and Venkatesh:1977:15).

In a heterogeneous market, different submarkets respond differently to changes in a firm's marketing variables. These submarkets have different responses to price and promotion which makes segmentation necessary. Members within one group respond in the same manner but between group response is different. In a heterogeneous market, that is treated as such, different price and promotional policies are directed towards each submarket. Changes in policies will, therefore, result in changes in demand for each submarket. Some submarkets may be interested in a price cut,

while others may be more affected by advertising. If the market is treated homogeneously, however, a cut in price may be wasted on those consumers not concerned with price. By directing policies at only those segments that respond to changes, increase in profits may result if the profit margin, that is the difference between sales and expenses, is higher after segmenting the market.

In theory, a homogeneous market exists when all or most of a firm's customers respond the same to changes in a firm's marketing variables, for example, price or promotion. In this case segmentation from a profit point of view is not necessary. If segmentation were attempted, for example, a different pricing policy directed at each submarket, the costs involved would be unnecessary because most of the market would respond in the same manner to changes in price. Those changes not affecting the market would be wasted and the costs involved in segmentation would lower the profit margin.

Market segmentation has become increasingly important to marketers since the 1960's. In an article written by William Reynolds (1965:107), Kenneth Swartz was quoted, "It is nothing less than a revolutionary transformation which has come over the mass consumer market during the past five years. From a single homogeneous unit, the mass market has exploded into a series of segmented, fragmented markets, each with its own needs, tastes, and way of life."

Marketers through segmentation will be able to deal

with the segments individually and, therefore, penetrate and develop the market. By redefining the market as consisting of individual submarkets, the consumers will obtain more precise satisfaction for their many wants. Increased sales may result at the same input cost or the same amount of sales may result at lower costs.

Criteria for Market Segmentation

Markets can be segmented according to many criteria. Frank (1968) and Blattberg and Sen (1974) reviewed research using different criteria of segmentation. Frank categorized segmentation approaches according to two overall main bases (1968:43-44): (1) personal characteristics of the individual - demographic, socioeconomic and personality traits; (2) purchasing behaviour - total consumption and brand loyalty. Blattberg and Sen reviewed five main approaches to segmentation and each approach may be classified within Frank's bases. Frank and Blattberg and Sen focussed on the disadvantages of each basis and approach.

As a result Blattberg and Sen further developed a new approach in an attempt to overcome the disadvantages of the other approaches. Their alternative segmentation strategy consisted of three stages: (1) segment definition; (2) consumer classification; and (3) segment identification. In segment definition, segments are defined according to consumers' purchasing behaviours based on a prioriknowledge. Each segment is different from another in some aspect of purchasing behaviour.

In the second stage, consumer classification, stochastic brand choice models, which represent the purchasing behaviour of individual segments, are used in conjunction with the Bayesian Model Discrimination Procedure (BDIS). The BDIS, a mathematical classification technique, classifies consumers into the stochastic brand choice models best representing the purchasing behaviours of the consumers. Through this procedure, therefore, consumers are classified into individual segments.

In segment identification, the third stage, socio-economic and demographic information are examined to identify characteristics common to a segment. This leads to the determination of the size of each segment and enables estimation of response functions of each segment. Segment membership may also be predicted based on consumer characteristics (Blattberg and Sen:1974:28). This prediction may only be done if each segment is homogeneous in one or more characteristics and if each segment is different from another segment in one or more characteristics.

The homogeneity within segments and heterogeneity between segments should result in differences between segments in responses to marketing variables, for example, price or promotion. Also the principal behavioural characteristics, for example, brand loyalty patterns, used in establishing the segments lead to easy segment interpretation.

Using consumer panel data, Blattberg and Sen (1976) developed nine market segments based on three "dimensions of a consumer's purchasing behaviour: the brand purchased, the store shopped, and the price paid," (1976:35). The nine segments developed are shown in Table 1. Blattberg and Sen showed that their approach could be used in developing market segments and implemented the first two stages.

Division of Light and Heavy Buyers

To segment consumers based on their purchasing behaviour, a decision has to be made as to which respondents to segment. Of interest to many marketers are heavy buyers as they result in the most sales. When advertising, marketers should use those media which reach the heavy users. Aiming promotion at the heavy buyers results in greater cost savings because a larger sales volume part of the market is reached.

Two methods of the division of the market into light and heavy buyers have been presented by Twedt (1964) and Blattberg and Sen (1976). Using purchase diaries of the Chicago Tribune consumer panel, Twedt (1964:71) conducted an analysis "of the degree of purchase concentration in eighteen product categories". He divided the consumers based on purchasing volume into two groups separating the groups at the median purchase point. This resulted in a light-using half and a heavy-using half of consumers. He found "that the heavy-using household buys more, buys more often, and buys more different brands," (1964:71). For one

TABLE I
 NINE FACIAL TISSUE MARKET SEGMENTS AS
 DEVELOPED BY BLATTBERG AND SEN

High National Brand Loyal
 National Brand Loyal
 National Brand Switcher
 Private Label Loyal
 Private Label Switcher
 National/Private Brand Switcher
 Last Purchase Loyal
 National Brand Switcher (Deal)
 Deal-Oriented

Source: Blattberg and Sen:1976:35-37.

product examined, lemon-lime beverages, the heavy-users purchased nine times as much as the light-users.

In Blattberg and Sen's study (1976) of segmentation, they used consumers who had made a minimum of five purchases for the second stage. They found this minimum aided in representing most of their segments by multinomial and Markov models. Their division of light and heavy buyers for their study was, therefore, five purchases.

Blattberg and Sen and Twedt have both implemented the division of light and heavy buyers. This division is of interest to many marketers because heavy buyers are becoming an important segment of the market.

Market Segmentation Classification Techniques

Using Blattberg and Sen's approach, once market segments have been established, individual respondents have to

be classified into those segments which best describe the individual's purchasing behaviour. Two alternative methods of classification are stochastic brand choice models with the use of the Bayesian Model Discrimination Procedure or an index adapted for consumer classification. Blattberg and Sen (1976) have shown that simple stochastic brand choice models can represent the purchasing behaviour of various segments and lead to easy classification, especially for large samples. An index adapted for consumer classification, the index of continuity of care (Bice and Boxerman:1977), previously used in medical studies, may be used for classifying individual consumers into individual segments. Each of these will be discussed separately.

Stochastic Brand Choice Models - As defined by Engel, Kollat and Blackwell (1968:559), stochastic brand choice models treat the response in the marketplace as the outcome of some probabilistic process. In their book, Massy, Montgomery and Morrison (1970:xi) comment on these models: "The use of stochastic models as representations of purchasing processes has been growing in importance during the past ten years. These models provide structural insight into the ways in which consumers regulate their choice of brands and decisions as to purchase timing and amounts for frequently purchased products. In addition, they increase the effectiveness of consumer panels as a source of market research data for these products. Panel data are too complex to be interpreted fully without the use of models, and the models must be stochastic

to provide reasonable representations of the purchasing process and to avoid misleading conclusions."

Stochastic brand choice models can be used to represent the purchasing behaviour of homogeneous populations. A homogeneous population, either an entire market or a sub-market (segment), has one or more common characteristics or purchasing behaviours. For example, all members of a segment are in a certain income range and/or purchase the same amount of a product. The marketer determines the criteria of importance according to objectives and may use stochastic brand choice models to predict purchasing behaviour.

The use of the Bayesian Model Discrimination Technique (BDIS), in addition to stochastic models, facilitates classifying consumers into segments. Stochastic brand choice models represent the purchasing behaviour of various segments and the BDIS classifies consumers into models which represent segments. The BDIS is useful when classifying large samples, especially large consumer panels.

Although the BDIS aids in classification there also are some disadvantages. It is a complicated mathematical procedure and requires a computer program for easier classification. The BDIS is also not widely known or readily available to marketers.

Index of Continuity of Care - The index of continuity of care (COC) has been used in medicine when examining individuals

and their total number of visits to a certain number of providers, that is, doctors. Using the formula
$$COC = \frac{\sum_{j=1}^s n_j^2 - n}{n(n-1)}$$

each individual is given an index which leads to easy comparison between individuals. This comparison is useful when "evaluating alternative health delivery systems and their corresponding effect on an individual's continuity of care," (Bice and Boxerman:1977:348).

The above formula may be adapted for use in market segmentation. Each consumer is given an index based on past purchases and classified into that segment which is represented by a range of indices. When using the above formula for segmentation based on brand purchases, n = total number of purchases, n_j = number of purchases of brand j , and s = number of brands. By using past purchasing behaviour, each respondent can be individually classified. When segmenting the market into brand loyal and brand switching segments, the value of the range of indices for the brand loyal segments would be higher than the value of the range of indices for the brand switching segments. From the index, a consumer's loyalty to a brand can be determined. This would lead to easy comparison between individuals, and might prove useful in evaluating the effect of different price or promotional campaigns on the continuity of purchase of a type of brand.

Use of the COC index has disadvantages because it has not been extensively used outside the medical field. It also has not been used in market segmentation research or implementation. The index, however, may prove useful for market segmentation because it is not a difficult and tedious

process. The index is also useful for classifying both large and small consumer panels.

CONSUMER PANELS

Researchers collecting purchasing data may use either survey recall or consumer panels. Each method of data collection offers advantages and disadvantages which must be considered before one method is adopted.

Survey recall is economical when compared to consumer panels, and data may be obtained fairly quickly. When marketers need information about consumers' purchasing behaviours and do not want to buy information from a consumer panel, they use survey recall.

If survey recall is used, marketers have to be aware of its limitations. According to Sudman (1964b:76), "studies have shown that survey recall data tend to overstate purchases," which is further verified by Boyd and Westfall (1960). Boyd and Westfall found, "that a recall study may tend to produce inflated results," (1960:17).

Another problem of recall is "the tendency to recall the names of well-known brands when in some cases, the actual purchase may have been of a lesser-known brand," (Sudman:1964b:76). Sudman found that "leading nationally advertised brands have their brand shares overstated by an average of fifty per cent on recall surveys as compared to diary records, while chain brands are almost always understated substantially," (1964b:80).

Consumer panels are an alternate method of obtaining

purchasing data. According to Sudman (1964a:14), consumer panels are household samples that record continuous information on household purchases and other behaviours. Members of a consumer panel are requested to keep a diary of their purchases for a predetermined set of convenience products, usually household items. The consumers' demographic and socioeconomic characteristics are also available.

Consumer panels are more accurate than survey recall because information is recorded continuously. The purchases are not overstated as highly as in survey recall. All brand names are given accurately, including chain brands.

Though consumer panels have advantages, they also have disadvantages. One problem of any data collection, also common to consumer panels, is the reliability of the data collected. A method to check the accuracy of data is to compare the consumer panel data to actual sales records. Although a crude measure, according to Boyd and Westfall (1960:11), over a long period of time a marketer can tell whether the panel data are reasonably accurate.

Other problems may occur over which the marketer has no control, such as recording accuracy. Many consumer panel operators, however, have good training sessions for panel members in an attempt to overcome the recording problems. Recording forms have also been made easier to complete.

If the problems can be overcome, consumer panels can be an important source of purchasing behaviour for marketers. Segmentation can be based on some aspect of the purchasing behaviour and will result in a cost reducing marketing strategy.

PANTYHOSE

Since their introduction pantyhose have become an important apparel item for many women. Their sales increased rapidly as shown in Appendix 17. Pantyhose are available in many colours, patterns and styles. Technological developments have resulted in better fit and new kinds of pantyhose are continually being developed, for example, support and panty-and-hose-in-one. Developments in packaging have resulted in eye appealing packages that have made pantyhose easier to sell.

Pantyhose are now considered to be a convenience purchase and are often included on supermarket shopping lists (Hosiery and Underwear: June 1973:18). Pantyhose are considered convenience items because purchases are usually frequent and the prices are generally low. Pantyhose are different from many other convenience products because they are apparel items influenced by fashion.

Packaging and outlets of sale for pantyhose have changed greatly since their introduction to the market. Pantyhose were mainly sold in department stores when they were first introduced. Now they can be found in many retail outlets, including drug stores and supermarkets. In the

United States supermarkets are the principal outlet and constitute about 28 per cent of the market (American Druggist: 1974:54).

The drug store share of the market is also increasing. More drug stores are displaying pantyhose for the same reasons as supermarkets. According to the American Druggist (1974:54-55), this is because pantyhose are priced right and are profitable, have a high turnover, require little investment and servicing, do not take up much space, and are the focus of millions of dollars of advertising.

The increase in sales in supermarkets and drug stores has led to a decrease in sales in department stores. Variety and mass merchandising outlets have also taken some of the sales from the department stores. One of the reasons for this could be neglect of the hosiery department in department stores (Colbert:1973:30). Pantyhose departments were not emphasized as much as other departments and consumers were turning to other retail outlets for their pantyhose purchases. Once department store managers realized this, they tried to recapture some of the market. The emphasis is now to be on fashion, service, quality and value, especially the latter two (Hosiery and Underwear:1974:18). Displays are to be more attractive and attention getting.

Sales of pantyhose fluctuate from month to month depending on consumer needs which may vary, for example, according to climatic conditions. The months with the highest sales in Canada for 1975 and 1976 were September, October,

November and December as shown in Figure 1. The figures for the graph are limited because they were based on Statistic Canada's figures of Department Store Monthly Sales for Women's and Girls' Hosiery Department. No monthly sales figures were available for pantyhose purchases for all types of stores. Although the figures are limited, they give an indication of monthly trends for pantyhose sales.

Pantyhose are sold both as national brands and private brands. Many outlets, including department stores, carry private brands in addition to national brands and may place them side by side. Some outlets, however, only carry their private brand. Norman Smith of Bear Brand Hosiery felt that private labels would sell more than national labels (Hosiery and Underwear: June 1973:21). Consumers vary in which type of brand they prefer and according to some resident buyers, 50 per cent of their sales to their stores are private labels.

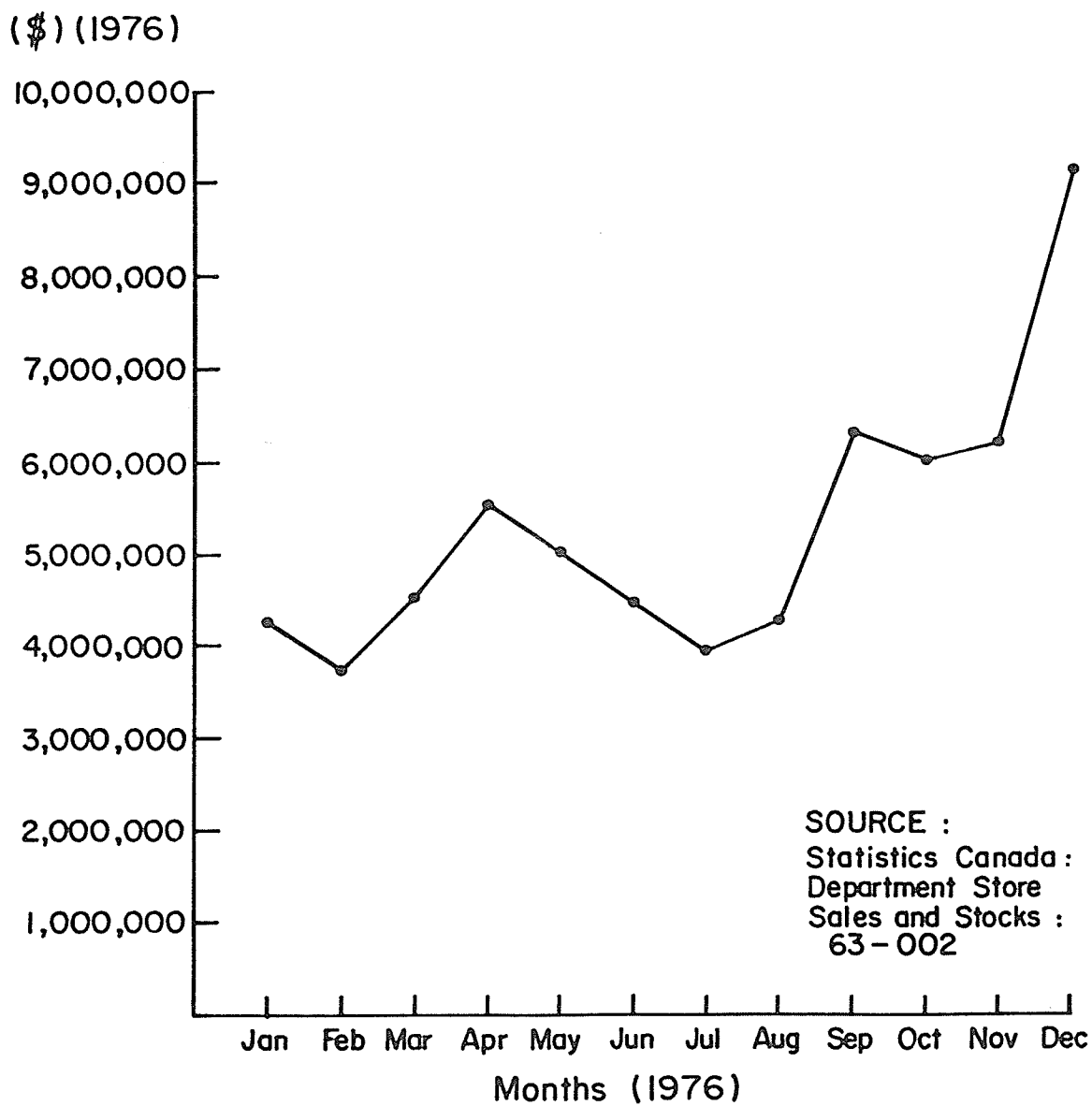
PRIVATE AND NATIONAL BRANDS

Private labels are becoming more predominant in the market and pose a threat to some national brand manufacturers. Many manufacturers advertise their products in an attempt to differentiate their brand from other similar brands. Many commodity private labelled goods are almost identical to manufacturer (national) brands. These are of interest to retailers who carry their own private labels and compete on the basis of price.

The introduction of private labels according to

DEPARTMENT STORE MONTHLY SALES FOR WOMEN'S
AND GIRLS' HOSIERY DEPARTMENT

FIGURE I



Stern (1966), has significant social consequences: (1) Private labels may help lower retail prices or prevent them from rising any further; (2) Manufacturers to better compete in the marketplace may produce innovations which will help to give the consumer a greater choice; (3) Private labels may help the small manufacturer who will produce the undifferentiated private labels for which plant production would be efficient. The larger manufacturer could concentrate on differentiated goods and branded goods and engage in reasearch, development and marketing; and (4) The smaller firms may also be the cause of innovation of larger firms who are still producing undifferentiated products. Private labels may, therefore, be beneficial to consumers, manufacturers and retailers.

With the increase of private brands in the market place, there has been an increased interest in research in this area. Some research has examined purchasers of private brands and differences between national and private brand purchasers. Other research has examined price and performance levels of both private and national brands.

Consumer Perceptions and Purchasing Characteristics

Myers (1967) examined perceptions and characteristics of private brand purchasers. Acceptors of private brands stated price as being a main reason for purchasing private brands. They thought private brands were essentially the same as national brands, except private brands were lower priced, and they were reluctant to pay for the higher costs

of advertising and packaging of national brands. The rejectors of private brands, however, believed in greater value received for money spent on national brands.

Personality and socioeconomic variables were also examined as determinants of private brand attitude. Women who were enthusiastic, sensitive and dominant were found more prone to purchase private brands. The predictive power, however, was very low. A woman's occupational status also had an association with private brand attitude. Housewives were more likely to accept private brands and working women to reject them. Of fifteen socioeconomic and perceptual variables examined, the socio-occupational variable had the highest association with private brand attitude.

Rothe and Lamont (1973) conducted a study examining differences in brand preferences of national and private brand purchasers of major appliances and the characteristics of those purchasers. Table 2 gives a summary of the findings. For both national and private brand buyers, previous personal information was the most important source of information. The national brand buyers also depended on consumer report-type bulletins whereas the private brand buyers depended on in-store promotional displays. Both thought product reliability to be important as a brand selection criterion. National brand buyers also thought brand reputation to be important while private brand buyers were concerned with price. For national brand buyers repair service was the most important store choice factor,

TABLE 2
SUMMARY OF FINDINGS OF ROTHE AND LAMONT (1973)

CHARACTERISTICS EXAMINED	DIFFERENCES AND SIMILARITIES
<u>Purchase Characteristics</u>	
National Brand Purchasers	Private Brand Purchasers
Previous personal information most important source of information	Previous personal information most important source of information
Consumer report-type bulletin second most important source of information	In-store promotional display second most important source of information
Product reliability most important brand selection criterion	Product reliability most important brand selection criterion
Brand reputation second most important brand selection criterion	Price second most important brand selection criterion
Repair service most important store choice factor	Sales specials most important store choice factor
Spent less time shopping	Spent more time shopping
Brand name important	Brand name and store important
<u>Personal Characteristics</u>	
National Brand Purchasers	Private Brand Purchasers
Occupation required more training and greater formal education	Occupation required less training and less formal education
Higher annual income	Lower annual income
Family size and age same	Family size and age same
Were more home owners	Were more renters
If renting, rental range higher	If renting, rental range lower
Value of homes same	Value of homes same

while for private brand buyers sales specials was the most important. Private brand buyers also spent more time shopping. While brand name was important to national brand buyers, brand name and store was important to private brand buyers.

The national brand buyer was found to be employed in occupations that required more training and greater formal education and that had a higher annual income than private brand buyers. Family size and age were not found to be significantly different between the two types of buyers. National brand buyers also were more home owners than renters compared to private brand buyers and if renting, the rental range was higher for national brand buyers. The value of the homes of private brand and national brand buyers, however, tended to be the same.

The research has shown that there are differences between private and national brand purchasers. These differences can be found in both personal characteristics and purchasing behaviour characteristics, including perceptions of private and national brands.

Price and Performance of Private and National Brands

A study was conducted by Swan (1974) "to examine and compare the price-product performance relations of two competitive classes of products: manufacturer and retailer brands". Consumer Union data on major appliances were used for the analysis. It was found that the private brands "offered the consumer better product performance relative to

to the price paid," (1974:58). Private brands were found to be equal in performance to national brands but priced significantly lower.

The price and performance correlations of the private brands and national brands were also examined. There was a significant correlation between price and performance for national brands but not for private brands. The strength of the association, however, was not very high. The strength of the correlations was further examined. No significant difference was found between the strength of the price and performance correlations of the national brands and the strength of the price and performance correlations of the private brands. These findings "imply that consumers do not necessarily obtain the best product performance by paying the highest prices," (Swan:1974:56).

When different brands were examined, products sold under a certain private or national brand name were found to be congruent with a certain price or performance level. When congruence by brand was compared to congruence by price and performance, congruence by brand was found to occur more frequently. It was, however, significantly higher only for performance. Swan also found national brands were more congruent than private brands in both performance and price levels.

The implication of Swan's findings for consumers was that product performance should not be judged by price. A high price does not necessarily mean high performance. If

consumers are willing to seek information, good performance may be obtained at a relatively low price.

Brand Loyalty

Brand loyalty has interested many researchers and many aspects of brand loyalty have been examined. When referring to brand loyalty, specific brand names or types of brands for a product may be of interest.

In a study conducted by Stafford (1970), brand loyalty was found to develop after a period of search or exploratory behaviour among test brands. The more often a person purchased a certain brand, the higher the probability became of that person to purchase the brand again.

Brand loyalty has been found to be a real and reliable phenomenon (Frank:1968:59). Researchers have attempted to identify brand loyal consumers in terms of socioeconomic, demographic and personality attributes. In the research reported by Frank, the above mentioned attributes were not found to be good determinants of brand loyalty. The result was that brand loyal consumers were not found to be different from non-brand loyal consumers.

Frank stated "the case for total consumption as a basis for market segmentation is somewhat stronger than that for brand loyalty as, by definition, different market segments contain customers with somewhat different demand characteristics," (1968:65). Although brand loyal consumers are difficult to identify, Frank commented that more

studies across a wide range of products examining prices and/or personal risk might prove to be valuable.

CHAPTER III

METHODOLOGY

This Chapter will present the methodology followed in this study beginning with a discussion of the sample which was selected from an existing consumer panel. The procedure was based on a pre-test, the purpose of which was to examine the purchasing behaviour of consumers of pantyhose. The relevant points of the pre-test which will be discussed are frequency distribution of mean time between pantyhose purchases, frequency distribution of mean quantity purchased, overall frequency distribution and record sheet of the pre-test.

Following the pre-test will be a complete discussion of the procedure followed in the final study. The information obtained from the members of the consumer panel included a record of continuous pantyhose purchasing behaviour, a measure of the importance of brand names for pantyhose purchases, and socioeconomic and demographic information. Segmentation of the sample was based on the purchasing behaviour of national and private brands of pantyhose. The individual segments were established by visual examination of the purchasing behaviours of the heavy buyers. An index

adapted for consumer classification was used to classify respondents into three basic categories of segments.

Respondents were then visually classified from the three basic categories into individual segments based on the purchasing behaviour and degree of loyalty exhibited for private and national brands of pantyhose. Statistical analysis of the data included use of the Kruskal-Wallis test, the Chi-Square test and the Wilcoxon test.

SAMPLE

One hundred and fourteen women who were members of an existing consumer panel in Winnipeg, Manitoba were contacted. They were requested to participate in a study on pantyhose purchases for six months. The ninety-eight members of the consumer panel who were willing to participate constituted the original sample.

After three months of record keeping, thirty-four women were eliminated from the study because they had not purchased enough pantyhose and/or intended to purchase enough pantyhose for the purpose of the study. Sixty-four women remained in the study and kept a record of their pantyhose purchases for six months.

PRE-TEST

A pre-test examining the purchasing behaviour of the consumer of pantyhose was conducted. Personal interviews with eighty females eighteen years of age and over were conducted on April 29 and 30, 1977, in a Winnipeg shopping mall. Women were approached and requested to participate in

an exploratory study on pantyhose purchasing behaviour. The introduction used by the interviewer in the pre-test is found in Appendix 1. If consent was given, the respondent was given the questionnaire (Appendix 2) with an attached request for further participation (Appendix 3). They were given the instructions for record keeping (Appendix 4) and the pantyhose record sheet (Appendix 5).

At the beginning of the record keeping period, the respondents who indicated they would participate in the study, were contacted to determine if any information or assistance was required prior to completing the purchase record sheet. After thirty days, the respondents were again contacted to determine if any pantyhose had been purchased. If any pantyhose had been purchased, the respondents were mailed an addressed envelope and requested to return the purchase record sheet.

In the pre-test, general purchasing information was requested from the respondent. For the purpose of the final study, frequency distribution of mean time between pantyhose purchases, frequency distribution of mean quantity purchased and overall frequency distribution of these two variables were analyzed. For each variable, one observation was obtained from each respondent. The purchase record sheet of the pre-test was further developed for the final study and the results of the pre-test provided a basis for the procedure and analysis to be used in the final study.

Frequency Distribution of Mean Time Between Pantyhose Purchases

Examination of the frequency distribution of mean time between pantyhose purchases aided in determining the length of record keeping time necessary for the final study. The mean time between pantyhose purchases ranged from two to three days to a year. The distribution of respondents is shown in Figure 2. For each bar in the figure, the mean time between pantyhose purchases was greater than the previous adjacent bar and less than the latter adjacent bar. The modal class, that is, the class containing the most respondents, was one month.

Frequency Distribution of Mean Quantity Purchased

The frequency distribution of mean quantity purchased in conjunction with the frequency distribution of mean time between pantyhose purchases was used in estimating how many pantyhose would be purchased in a predetermined length of time. This information was necessary to determine a minimum record keeping time for the final study.

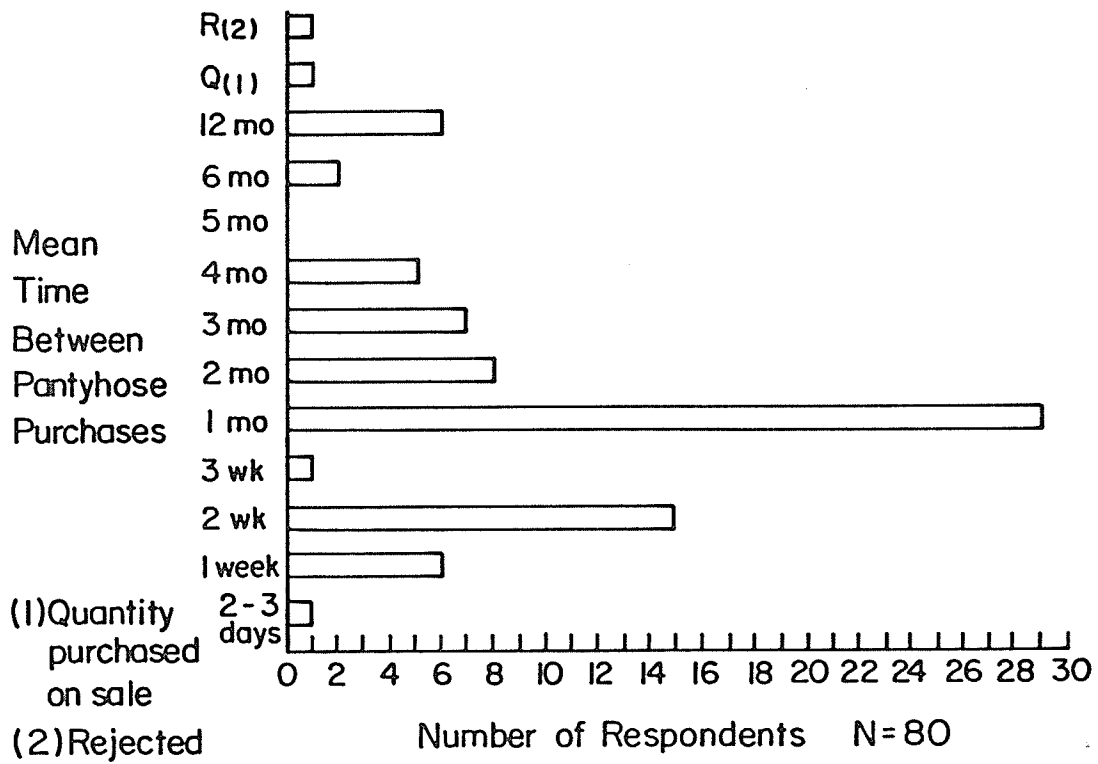
The mean quantity purchased on each purchase occasion ranged from one pair to twenty-four pairs of pantyhose. The distribution of respondents is shown in Figure 3. The median quantity purchased on each purchase occasion was three pairs. The modal class, however, was two pairs.

Overall Frequency Distribution

Table 3 contains the distribution of respondents by mean time between pantyhose purchases and mean quantity pur-

FREQUENCY DISTRIBUTION OF MEAN TIME BETWEEN PANTYHOSE PURCHASES FOR ALL RESPONDENTS IN PRE-TEST

FIGURE 2



FREQUENCY DISTRIBUTION OF MEAN QUANTITY PURCHASED
ON EACH PURCHASE OCCASION FOR ALL
RESPONDENTS IN PRE-TEST

FIGURE 3

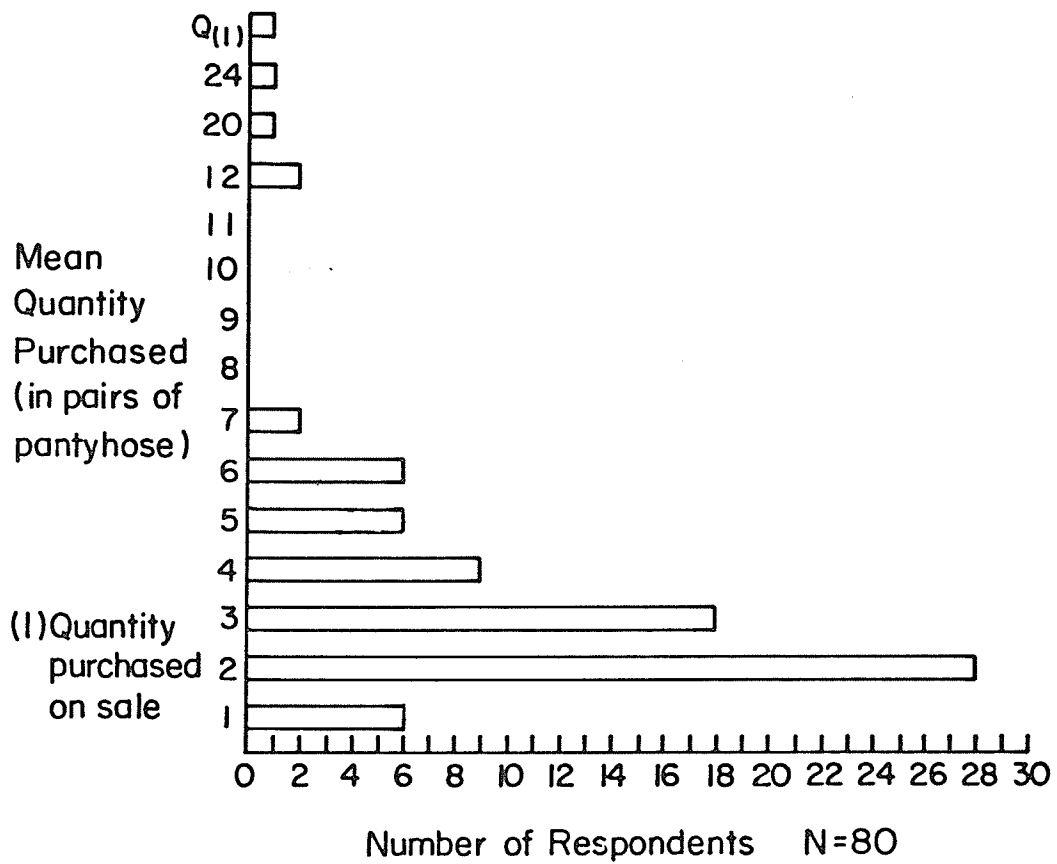


TABLE 3
OVERALL FREQUENCY DISTRIBUTION OF THE PRE-TEST

Mean Time Between Pantyhose Purchases	Mean Quantity Purchased on Each Purchase Occasion															TOTAL	% OF TOTAL	
	1	2	3	4	5	6	7	8	9	10	11	12	20	24	0 ₁			
2 - 3 days		1															1	1.3
1 week		3	1	2													6	7.5
2 weeks	2	8	2	1		2											15	18.8
3 weeks	1																1	1.3
1 month	3	11	5	5	1	1					1						27	33.8
2 months		3	4			1											8	10.0
3 months		2	2		2									1			7	8.8
4 months			2	1	1	1											5	6.3
5 months																	0	0
6 months							1					1					2	2.5
12 months			1		2	1	1						1				6	7.5
quantity purchased on sale															1		1	1.3
reject			1														1	1.3
TOTAL	6	28	18	9	6	6	2	0	0	0	0	2	1	1	1		80	100.4 ₂
% OF TOTAL	7.5	35.0	22.5	11.3	7.5	7.5	2.5	0	0	0	0	2.5	1.3	1.3	1.3		100.2 ₂	

1. Quantity Purchased on Sale

2. Not Equal to 100 due to Rounding Off

chased on each purchase occasion. As shown the area between two to three days to one month and one pair to three pairs is highly concentrated. The greater the time between purchases and the larger the quantity purchased, the more disperse the distribution becomes. When analyzing continuous purchasing behaviour, this information may be used to estimate possible purchases for a given period of time.

Record Sheet for the Pre-Test

From the pre-test it was determined more specific information was required on the record sheet for the final study (Appendix 9). The information on the pre-test record sheet (Appendix 5) was re-organized to include two overall categories: package information and purchase circumstances, under which some of the individual categories were classified. This was necessary to obtain more specific information about the purchasing behaviours of consumers of pantyhose.

Instead of price paid per pair and number of pairs purchased each time, as stated on the pre-test record sheet, the final study record sheet stated number of pairs in package and price per package. It was assumed that the latter two categories would be a better indication of pantyhose purchases than the former two categories. In the record sheet of the final study two categories were added, 'fit all or sized' and 'coupon used' or 'other (Please specify)'. They were added to obtain additional information about pantyhose purchasing behaviours of the respondents.

PROCEDURE

Pantyhose record keeping was requested from the consumer panel for a period of six months from July to December, 1977. Based on the results of the pre-test, a period of six months was selected to ensure that enough pantyhose would be purchased to allow analysis of the data. The months July to December were chosen because they included the months September to December, which, according to Statistics Canada (63-002), are the highest sales months of the year. Time and financial investment were also considered in the selection of six months.

The one hundred and fourteen members of the consumer panel were mailed a letter (Appendix 6) in June, 1977, informing them of the study and requesting their participation. The members were not informed they would be collecting data for a university study because of the confidentiality about the organizations conducting the research maintained by the consumer panel firm.

Attached to the letter was a form (Appendix 7) requesting the respondents to indicate whether or not they were willing to participate in a study on the purchasing behaviour of women who buy pantyhose. If they indicated 'yes', they were requested to complete the brand importance questions also included on the form. The measure of brand importance was a seven point Likert scale ranging from extremely important to extremely unimportant.

At the end of June, all respondents who had indicated

they would participate in the study were mailed an instruction sheet (Appendix 8) and a purchase record sheet (Appendix 9). The instruction sheet included a request that the sales slips of the pantyhose purchases be returned with the purchase record sheet. The purpose of this was to reduce incomplete and inaccurate recording of pantyhose purchases.

The purchase record sheet of the pre-test was further developed to ensure all information needed for analysis was included. The results of the pre-test indicated further more detailed information was required. The information included on the purchase record sheet used for the final study (Appendix 9) were date of purchase, store where purchased, package information (name of brand, type of pantyhose, 'fit all or sized'), number of pairs in package, price per package and purchase circumstances (regular or sale price, coupon used, or other, for example a gift).

For the months of July to December, the respondents were mailed an instruction sheet, a purchase record sheet, a note (Appendix 10) requesting the return of the previous month's purchase record sheet and a stamped addressed envelope. The assumption was made that by requesting the respondents to return the previous month's purchase record sheet, contact would be maintained with each panel member. The monthly returns of the record sheets served as a reminder to the respondents to keep a record of their pantyhose purchases and helped in screening out those respondents who did not buy

pantyhose.

At the end of September, the participants were mailed a letter (Appendix 11) requesting the return of purchase record sheets which had not been returned. They were informed about the decision of the researcher to remove non-purchasers from the study. Included with the letter was a question asking respondents to indicate how many pairs of pantyhose they estimated purchasing for the months of October, November, and December (Appendix 12). The assumption was made that the estimate would be a reasonable indication of future purchases. Examination of the purchases for the months of July, August, and September and the estimate indicated which panel members would be removed from the study. Thirty-four women were removed from the study by the end of September. The overall criterion for removal was that the respondent had bought at the most one pair of pantyhose and estimated at the most two purchases. The individual criteria were: (1) bought no pantyhose and estimated no purchases; (2) bought one pair of pantyhose and estimated no purchases; (3) bought no pantyhose and estimated 1-2 purchases; and (4) bought one pair of pantyhose and estimated 1-2 purchases. At the end of September, therefore, sixty-four women remained in the study.

After return of the estimate, all respondents were mailed five dollars, a letter indicating whether or not they were eliminated from the study and a receipt form (Appendix 13). The receipt was to be signed and returned.

This indicated the respondents had received the five dollars for participating in the study.

For the remaining three months, only those respondents still asked to participate in the study were mailed instruction and purchase record sheets and envelopes. At the beginning of January the respondents were mailed a request (Appendix 14) to return the previous month's purchase record sheet and any outstanding sheets. They were also informed that December was the final month of the study. Upon receipt of the purchase record sheet(s), the respondents were mailed five dollars as the final payment for their participation and a receipt form (Appendix 15) which was to be returned. A total of ten dollars was, therefore, paid to those respondents who participated the entire six months.

DATA ANALYSIS

Once all the purchase record sheets were received the following purchase data were summarized for each respondent: total number of packages of pantyhose purchased, the brand names of the pantyhose, number of packages for each brand name, the type of brand, that is, whether a national or private brand, the average price of both national and private brands, total number of stores visited, the names of the stores visited and number of purchase occasions for each store. This information was summarized for use in the analysis.

For the final analysis, only those respondents who had



purchased five or more packages of pantyhose were analyzed. These respondents were classified as heavy buyers. The criterion for determining the heavy buyers was based upon Blattberg and Sen's (1976) criterion and then compared to Twedt's (1964) criterion. Blattberg and Sen used consumers who had made a minimum of five purchases for part of their analysis. Their division of light and heavy buyers was, therefore, five purchases. Twedt divided consumers based on purchasing volume into two groups separating the groups at the median purchase point. This resulted in a heavy-using half and a light-using half.

The purchase record sheets of the heavy buyers were examined to determine which segments existed, based on the purchasing behaviour of private and national brands. The segments found by Blattberg and Sen (1976) provided a basis for establishment of the segments.

Once all the segments were established, the individual segments were first categorized together according to one component of purchasing behaviour, degree of brand loyalty. Once the categories were determined, each category was assigned a range of indices of continuity of purchase (COP), previously referred to as the index of continuity of care. For each respondent, a COP index was calculated and each respondent was classified into the category best representing their purchasing behaviour. The index of continuity of purchase used in this study was an

adaptation of the index used by Bice and Boxerman (1977).

The formula
$$COP = \frac{\sum_{j=1}^s n_j^2 - n}{n(n-1)}$$
 was used to calculate a COP

index for each individual, with n = total number of purchases, n_j = number of purchases of brand j , and s = number of brands. An example of different COP indices based on a total of five purchases is shown in Appendix 16. As shown the greater the number of different brands purchased, the smaller the index and vice versa. In other words, the more loyal to a brand a consumer is, the higher the index.

The COP index was used in this study to test its applicability to market segmentation. Other studies have used other methods for determining of which segment a consumer is a member, for example, the Bayesian Model Discrimination Procedure (Blattberg and Sen:1976). Use of the COP index, however, may be less time consuming and easier to use than previously used methods. The COP index may also be found useful in market segmentation as it can distinguish between different degrees of loyalty and the responsiveness of individual segments to alternative strategies.

After the respondents were classified into the categories, a second component of the purchasing behaviour of the respondents was examined. Based on their type of brand purchases, that is, whether a national or private brand, they were then classified into individual segments.

The Kruskal-Wallis test and the Chi-Square statistic were

proposed to determine which, if any, socioeconomic, demographic and/or purchasing behaviour characteristics distinguished one segment from another segment. Some research has shown that socioeconomic and demographic characteristics were not reliable characteristics in distinguishing between brand loyal and non-brand loyal consumers (Frank:1968). Other studies, however, have shown that some socioeconomic and demographic characteristics are useful in distinguishing between national and private brand purchasers (Myers:1967 and Rothe and Lamont:1973). Use of these characteristics, therefore, was further analyzed in this study to determine which, if any, can be used to distinguish between pantyhose purchase segments.

Rothe and Lamont (1973) found price to be an influential factor in the purchasing of private brands and Myers (1967), found acceptors of private brands perceived the prices of private brands to be lower than the prices of national brands. The Wilcoxon test, therefore, was used to determine if the average prices of the national brands purchased by the respondents were significantly higher than the average prices of the private brands purchased by the respondents.

Statistical Analysis of the Data

The Kruskal-Wallis Test - The Kruskal-Wallis test (Marascuilo and McSweeney:1977:299-305) is a nonparametric analogue to one-way analysis of variance. The test was used to determine if there were significant differences between the segment into which each respondent was classified and the three

characteristics: age group of the respondent, degree of store shopping consistency for pantyhose purchases exhibited by the respondent, and importance of brand names for pantyhose to the respondent. Three Kruskal-Wallis tests were, therefore, conducted, one for each characteristic.

The Kruskal-Wallis test was used for these characteristics because the categories established within each characteristic could be ranked, which is a Kruskal-Wallis test characteristic. The Kruskal-Wallis test also overcomes the limitation of empty or small cells.

When using the test, ranks are substituted for the original observations. The formula for the test is

$$H = \frac{12}{N(N+1)} \sum_{i=1}^k \frac{R_i^2}{n_i} - 3(N+1), \text{ where } N = \text{the total number}$$

of observations, k = the number of rows in the table, R = the sum of the ranks in the i th row, and n_i = the number of observations in the i th row.

When there are tied ranks present, a correction for ties has to be conducted. The formula for correction of ties is $C = 1 - \frac{1}{N^3 - N} \sum_{s=1}^s t_s^3 - t_s$ where N = the total number of observations, s = the number of tied groups, and t_s = the size of the s group. The test statistic corrected for ties is $H' = \frac{H}{C}$. It was, therefore, determined if there were any significant differences between the segments into which each respondent was classified for each of

the three characteristics.

The Chi-Square Statistic - The Chi-Square statistic was used to determine if there were significant differences between the segment into which each respondent was classified and the three characteristics: education of the respondent, occupation of the respondent and occupation of the husband of the respondent. The Chi-Square statistic was used because the categories established within each characteristic could not be ranked, as required for the Kruskal-Wallis test. Use of the Chi-Square test is limited, however, if the expected values for the cells within the contingency tables are lower than five.

The Wilcoxon Test - The Wilcoxon test was used to determine if the average prices of the national brands purchased by the respondents were significantly higher than the average prices of the private brands purchased by the respondents. A nonparametric statistical test was used because the sample did not meet the requirements of normality of parametric statistical tests. Before the Wilcoxon test was used, the means of prices for the private and national brands purchased by the respondents were calculated. Only those respondents who purchased both private and national brands were used for the test. Those respondents, therefore, had a mean price for both private and national brands.

The difference in price between private and national brands was calculated for each respondent. If the national

brand was higher in price than the private brand, the difference was labelled positive (if lower in price the difference was labelled negative). The national-private prices of the respondents were ranked in order according to their absolute value. Each individual was then assigned a number starting with one for the lowest absolute value and increased by one for the next difference. The sum of the numbers assigned to each difference and the variance were calculated and the Wilcoxon test statistic applied. Application of the Wilcoxon test determined whether or not the national brands were higher priced than the private brands.

CHAPTER IV

RESULTS AND DISCUSSION

In this Chapter the results of the study will be presented. The sample, which consisted of members of a consumer panel, was divided into two groups, light and heavy buyers. The demographic and socioeconomic characteristics of the heavy buyers will be given. These characteristics were age group of the respondent, level of education of the respondent, occupation of the respondent, and occupation of the husband of the respondent.

The purchasing behaviour of the heavy buyers was examined to determine which market segments, based on the purchasing of private and national brands of pantyhose existed. The pantyhose purchase segments found will be examined followed by a discussion of the prices of national and private brand pantyhose.

With the use of an index of continuity of purchase, and visual examination, the heavy buyers were classified first into three categories of segments and then into individual segments. The individual market segments will be further examined. The segments were analyzed to determine which, if any, demographic, socioeconomic or purchasing be-

behaviour characteristics could be used to distinguish between the pantyhose purchase segments. Statistically analyzed were age group of the respondent, degree of store shopping consistency for pantyhose purchases and importance of brand names for pantyhose purchases. The personal and purchasing behaviour characteristics will then be examined overall.

DETERMINATION OF FINAL SAMPLE

Ninety-eight women, who were members of the consumer panel, were in the original sample. These respondents indicated, at the beginning of the record keeping time, that they would maintain pantyhose purchase record sheets for six months. The demographic and socioeconomic characteristics of the original sample were obtained from the file maintained by the consumer panel firm and are found in Appendix 18.

For the purpose of the study, only heavy buyers were used in the final analysis. The number of packages of pantyhose bought by each respondent was used to distinguish between light and heavy buyers. This was based on the assumption that the number of packages would be an accurate indication of the purchasing behaviour of the consumer of pantyhose. The number of packages was used, instead of the number of pairs, because one package represented one purchase decision even if the package contained more than one pair of pantyhose.

At the end of September, after three months of record

keeping time, thirty-four women were eliminated from the study. This elimination was based on the number of packages of pantyhose purchased during the months of July, August, and September, and an estimate of pantyhose purchases for the months of October, November and December.

The overall criterion for elimination was that the respondent had bought at the most one pair of pantyhose and estimated at the most two purchases. Based on this criterion, the assumption was made that those thirty-four respondents who were eliminated would be classified as light buyers and would not be used in the final analysis. The remaining sixty-four women, therefore, maintained pantyhose purchase record sheets for six months.

Blattberg and Sen classified light buyers as those purchasing four or less of a product and heavy buyers as those purchasing five or more of a product. Using this criterion, of the sixty-four women who maintained pantyhose purchase record sheets for six months, forty-nine women were classified as heavy buyers. The light buyers who had purchased four or less packages of pantyhose were not used in the final analysis. This included fifteen of the respondents who had maintained purchase record sheets for six months and the thirty-four respondents eliminated at the end of September. In the sample, therefore, there were forty-nine light buyers and forty-nine heavy buyers.

The division of light and heavy buyers using the criterion of Blattberg and Sen produced similar results to the

division of light and heavy buyers as outlined by Twedt. Twedt proposed that the division be the median. In this study, the median was forty-nine-and-a-half. This added further justification to the division of light and heavy buyers used in this study.

DEMOGRAPHIC AND SOCIOECONOMIC CHARACTERISTICS OF THE HEAVY BUYERS

The sample used for the final analysis consisted of the heavy buyers. The demographic and socioeconomic characteristics were obtained from the file maintained by the consumer panel firm.

Distribution of the Heavy Buyers by Age Group of the Respondent

The age of the heavy buyers ranged between twenty years old and forty-four years old. Five women were between the ages of twenty to twenty-four, twelve between the ages of twenty-five to twenty-nine, twenty-four between the ages of thirty to thirty-four, six between the ages of thirty-five to thirty-nine and one between the ages of forty to forty-four. The age was not available for one respondent.

Distribution of the Heavy Buyers by Level of Education of the Respondent

The classifications for level of education for the respondent used by the consumer panel firm were some or complete high school, some or complete university, and professional school. The classification for level of education was limited because of the category, professional school. Professional school included both trade schools, for example

carpentry, as well as the traditional professional schools, such as dentistry. The education requirements for trade schools differ from those of traditional professional schools. Thus this one category was not homogeneous.

Nineteen women had completed some high school or graduated from high school, twenty women had completed university or graduated from university, and eight women had graduated from professional school. The level of education was not available for two respondents.

Distribution of the Heavy Buyers by Occupation of the Respondent

The following classifications for occupation of the respondent were used: professional or business executive, sales or clerical people, and skilled, semi-skilled, or unskilled workers. Thirty-six women were unemployed. The occupation was not available for two respondents. Of the eleven women who were employed, four were professional or business executives, and seven were sales or clerical people. None of the respondents were skilled, semi-skilled, or unskilled workers.

Distribution of the Heavy Buyers by Occupation of the Husband of the Respondent

The classifications for occupation of the husband of the respondent were the same as the classifications used for occupation of the respondent. Twenty-five husbands were professional or business executives, eleven husbands were sales or clerical people, and twelve were skilled, semi-skilled or unskilled workers. The occupation of the husband

was not available for one respondent.

SEGMENTATION OF THE HEAVY BUYERS

The segmentation of the heavy buyers paralleled the three stages developed by Blattberg and Sen (1974). These three stages were segment definition, consumer classification and segment identification.

Segment Definition - Operationalized Objective 1

Market segments, based on the purchasing behaviour of private and national brands, can be established for the consumer of pantyhose.

Examination of the purchase record sheets of the respondents showed that seven pantyhose purchase segments existed: High National Brand Loyal, High Private Brand Loyal, National Brand Loyal, Private Brand Loyal, National Brand Switcher, Private Brand Switcher and National/Private Brand Switcher. The segments are shown in Table 4. No statistical test was used in establishing the segments.

Blattberg and Sen (1976) found nine homogeneous purchasing segments. Five of the segments as explained by Blattberg and Sen were found to exist in this study: the High National Brand Loyal segment, the National Brand Loyal segment, the National Brand Switcher segment, the Private Brand Switcher segment and the National/Private Brand Switcher segment. One of the segments found by Blattberg and Sen, Private Brand Loyal, was divided into two segments for the purpose of this study: High Private Brand Loyal and Private Brand Loyal. These two segments, High Private

TABLE 4

PANTYHOSE PURCHASE SEGMENTS FOUND IN THE STUDY

High National Brand Loyal
 High Private Brand Loyal
 National Brand Loyal
 Private Brand Loyal
 National Brand Switcher
 Private Brand Switcher
 National/Private Brand Switcher

Brand Loyal and Private Brand Loyal, have similar definitions to High National Brand Loyal and National Brand Loyal, respectively. The definitions of these two segments are:

High Private Brand Loyal - Consumers in this segment are highly loyal to one private brand of the store they usually visit. Ninety to 100 per cent of their purchases are of their favourite brand.

Private Brand Loyal - Consumers in this segment are loyal to one private brand, however, not as loyal as the High Private Brand Loyal consumer. They switch occasionally to another brand, as they switch stores, but return to their favourite brand usually after a single trial of another brand. At least 67 per cent of their purchases are of their favourite brand.

Three other segments found by Blattberg and Sen were not found in this study. These segments were Last Purchase Loyal, National Brand Switcher (Deal) and Deal-Oriented. These purchase segments may also exist for pantyhose. They were not found, however, to be evident in the sample studied.

Examination of Pantyhose Purchase Segments - Based upon the purchase record sheets, each of the seven pantyhose purchase segments found in this study appeared homogeneous in purchasing behaviour. The High Brand Loyal segments (High National Brand and High Private Brand) contained consumers who were highly loyal to one brand of pantyhose, with 90 to 100 per cent of their pantyhose purchases of their favourite national or private brand. The High National Brand Loyal segment members purchased mainly one national brand. The High Private Brand Loyal segment members purchased mainly one private brand, the private brand carried by the store they usually visited. Both segments contained members that were highly loyal to one brand of pantyhose but the type of brand preference differed.

The two Brand Loyal segments (National Brand and Private Brand) contained members who were loyal to one brand of pantyhose with at least 67 per cent of their purchases being their favourite national or private brand. They were not as loyal as members of the High National or High Private Brand Loyal segment. They, however, did prefer one brand even though they occasionally switched to another brand of pantyhose. The main difference between these two segments was the National Brand Loyal segment members preferred a national brand and the Private Brand Loyal segment members preferred a private brand.

There were three switching segments found in this

study, the National Brand Switcher segment, the Private Brand Switcher segment, and the National/Private Brand Switcher segment. Members of these segments were not loyal to any one brand of pantyhose. The segments differed in the type of brand switching behaviour exhibited. The switching occurred between national brands, between private brands, or between national and private brands. The difference in type of brand preferences resulted in heterogeneous purchasing behaviour between the three groups.

The results showed that seven pantyhose purchase segments existed. The differences between the segments were based on degree of loyalty to one brand or type of brand, and type of brand purchased. Each segment may be important to marketers because each segment contains members with different and varied purchasing behaviours.

The conclusion was drawn that market segments, based on purchasing behaviour of private and national brands, can be established for the consumer of pantyhose. Operationalized Objective 1 was, therefore, achieved.

Examination of National and Private Brand Pantyhose Prices-

One possible reason for the purchasing of private brands, as stated by Myers (1967) and Rothe and Lamont (1973), was that national brands are higher priced than private brands. The price of the private and national brands purchased by the respondents in this study was, therefore, examined. The nonparametric Wilcoxon test was used to determine if the national brands of pantyhose purchased by the respondents were significantly higher priced than the private brands

of pantyhose purchased by the respondents.

The Wilcoxon test is a nonparametric analogue to the paired sample t-test. Only those respondents, therefore, who had purchased both private and national brands could be examined. Of the forty-nine respondents classified as heavy buyers, twenty-six had purchased both national and private brands of pantyhose. National brands were found to be significantly higher priced than private brands at the .10 level of significance. The mean price of the national brands purchased by the twenty-six respondents was one dollar and thirty-nine cents and the mean price of the private brands purchased by the twenty-six respondents was one dollar and seventeen cents. The national brands purchased by the respondents cost, therefore, twenty-two cents more than the private brands purchased by the respondents. One possible reason, therefore, for the purchasing of private brands could be their lower prices as compared to national brands. No definite conclusion can be drawn, however, because some respondents may not have perceived the private brands to be lower in price than the national brands.

Consumer Classification - Operationalized Objective 3

Each consumer of pantyhose can be classified into one market segment by using an index adapted for consumer classification.

The index of continuity of care was adapted for the second stage, consumer classification, and renamed the index

of continuity of purchase (COP). The COP index and visual examination were used to determine of which segment a consumer was a member.

The classification of respondents into individual segments involved two steps: (1) A range of COP indices was determined for the segments based on the percentage purchases of one brand as specified in the segment definition. For each respondent, a COP index was calculated. Thus, in the first step, the respondents were classified into categories of segments with the use of the COP index; (2) The respondents were classified from the categories of segments into individual segments through visual examination of type of brand purchases. These two stages were necessary because the respondents could not be classified into individual segments with only the use of the COP index. For example, the High National Brand Loyal and High Private Brand Loyal segments had the same degree of loyalty but differed in type of brand purchases. The COP index distinguishes between degrees of loyalty but not between type of brand purchases.

Before the respondents were classified into one market segment, three categories of segments were determined which incorporated the seven segments. The categories were based on similar type of purchasing behaviours, specifically, the percentage purchases of one brand. The three categories were: (1) High Brand Loyal (National or Private), (2) Brand Loyal (National or Private) and (3) Switchers (National,

Private, or National/Private).

Each category was assigned a range of COP indices based on the percentage purchases of one brand. The High Brand Loyal category, according to the definition of 90 to 100 per cent of total purchases being of one brand, was assigned a COP index range of 0.80 to 1.00. The Brand Loyal category, according to the definition of 67 to 89 per cent of total purchases being of one brand, was assigned a COP index range of 0.50 to 0.79. The Switcher category, according to the definition of less than 67 per cent of total purchases being of one brand, was assigned a COP index range of 0.00 to 0.49. The respondents were then classified into one of the three categories based on their calculated COP index.

After the respondents were classified into a category, they were visually classified into individual segments. The classification into individual segments was based on a second component of purchasing behaviour, specifically, type of brand purchased. For example, if a respondent was classified into the High Brand Loyal category based on her COP index and only purchased national brands, she was then classified into the High National Brand Loyal segment.

Each of the heavy buyers could be classified into one of the seven segments with the use of the COP index and visual examination. The High National Brand Loyal segment contained two members; the High Private Brand Loyal segment

contained four members; the National Brand Loyal segment contained two members; the Private Brand Loyal segment contained three members; the National Brand Switcher segment contained seventeen members; the Private Brand Switcher segment contained three members; and the National/Private Brand Switcher segment contained eighteen members. The segments found in this study, their range of COP indices, the number of respondents in each segment and the percentage of the sample in each segment are found in Table 5. The conclusion was drawn that the consumers of pantyhose can be classified into market segments by using an index adapted for consumer classification plus visual examination. The COP index was not sufficient in itself to classify respondents into individual segments. Operationalized Objective 2 was, therefore, partially achieved.

Examination of Market Segments - The results have shown there were high loyal, loyal and switching consumer segments of pantyhose. Each segment contained consumers who preferred national or private brands, or switched between national brands, private brands or between national and private brands.

The existence of High National and High Private Brand Loyal consumers indicated that some consumers were very loyal to one brand within a brand classification. These consumers appeared to be satisfied with the brand they had been purchasing and very seldom switched to another brand.

The High National Brand Loyal consumers may have been influenced by national advertising and may have believed

TABLE 5
PANTYHOSE MARKET SEGMENT MEMBERSHIP

Segment Name	Range of COP Indices	Number of Respondents Within each Segment	Percentage of Heavy Buyers
High National Brand Loyal	0.80 - 1.00	2	4.1
High Private Brand Loyal	0.80 - 1.00	4	8.2
National Brand Loyal	0.50 - 0.79	2	4.1
Private Brand Loyal	0.50 - 0.79	3	6.1
National Brand Switcher	0.00 - 0.49	17	34.7
Private Brand Switcher	0.00 - 0.49	3	6.1
National/Private Brand Switcher	0.00 - 0.49	18	36.8
TOTAL		49	100.1 ⁽¹⁾

(1) Not equal to one hundred due to rounding off

the national brands to be of a better quality than private brands. They may also have been influenced by the better known national brand names.

The High Private Brand Loyal consumers preferred a private brand carried by a particular store. Many retail outlets carry their own private brand and consumers may have equated the store with their private brand. In some outlets, private brands may be purchased at the same time as groceries.

Rather than purchase the pantyhose at another store, consumers include them on their grocery shopping lists, thus saving time and money.

The National Brand Loyal and Private Brand Loyal consumers were loyal to a brand within a certain classification. They switched occasionally to another brand but returned to

their favourite brand. They may have been influenced in a similar way to the High National and High Private Brand Loyal consumer. They, however, were not as loyal as they occasionally switched to another brand. Advertising may also have influenced them to try another brand. They may also have been in a store where their favourite brand was not available and instead of going to a store where it may have been available, they purchased another brand.

The third category of segments, the Switcher, included 77.6 per cent of the respondents. The switching occurred within a certain type of brand, that is, national or private, or between two different types of brands, national and private. The two segments, National Brand Switcher and National/Private Brand Switcher, had the largest segment membership of the heavy buyers.

The high percentage of respondent switching between national brands (34.7 per cent of the heavy buyers) may have been due to the large amount of advertising for national brands. These consumers may have been more aware of national brands than private brands and were influenced to try a new national brand on their next purchase occasion.

Of the heavy buyers, 6.1 per cent switched between private brands. They were not loyal to the private brand of one store. They preferred, however, the private brand carried by the store they visited. The private brand purchasers may have believed the private brands to be of the

same quality as national brands but they did not want to pay for the higher costs of advertising and packaging of the national brands.

The switching of respondents from buying national brands to buying private brands and the reverse (36.8 per cent of the heavy buyers), may have been due to many factors. Analysis of the prices of national and private brands purchased by the respondents, presented earlier, showed that the national brands purchased by the respondents were significantly higher priced than the private brands purchased by the respondents. This suggested that price may have been an influential factor in the switching to private brands from national brands. Perceived higher quality of national brands may have influenced switching to national brands. The National/Private Brand Switcher consumers were not loyal to any one brand and may have been encouraged to switch brands by many marketing variables, such as price or promotion.

Segment Identification - Hypotheses 3 to 8

After the segments were established and the individual respondents classified into that segment best representing their purchasing behaviour, the individual segments were analyzed by demographic, socioeconomic and purchasing behaviour characteristics. These characteristics were used to determine which, if any, could be used to distinguish between pantyhose purchase segments.

In four of the seven segments, statistical analysis was not possible due to the small number of respondents in each segment. Before the statistical analysis could be attempted, therefore, these four segments were reduced to two segments. The High National Brand Loyal and National Brand Loyal segments were combined to form one segment. The High Private Brand Loyal and Private Brand Loyal segments were combined to form another segment. The other three segments, National Brand Switcher, Private Brand Switcher and National/Private Brand Switcher remained as individual segments. In the analysis five segments were, therefore, analyzed.

The Kruskal-Wallis test (Marascuilo and McSweeney:1977: 299-305), a non parametric analogue to one-way analysis of variance, and the Chi-Square statistic were proposed for the analysis. The Kruskal-Wallis test was used for the characteristics: age group of the respondent (Hypothesis 3), degree of store shopping consistency for pantyhose purchases (Hypothesis 7), and importance of brand names for pantyhose purchases (Hypothesis 8). It was used for these because the categories established within each characteristic could be ranked, a Kruskal-Wallis test requirement.

The Chi-Square test statistic was proposed for the characteristics: level of education of the respondent (Hypothesis 4), occupation of the respondent (Hypothesis 5), and occupation of the husband of the respondent (Hypothesis 6).

The Chi-Square statistic was proposed for these characteristics because the categories established within each characteristic could not be ranked, as required for the Kruskal-Wallis test. Use of the Chi-Square statistic is limited, however, if the expected values of the cells within the contingency tables are lower than five. Appendix 19 contains the tables to which the Chi-Square statistic was to be applied.

Because of the occurrence of cells with expected values lower than five within the contingency tables for level of education of the respondent, occupation of the respondent, occupation of the husband of the respondent and the pantyhose purchase segments, application of the Chi-Square statistic was not possible. No conclusion could be made, therefore, whether these characteristics could be used to distinguish between pantyhose purchase segments.

The Kruskal-Wallis test was applied to the previously given three characteristics: age group of the respondent, degree of store shopping consistency for pantyhose purchases and importance of brand names for pantyhose purchases. Each of these characteristics will be discussed separately.

Hypothesis 3 - The age group of the respondent cannot be used to distinguish between pantyhose purchase segments.

Table 6 shows the distribution of the heavy buyers by age group of the respondent and pantyhose purchase segments. When the Kruskal-Wallis test was applied, no significant

TABLE 6
 DISTRIBUTION OF THE HEAVY BUYERS BY AGE GROUP OF THE
 RESPONDENT AND PANTYHOSE PURCHASE SEGMENTS

Pantyhose Purchase Segments	Age Group					TOTAL
	20-24	25-29	30-34	35-39	40-44	
High National Brand Loyal and National Brand Loyal	2(3) ₁		2(29.5)			4
High Private Brand Loyal and Private Brand Loyal	1(3)	2(11.5)	2(29.5)	1(44.5)	1(48)	7
National Brand Switcher	1(3)	5(11.5)	8(29.5)	2(44.4)		16
Private Brand Switcher		1(11.5)	2(29.5)			3
National/Private Brand Switcher	1(3)	4(11.5)	10(29.5)	3(44.5)		18
TOTAL	5	12	24	6	1	48 ₂

(1) Number in parentheses equals assigned rank

(2) The age group was not available for one respondent

difference was found between the age group of the respondent and the pantyhose purchase segments into which each respondent was classified. The conclusion was made that the age group of the respondent cannot be used to distinguish between pantyhose purchase segments. Hypothesis 3 was, therefore, accepted.

Hypothesis 7 - The degree of store shopping consistency for pantyhose purchases exhibited by the respondent cannot be used to distinguish between pantyhose purchase segments.

In order to examine store shopping consistency for pantyhose purchases, three categories of store shopping consistency were developed on a similar basis to the categories of pantyhose purchase segments: High Store Shopping Consistency, Store Shopping Consistency and Store Switcher. The High Store Shopping Consistency category had the highest degree of store shopping consistency with 90 to 100 per cent of their pantyhose purchases being in one store. The Store Shopping Consistency category had the second highest degree of store shopping consistency with 67 to 89 per cent of their pantyhose purchases being in one store. The Store Switcher category had the lowest degree of store shopping consistency with less than 67 per cent of their pantyhose purchases being in one store.

The range of indices for each category of store shopping consistency was similar to the range of indices for the categories of pantyhose purchase segments: High Store

Shopping Consistency - 0.80 to 1.00; Store Shopping Consistency - 0.50 to 0.79; and Store Switcher - 0.00 to 0.49.

When determining store shopping consistency the name of the store, not the type of store, was used. To determine in which category of store shopping consistency a respondent belonged, a COP index was calculated and each respondent classified into one of the three categories of store shopping consistency.

Table 7 shows the distribution of the heavy buyers by category of store shopping consistency for pantyhose purchases and pantyhose purchase segments. A significant difference, at the .005 level of significance, was found between the degree of store shopping consistency for pantyhose purchases and the pantyhose purchase segments. The conclusion was made that the degree of store shopping consistency for pantyhose purchases exhibited by the respondent can be used to distinguish between pantyhose purchase segments. Hypothesis 7 was, therefore, rejected.

The results suggested that brand switching may have been associated with store switching. Seventy-six per cent of the respondents who were national brand, private brand, or national/private brand switchers were also store switchers. These respondents may have purchased pantyhose whenever necessary without being concerned about the brand name, type of brand or store purchased. They may have shopped at different stores and purchased pantyhose at the store in which they were presently shopping. Not all brands were available

TABLE 7
 DISTRIBUTION OF THE HEAVY BUYERS BY DEGREE OF STORE SHOPPING CONSISTENCY
 FOR PANTYHOSE PURCHASES AND PANTYHOSE PURCHASE SEGMENTS

Pantyhose Purchase Segments	Category of Store Shopping Consistency for Pantyhose Purchases			TOTAL
	High Store Shopping Consistency	Store Shopping Consistency	Store Switcher	
High National Brand Loyal and National Brand Loyal	2 (5.5) ₁	2 (15)		4
High Private Brand Loyal and Private Brand Loyal	3 (5.5)	3 (15)	1 (34.5)	7
National Brand Switcher	5 (5.5)	3 (15)	9 (34.5)	17
Private Brand Switcher			3 (34.5)	3
National/Private Brand Switcher		1 (15)	17 (34.5)	18
TOTAL	10	9	30	49

(1) Number in parentheses equals assigned rank

at every store. Loyalty to a brand, therefore, could not have been established. Advertising may have influenced some respondents to seek out those brands recently advertised. Sales may also have attracted some respondents to certain stores. These respondents may have been concerned about sales specials and sought out the lower priced brands.

Conversely, there may have been an association between brand loyalty and store shopping consistency. The loyal respondents purchased their preferred brand at a certain store, and some brands may have been only available at certain stores, for example, private brands. If consumers preferred certain private brands, they had to return to those stores carrying their favourite brand. Other respondents may have shopped consistently at a certain store and, therefore, only purchased those brands available at that store. After having tried some of the brands available in that store, they found one they preferred and purchased it consistently.

Hypothesis 8 - The importance of brand names for pantyhose purchases to the respondent cannot be used to distinguish between pantyhose segments.

Table 8 shows the distribution of the heavy buyers by importance of brand names for pantyhose purchases to the respondent and pantyhose purchase segments. The importance of brand names was determined using a seven point Likert scale (Appendix 7) ranging from two extremes: 'extremely important' to 'extremely unimportant'. The rating scale is limited because of the middle category 'uncertain'. Some respondents

TABLE 8
 DISTRIBUTION OF THE HEAVY BUYERS BY IMPORTANCE OF BRAND NAMES FOR
 PANTYHOSE PURCHASES TO THE RESPONDENT AND PANTYHOSE PURCHASE SEGMENTS

Pantyhose Purchase Segments	Importance of Brand Names for Pantyhose Purchases							Total
	Extremely Important	Very Important	Important	Uncertain	Unimportant	Very Unimportant	Extremely Unimportant	
High National Brand Loyal and National Brand Loyal		2(3)	1(13)		1(34.5)			4
High Private Brand Loyal and Private Brand Loyal			3(13)		3(34.5)		1(48)	7
National Brand Switcher	1(1) ₁	1(3)	7(13)	1(22.5)	6(34.5)		1(48)	17
Private Brand Switcher					3(34.5)			3
National/Private Brand Switcher			6(13)	1(22.5)	9(34.5)	1(46)	1(48)	18
TOTAL	1	3	17	2	22	1	3	49

(1) Number in parentheses equals assigned rank.

may not have interpreted uncertain as being a middle neutral category as was intended. As shown in the table, only two respondents used the middle scale. When the Kruskal-Wallis test was applied, no significant difference was found between importance of brand names for pantyhose purchases to the respondent and pantyhose purchase segments. The conclusion was made that the importance of brand names for pantyhose purchases of the respondent cannot be used to distinguish between pantyhose purchase segments. Hypothesis 8 was, therefore, accepted.

Examination of Personal and Purchasing Behaviour Characteristics - No significant difference was found between the one demographic characteristic analyzed and the pantyhose purchase segments. This indicated age group of the respondent was a poor predictor of segment membership. Although the individual segments were homogeneous in purchasing behaviour, they were not homogeneous in this one demographic characteristic. No conclusion could be drawn about the other three demographic and socioeconomic characteristics proposed for analysis. The occurrence of cells with expected values lower than five within the contingency tables for the characteristics education of the respondent, occupation of the respondent and occupation of the husband of the respondent, did not permit statistical analysis.

A significant difference was found between the purchasing behaviour characteristic, degree of store shopping consistency for pantyhose purchases exhibited by the respondent,

and pantyhose purchase segments. This indicated that store shopping consistency for pantyhose purchases may be used as a predictor of segment membership. If degree of store shopping consistency for pantyhose purchases was known, it could be predicted of which segment a consumer is a member. Conversely, if segment membership was known, the degree of store shopping consistency for pantyhose purchases could be predicted.

No significant difference was found between the purchasing behaviour characteristic, importance of brand names for pantyhose purchases to the respondent and pantyhose purchase segments. This indicated that this purchasing behaviour characteristic could not be used to predict segment membership. Although different types of brands were being purchased, the importance of brand names did not differ significantly between the segments.

The results indicated that age group of the respondent was a poor predictor of segment membership. One purchasing behaviour characteristic, degree of store shopping consistency for pantyhose purchases, could be used to determine of which segment a respondent was a member. Another purchasing behaviour characteristic, importance of brand names for pantyhose purchases, was found to be a poor predictor of segment membership.

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

In this Chapter a brief review of the methods and results of the study will be given. Following the review, the conclusions and implications of this study will be discussed.

Market segmentation is an important marketing strategy for many products. Little market segmentation research, however, has been done for apparel items. Constant changes in demand and fashion have made apparel manufacturers reluctant to conduct research in this area. Proper market segmentation strategy applied to apparel items may result in greater cost savings for the firm.

Richards and Sturman (1977) presented the results of life style segmentation of an apparel item, brassieres. They successfully applied market segmentation to their market and this resulted in an increase in sales. They stated that proper segmentation applied to the apparel industry may reduce risks and increase sales.

Segmentation strategy may be useful in analyzing pantyhose, also a packaged apparel item similar to brassieres. By applying the approach of market segmentation proposed by Blattberg and Sen (1974), information may be obtained about the existence of market segments, the size of each segment,

the purchasing behaviour of the segment, and the marketer may be able to predict segment membership based on consumer characteristics.

The purpose of this study was to determine if consumers of pantyhose could be segmented based on the purchasing behaviour of private and national brands. Ninety-eight women, members of an existing consumer panel in Winnipeg, were requested to maintain a record of their pantyhose purchases for six months. Of those ninety-eight women, forty-nine were classified as light buyers and forty-nine were classified as heavy buyers. The heavy buyers were segmented into seven segments and one demographic and two purchasing behaviour characteristics analyzed. The small sample size limited the generalizations to be made. The results, however, may be an indication of trends in the pantyhose market.

Two operationalized objectives and six hypotheses were formulated for the study. Operationalized Objective 1 was, "Market segments, based on the purchasing behaviour of private and national brands, can be established for the consumer of pantyhose". Visual examination of the purchase record sheets of the heavy buyers revealed that seven segments existed in this sample. The seven segments found were High National Brand Loyal, High Private Brand Loyal, National Brand Loyal, Private Brand Loyal, National Brand Switcher, Private Brand Switcher and National/Private Brand Switcher.

One possible reason for the purchase of private brands could be their lower prices relative to national brands. The national brands purchased by the respondents and the private brands purchased by the respondents were, therefore, examined. Only those respondents who had purchased both national and private brands were used in the analysis. Application of the Wilcoxon test statistic indicated that the national brands were significantly higher priced than the private brands. Price, therefore, may have been an influential factor in the purchase of private brands.

Operationalized Objective 2 was, "Each consumer of pantyhose can be classified into one market segment by using an index adapted for consumer classification". With the use of the classification index, the COP index, each respondent was classified into a category of segments and then visually classified into an individual segment. Using the COP index, each of the forty-nine heavy buyers could be classified into a category of segments, but visual examination was required to classify respondents into an individual segment.

Socioeconomic, demographic and purchasing behaviour characteristics of the respondent were proposed to be examined to determine which characteristics could be used to distinguish between pantyhose purchase segments. Some studies have shown that demographic and socioeconomic variables are not useful in distinguishing between market segments.

The usefulness of these characteristics for segmentation of consumers of pantyhose, however, was further examined in this study. The socioeconomic and demographic characteristics to be examined were age group of the respondent, education of the respondent, occupation of the respondent and occupation of the husband of the respondent. The purchasing behaviour characteristics examined were degree of store shopping consistency for pantyhose purchases exhibited by the respondent and importance of brand names for pantyhose purchases to the respondent.

Application of the Kruskal-Wallis test to the two characteristics, age group of the respondent and importance of brand names for pantyhose purchases to the respondent, showed no significant differences. Using the Kruskal-Wallis test, a significant difference was found between the degree of store shopping consistency exhibited by the respondent and pantyhose purchase segments. The Chi-Square statistic proposed for the characteristics, education of the respondent, occupation of the respondent, and occupation of the husband of the respondent, could not be used because of occurrence of cells with expected values lower than five within the contingency tables. No conclusions could, therefore, be drawn for the ability of these characteristics to distinguish between pantyhose purchase segments. The only characteristic found in this study which may be used to distinguish between pantyhose purchase segments was degree of store shopping consistency for pantyhose purchases exhibited by the respondent.

Seven pantyhose purchase segments were found in this study and were similar to those found by Blattberg and Sen (1976). Examination of the purchase record sheets showed that pantyhose purchase segments, based on the purchasing behaviour of private and national brands, may be established. The concept of market segmentation for apparel items should be further examined. There may be other apparel items where segmentation is possible.

Richards and Sturman (1977) segmented the brassiere market into five consumer segments based on life style segmentation. The study in this report utilized the purchasing of private and national brands as a segmentation criterion for the pantyhose market. Implementation of market segmentation strategy for marketers of apparel may result in greater cost savings for firms as found by Richards and Sturman. The criteria for segmentation may differ depending on the type of apparel items examined and the purchasing criteria of consumers.

Textile items, for example household linens, may be other products where segmentation may be possible. Some household linens are sold under both private and national brands, and could be segmented using the criterion in this study. Properly applied segmentation may result in cost savings and/or increase in sales for the manufacturer and retailer.

Once market segments have been established, the problem

arises of how to classify consumers into individual segments. This study used the index of continuity of care which was previously used in medical studies and adapted for consumer classification in this study. The index, renamed the index of continuity of purchase (COP), proved to be a useful classification technique for market segmentation. It is an uncomplicated process that can easily be used by and is available to all marketers. Use of the COP index is not time consuming and, therefore, can be used for both small and large consumer panels.

Each of the respondents classified as heavy buyers could be classified into one of the seven pantyhose purchase segments. Each segment was different from another segment in type of brands purchased, that is, private or national brands, and degree of loyalty to a type of brand, that is, high loyal, loyal or switcher.

One reason private brand purchasers may have purchased private brands instead of national brands could be the lower cost of the private brands. In the study conducted by Rothe and Lamont (1973) examining national and private brand purchasers of major appliances, they found price to be an influential factor in the purchasing of private brands. Statistical analysis of the private and national brands of pantyhose purchased by the respondents found the national brands to be significantly higher priced than the private brands purchased by the respondents. Price may, therefore, have been an influential factor in the purchasing of private

brands.

The national brand purchasers may have been influenced by promotion and believed in the greater value of national brands. In other studies, differences have been found to exist between national and private brand purchasers both in purchasing behaviour and perceptions of national and private brands. Myers (1967) found that rejectors of private brands believed in the greater usefulness or value of national brands. National brand buyers also thought brand reputation to be important (Rothe and Lamont:1973).

This study found seven pantyhose purchase segments. The Blattberg and Sen (1974) methodology applied to this study proved useful in determining the existence of pantyhose market segments, the size of each segment and the purchasing behaviour of each segment. More research is needed in the pantyhose area to determine if more segments exist, for example, deal purchasers, and if the use of coupons is important. These purchasers may be a small part of the total pantyhose market, however, for some marketers they may be an important segment. Information may also be obtained about the size of each segment in relation to the total pantyhose market. Knowledge about the purchasing behaviour of each segment may aid the marketer in determining marketing policies. With additional information segment membership possibly may be predicted based on consumer characteristics.

In this study, the purchasing behaviour of private

and national brands was the basis for segmentation. More research is needed to determine the perceptions and importance of these types of brands to apparel purchasers. Further research should incorporate an interview or questionnaire on attitudes and shopping behaviour. This may prove relevant to marketers in the decisions of which type of brand should be used for their apparel items.

After segments have been established and consumers classified into segments, of interest to many marketers are differences between the segments in personal and purchasing behaviour characteristics. If the differences are known, marketing strategies may be aimed at only those segments influenced by changes in marketing variables.

Only one demographic characteristic, age group of the respondent, was statistically tested to determine if it could be used to distinguish between pantyhose purchase segments. No significant difference, however, was found between the segments and this characteristic. This indicated that age group of the respondent may not be a useful criterion in distinguishing between pantyhose purchase segments. Myers (1967) examined fifteen socioeconomic and perceptual variables and found the socio-occupational variable to have the highest association with private brand attitude. Rothe and Lamont (1973) also found occupation, education and level of income distinguished between national and private brand purchasers. Although no difference was

found in this study, additional research needs to be conducted examining the differences between national and private brand purchasers.

Of the two purchasing behaviour characteristics examined, store shopping consistency for pantyhose purchases and importance of brand names for pantyhose purchases, only store shopping consistency was found useful in distinguishing between pantyhose purchase segments. The results indicated that as type of brand switching increased, so did store switching. This may prove useful to marketers when store shopping consistency patterns of consumers are known. If consumers shop consistently at certain stores, they may be loyal to a private brand or a national brand sold in that store.

Of the heavy buyers, 77.6 per cent were national brand, private brand or national and private brand switchers of pantyhose. Also 76.3 per cent of the brand switchers were store switchers. They may be of interest to marketers who are trying to establish brand loyalty or to retailers who are trying to establish store shopping consistency. By changing some marketing variables or emphasizing others, it may be possible to influence consumers and develop brand loyalty or store shopping consistency.

Marketers, if possible, should obtain information from the brand switchers as to why they switch between brands, whether between national brands, between private brands or

between national and private brands. Information about pantyhose purchase criteria of consumers may aid in identifying brand loyalty patterns. Marketers of pantyhose could promote the most important criteria in attempts to attract consumers to their brands of pantyhose and to establish brand loyalty.

It is also possible when brand loyalty patterns have been established, store shopping consistency may follow, for example, with private brand buyers. Private brand buyers prefer the private brand of a particular store. Retailers, aware of this, should determine which criteria attract private brand buyers. Promoting the most important criteria may attract private brand buyers to their store and, therefore, establish both brand loyalty and store shopping consistency.

Importance of brand names for pantyhose purchases was not found useful in distinguishing between pantyhose purchase segments. More research is needed in this area to determine if relationships exist. There may be an association between degree of loyalty to types of brands and importance of brand names, or there may be an association between type of brand purchases and importance of brand names. Rothe and Lamont (1973) found brand name was important to national brand buyers, while brand and store were important to private brand buyers. This indicated there may be an association between type of brand and importance of brand names. More research is needed examining purchasing behaviour

characteristics because they may prove to be more useful than personal characteristics in distinguishing between pantyhose purchase segments.

The results of this study were based on six months of record keeping. Further segmentation research needs to be done using a longer period of record keeping or a larger consumer panel. Either or both of these may result in data being analyzed with broader implications.

In addition to purchase record information, information should be obtained from consumer panel members about their attitudes to the product under study. In this study, for example, an attitude questionnaire may have been useful in obtaining information about attitudes of respondents to pantyhose and also to national and private brands. This information would have been useful when analyzing purchasing behaviour and might have resulted in more definite conclusions being drawn.

Data could also be purchased from consumer panels where a record has been kept for a long period of time. Many consumer panels, however, only maintain records of convenience household products. Increased interest by marketers in consumer panel data of apparel may result in consumer panel operators requesting their panel members to maintain records of apparel purchases.

Market segmentation was found in this study to be a viable marketing strategy for the consumer of pantyhose.

Segmentation properly applied to consumers of apparel items may result in cost savings and/or increase in sales for marketers. Market segmentation may reduce some of the risk involved in the marketing of apparel. Marketers may become more aware of what is important to consumers and consumers may find their needs and wants better satisfied.

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APPENDICES

APPENDIX I
INTRODUCTION USED BY THE INTERVIEWER IN PRE-TEST

Hello, I am a graduate student in the Faculty of Home Economics at the University of Manitoba. I am conducting a survey on purchasing habits of clothing items. Specifically, I am examining pantyhose purchases. Would you please fill out a short questionnaire which should not take longer than 5 minutes to complete?

APPENDIX 2
QUESTIONNAIRE ON PANTYHOSE PURCHASES
USED IN PRE-TEST

Instructions:

1. Please answer the following questions as accurately as possible.
2. Where a space is provided, please mark the appropriate answer with (✓) or an (X).
3. If you do not know the answer to a question, please say "I do not know" and move on to the next question. There are no "right" or "wrong" answers, and there are not always answers to every question.
4. The following information will be kept confidential and will not be connected with you personally in any way.

SECTION A

1. Do you wear nylon pantyhose? YES _____ NO _____

If YES, please proceed to question 2.

If NO, please return the questionnaire. I am specifically looking for pantyhose purchasers. Thank you for your willingness to co-operate.

2. Do you wear nylon stockings? YES _____ NO _____

If NO, proceed to question 3.

If YES which do you wear the most?

Pantyhose _____ Stockings _____

3. Do you wear dresses or skirts? YES _____ NO _____

If NO, proceed to question 4.

If YES, how often do you wear them?

Almost Always (5 to 7 times a week) _____

Regularly (3 to 4 times a week) _____

Often (1 to 2 times a week) _____
 Occasionally (1 every 2 weeks) _____
 Almost never (1 to 2 times a month) _____

SECTION B

4. On the average, how often do you buy pantyhose?

5. When you buy pantyhose, how many pairs do you usually buy at one time?

6. Do you usually buy more pantyhose during some months than others? YES _____ NO _____

If NO, proceed to question 7.

If YES, please list the 4 months in which the most pantyhose is bought.

7. Do you usually wear more pantyhose during some months than others? YES _____ NO _____

If NO, proceed to question 8.

If YES, please list the 4 months in which most pantyhose is worn.

SECTION C

8. Please list the specific store(s) where you have bought pantyhose in the past year.

If you buy most of your pantyhose at one store, please circle the name of the store.

9. Please list the brand name(s) of pantyhose which you have bought in the past year:

If you mainly buy one brand of pantyhose, please circle the name of the brand.

10. In which age group do you belong?

18 - 24 _____ 35 - 44 _____ 55 - 64 _____
 25 - 34 _____ 45 - 54 _____ 65 and over _____

11. Are you employed outside your home? YES _____ NO _____

If YES, what is your occupation? _____

THANK YOU FOR YOUR CO-OPERATION.

APPENDIX 3

REQUEST FOR FURTHER PARTICIPATION
USED IN PRE-TEST

Please indicate below if you would be willing to participate in further research on pantyhose. You will be asked to keep a record of your pantyhose purchases for 30 days. Your participation would be greatly appreciated.

Please fill in your name, address, and phone number if you are willing to participate. Thank you in advance.

Name _____

Address _____

Phone Number _____

Thank you again for your co-operation.

APPENDIX 4

INSTRUCTIONS AND EXPLANATIONS FOR PURCHASING RECORD
USED IN PRE-TESTInstructions:

Each time you buy pantyhose you are requested to fill in the attached purchase record sheet. This includes the date of purchase, the store where purchased, price paid per pair (excluding sales tax), if they were on sale or regular price, no. of pairs purchased each time, brand name(s) and the type of pantyhose bought. Please fill out this record after each purchase.

Explanations:

Column 4: If the pantyhose were on sale mark the 4th column with an (S). If they were regular price, that is, not on sale, mark the 4th column with an (R).

Column 7: For type of pantyhose mark the 7th column with the appropriate letter using the following guidelines:

Support (Su)
One Size Fits All (On)
Sheer Waist to Toe (Sh)
Unpanty Pantyhose (Un)

If the above list does not include the type of pantyhose purchased, please write in column 7 your description of the type purchased.

I will contact you at the beginning of the record keeping

time to give any further explanations if needed. If you wish to contact me, please call 474-8137 between the hours of 8:30 - 12:00 and 1:30 - 4:30.

I will also contact you before I come to pick up the purchase record.

THANK YOU FOR YOUR CO-OPERATION.

APPENDIX 5
PANTYHOSE PURCHASE RECORD SHEET USED IN PRE-TEST

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Date of Purchase	Store where purchased	Price Paid per Pair	If Sale Price (S) Regular Price (R)	No. of Pairs Purchased Each Time	Brand Name	Type of Pantyhose

APPENDIX 6
LETTER OF INTRODUCTION SENT TO MEMBERS OF THE
CONSUMER PANEL

INFORMATION OF NEW RESEARCH

_____ has been engaged to conduct research into the purchasing behaviour of women who buy pantyhose. The particular project will only involve keeping a record of your pantyhose purchases over a six month period, July to December, 1977.

For your participation, you will receive ten dollars (\$10.00), half of which will be sent to you at the end of September and the remainder at the end of the record keeping period, in early January.

A form will be provided to record the necessary purchase information: date of purchase, store where purchased, price paid per pair, number of pairs purchased, if they were on sale, if a coupon was used, brand name, and type of pantyhose.

Because of the long term nature of the project, your willingness to participate is being requested before the record forms are sent out. The project will not involve any additional questionnaires, interviews, or forms other than the above noted record of purchase related information.

Using the form below, would you please indicate your willingness to participate in the study and answer the question below. Return the form in the enclosed envelope.

Thank you for your continuing interest and co-operation.

APPENDIX 7

ACCEPTANCE FORM FOR PARTICIPATION AND
BRAND IMPORTANCE SCALE SENT TO MEMBERS
OF THE CONSUMER PANEL

_____ YES, I am willing to participate in the purchase re-
cord research related to pantyhose during the six
month period, July - December, 1977.

_____ NO, I do not wish to participate.

sign or initial

IF YOU ANSWERED YES, would you please answer the following
question by placing an "X" in the appropriate box which
best expresses your question:

When you purchase pantyhose, how important is the
brand name to you?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Extremely Important	Very Import- ant	Import- ant	Uncertain	Unimport- ant	Very Un- import- ant	Extremely Unimport- ant

APPENDIX 8
INSTRUCTION SHEET SENT TO MEMBERS OF
CONSUMER PANEL

Instructions:

Each time that you buy pantyhose, please fill in the attached purchase record sheet according to the instructions given below. Since accuracy is most important in keeping purchase records, please try to fill in the information as soon as possible after the purchase. Where possible, keep the sales slips in the envelope provided to send in with the completed purchase record.

Explanations of Information Required

IMPORTANT: For each package (whether the package contains one pair or more than one pair) make a separate record of each purchase. If, for example, you purchased four pair of pantyhose packaged individually, record each separately. You may use ditto marks to indicate 2nd, 3rd, and 4th identical purchases.

Date of Purchase: Record the month and the day of purchase.

Store Where Purchased: Record the name of the store where the pantyhose were purchased.

PACKAGE INFORMATION: (This information should be taken directly from the package.)

Name of Brand: Record the brand name from the package.

Type of Pantyhose: The type/style of pantyhose indicated on the package.

Fit All/Sized: FIT ALL indicates that the Pantyhose are "one size fits all".

SIZED indicates that the pantyhose were sized, e.g. S.M.L., etc.

Number of Pairs in Package: Indicate the number of pairs of pantyhose contained in the package.

Price per Package: Give the price for the package.

PURCHASE CIRCUMSTANCES:

<p>Regular Price or Sale Price</p>	<p>or</p>	<p>Record here if you paid the regular price or if you purchased these pantyhose under special circumstances such as a sale or special offer situation. If the categories do not apply to the situation under which you purchased the pantyhose (such as buy two pair and get one free), please check "Other" and make a brief note indicating the terms of the purchase.</p>
<p>Coupon Used or Other</p>	<p>or</p>	

NOTE: If the pantyhose were a gift, indicate this by checking the "Other" column and write "Gift", then complete as much of the other information as possible in the appropriate columns.

Thank you for your co-operation.

NOTE: The instruction sheet was sent each month of the study to each member of the consumer panel participating in the study.

APPENDIX 10

REQUEST NOTE FOR RETURN OF PREVIOUS MONTH'S RECORD SHEET
SENT TO MEMBERS OF THE CONSUMER PANEL

NOTE:

Please return last month's
"PANTYHOSE PURCHASE RECORD SHEET"
in the stamped return envelope.

Thank you,

APPENDIX 11
REQUEST FORM SENT TO MEMBERS OF
THE CONSUMER PANEL IN SEPTEMBER

IMPORTANT:

The enclosed "Pantyhose Purchase Record Sheet" is for the month of October, the fourth in the series of six.

There are several respondents who have not yet returned the July and/or the August record sheets. This makes it very difficult to determine whether these respondents have chosen not to participate, have forgotten, or have not returned them because they had made no purchases. For data analysis to proceed, it is most important that all of the record sheets be returned or that we have some indication of why they were not returned.

Also, several respondents have expressed concern that they are not making a sufficient number of purchases to be of value to the research and have expressed willingness to be removed from the study. This point in time would seem to be an appropriate point for the researchers to make the decisions about removing non-purchasers from the sample. The enclosed questionnaire will help us make those decisions. PLEASE COMPLETE THE FORM AND RETURN IT ALONG WITH YOUR SEPTEMBER RECORD SHEET.

Upon receipt of your September form (providing that we have forms for July and August) and the brief questionnaire regarding projected purchases, you will receive \$5.00 payment

for the three month reporting period. In this letter we will also indicate to you whether or not your continued participation (October, November, December) will be required.

Thank you for your participation during the past reporting period. The return rate has been over 90% and the data for the most part quite complete.

APPENDIX 12
PANTYHOSE PURCHASE ESTIMATE FORM SENT TO
MEMBERS OF THE CONSUMER PANEL

Please return this form with your September "Pantyhose Purchase Record".

Over the next three months, October, November, and December, I would estimate that I will likely be purchasing:

- _____ None
- _____ 1 to 2 pairs
- _____ 3 to 4 pairs
- _____ 5 to 6 pairs
- _____ 7 or more pairs

of pantyhose, (not knee-highs or anklets).

NOTE: This is only an estimate and in no way should be read as a contract to buy this many. We simply need to have some "guess" as to whether or not you will be buying a sufficient number of pantyhose in order to meet the requirements of the research design. Thank you.

APPENDIX 13
 ELIMINATION LETTER AND RECEIPT FORM SENT TO
 MEMBERS OF THE CONSUMER PANEL

IMPORTANT INFORMATION:

1. Enclosed with this letter is \$5.00 payment for the Pantyhose Purchase Record sheets for the months of July, August, and September. As indicated in the last letter, some members of the panel will have to be eliminated from this study due to insufficient purchases. Since a number of purchases are needed in order to effectively evaluate purchase patterns, some purchase records will not be useable. Following you will find the appropriate box checked as to whether or not you are to continue in this research for the remaining three months.

Research number:

_____ Please continue keeping pantyhose purchase records for the months of October, November, and December.

_____ Please do not continue. Thank you for your participation to date.

2. PLEASE COMPLETE THE RECEIPT OF PAYMENT form below and return in the envelope provided (along with the September purchase record for those who are continuing). Thank you again for your assistance to date and a special thank you to those whose participation had to

APPENDIX 13 CONTINUED

terminated at this point in the study.

Subject No. _____

I have received payment of \$5.00 for my Pantyhose
Purchase Record sheets for the months of July,
August, and September.

initial

date

APPENDIX 14
REQUEST FORM SENT TO MEMBERS OF THE
CONSUMER PANEL IN JANUARY

RE: December Pantyhose Purchase Records

PLEASE RETURN THE DECEMBER PANTYHOSE PURCHASE RECORD IN THE
ENVELOPE PROVIDED.

THIS IS THE FINAL MONTH OF THE SURVEY. UPON RECEIPT OF
YOUR DECEMBER RECORD SHEET (and other outstanding sheets
if there are any) YOU WILL BE SENT THE \$5.00 FOR THE THREE
MONTHS OF OCTOBER, NOVEMBER, AND DECEMBER.

THANK YOU FOR YOUR CO-OPERATION OVER THE PAST SIX MONTHS.
THE RESPONSE HAS BEEN EXCEPTIONAL, BOTH IN RELIABILITY OF
RETURNS AND RECORD KEEPING.

December 1977.

APPENDIX 15
FINAL RECEIPT FORM SENT TO MEMBERS
OF THE CONSUMER PANEL

Subject No. _____

I have received final payment of \$5.00 for my
Pantyhose Purchase Record sheets for the months
of October, November, and December, 1977.

initial

date

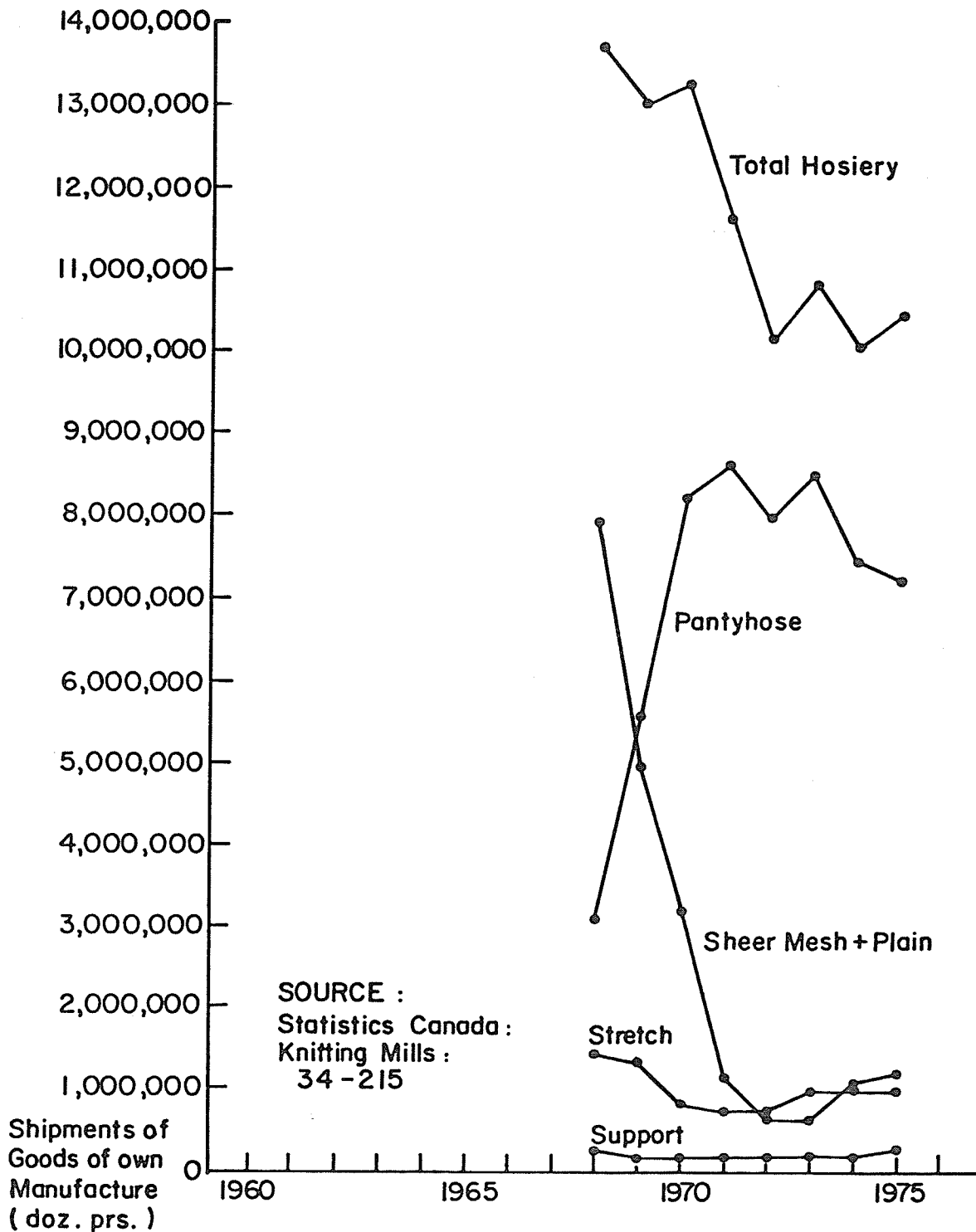
APPENDIX 16
 EXAMPLES IMPLEMENTING THE INDEX OF CONTINUITY OF PURCHASE

Respondent Number	Number of Brands					Total Amount Purchased	Index
	1	2	3	4	5		
101	5	0	0	0	0	5	.1
102	4	1	0	0	0	5	.60
103	3	2	0	0	0	5	.40
104	3	1	1	0	0	5	.30
105	2	2	1	0	0	5	.20
106	2	1	1	1	0	5	.10
107	1	1	1	1	1	5	0

Maximum Value of Index = 1
 Minimum Value of Index = 0

APPENDIX 17

SHIPMENTS OF GOODS OF OWN MANUFACTURE FOR TOTAL
 HOSIERY, PANTYHOSE, SHEER MESH AND PLAIN
 STOCKINGS, STRETCH STOCKINGS,
 AND SUPPORT STOCKINGS



APPENDIX 18
SUMMARY OF DEMOGRAPHIC AND SOCIOECONOMIC
CHARACTERISTICS OF THE ORIGINAL SAMPLE

Distribution of the Original Sample by Age Group of the Respondent

	Age Group of the Respondent					Total
	20-24	25-29	30-34	35-39	40-49	
Number of Respondents	7	32	44	11	3	97 ₁

1. The age group was not available for one respondent.

Distribution of the Original Sample by Level of Education of the Respondent.

	Level of Education of Respondent			Total
	Some or Complete High School	Some or Complete University	Professional School	
Number of Respondents	33	45	18	96 ₁

1. The level of education was not available for two respondents.

Distribution of the Original Sample by Occupation of the Respondent

	Occupation of the Respondent ₁			Total
	Professional or Business Executive	Sales or Clerical People	Skilled, Semi-skilled or unskilled worker	
Number of Respondents	5	11	4	20 ₂

1. Seventy-two women were unemployed and one respondent a student.
2. The occupation was not available for five respondents.

APPENDIX 18 CONTINUED

Distribution of the Original Sample by Occupation of the Husband of the Respondent.

	Occupation of the Husband of the Respondent			
	Professional or Business Executive	Sales or Clerical People	Skilled, Semi-skilled or unskilled Worker	Total
Number of respondents	54	20	23	97 ₁

1. The occupation of the husband of the respondent was not available for one respondent

APPENDIX 19

TABLE 1

DISTRIBUTION OF THE HEAVY BUYERS BY OCCUPATION OF
THE RESPONDENT AND PANTYHOSE PURCHASE SEGMENTS

Pantyhose Purchase Segments	Occupation ₂			Total
	Professional or Business Executive	Sales or Clerical People	Homemaker and Other ₃	
High National Brand Loyal and National Brand Loyal	0	3	1	4
High Private Brand Loyal and Private Brand Loyal	1	1	5	7
National Brand Switcher	3	1	11	15
Private Brand Switcher	0	0	3	3
National/Private Brand Switcher	0	2	16	18
TOTAL	4	7	36	47 ₁

1. The occupation was not available for two respondents.
2. No skilled, semi-skilled, or unskilled workers.
3. Includes one student.

APPENDIX 19 CONTINUED

TABLE 2

DISTRIBUTION OF THE HEAVY BUYERS BY LEVEL OF
EDUCATION OF THE RESPONDENT AND
PANTYHOSE PURCHASE SEGMENTS

Pantyhose Purchase Segments	Level of Education			Total
	Some and Complete High School	Some and Complete University	Professional School	
High National Brand Loyal and National Brand Loyal	1	1	2	4
High Private Brand Loyal and Private Brand Loyal	3	3	1	7
National Brand Switcher	5	8	3	16
Private Brand Switcher	2	1	0	3
National/Private Brand Switcher	8	7	2	17
TOTAL	19	20	8	47 ₁

1. The level of education was not available for two respondents.

APPENDIX 19 CONTINUED

TABLE 3

DISTRIBUTION OF THE HEAVY BUYERS BY OCCUPATION OF THE
HUSBAND OF THE RESPONDENT AND
PANTYHOSE PURCHASE SEGMENTS

Pantyhose Purchase Segments	Professional and Business Executive	Sales and Clerical People	Skilled, Semi-skilled or unskilled Worker	Total
High National Brand Loyal and National Brand Loyal	3	1	0	4
High Private Brand Loyal and Private Brand Loyal	4	1	2	7
National Brand Switcher	6	4	6	16
Private Brand Switcher	3	0	0	3
National/Private Brand Switcher	9	5	4	18
TOTAL	25	11	12	48 ₁

1. The occupation of the husband was not available for one respondent.