

## CHAPTER 5

### CONCLUSIONS AND IMPLICATIONS

The main objective of this study was to determine the relationship between household characteristics and the expenditure shares allocated among various categories of women's clothing for U.S. households belonging to different ethnic groups. The study also estimated unobserved latent quality variables based on household characteristics, and it examined the effects of the latent quality variables on the expenditure shares for the various apparel categories. A Multiple Indicator-Multiple Cause Model, which is a special case of the general Structural Equations Model, was used to estimate separate Engel equations for expenditure shares for 15 women's clothing categories, for four different ethnic groups. Household characteristics included as cause variables in the model were annual total household expenditures, numbers of adults and children in the household, age of the reference person, and dummy variables for home ownership, marital status, and education level of the reference person. For White households, a dummy variable for urban versus rural residence also was included. Indicator variables used in the model were annual per-capita household expenditures on clothing and annual per-adult expenditures on personal care and services. The data source was the Consumer Expenditure Survey, 1994-95 and 1995-96, of the U.S. Bureau of Labor Statistics.

#### Main Findings

The results of the study showed that socio-economic variables, including annual total household expenditures, numbers of children and adults in the household, age, marital status and education level of the reference person, and urban residence (for White households only) had significant impacts on the latent quality variables associated with different categories of women's clothing and that the latent quality variables themselves impacted the clothing expenditure shares. Also, for different ethnic groups, socio-economic variables including annual total household expenditures, numbers of children and adults in the household, age of the reference person, and urban residence (for White households only) had differing effects on women's clothing expenditure shares. Socio-

economic variables with significant effects on the largest numbers of latent quality variables associated with the clothing categories for the four ethnic groups were annual total household expenditures and numbers of children and adults in the household. Whereas annual total expenditures had a positive effect on the latent quality variables, the numbers of adults and children had a negative effect. Other independent variables with negative effects on the latent quality variables were age of the reference person and home ownership. Marital status and education of the reference person had mixed effects on the latent quality variables. As compared to rural residence, urban residence had a positive and significant effect on only one latent quality variable for White households. These results imply that socio-economic variables impact consumers' quality choices, and presumably prices paid, for women's clothing.

The socio-economic independent variables significantly affected several clothing expenditure shares for the four ethnic groups. Overall, the effects were not as broad as for the latent quality variables; that is, the socio-economic variables affected many more latent quality variables associated with the clothing categories than they did the expenditure shares for the clothing categories. The latent quality variables affected very few expenditure shares for Hispanic households, as compared to the other three ethnic groups. The latent quality variables had positive and significant effects on expenditures for personal care and services for all 15 expenditure shares for all four ethnic groups. Thus, expenditures for personal care and services appeared to be a good indicator for the latent quality variables. The results of t-tests indicated that, for each category of women's clothing, the relationship between annual total expenditures and expenditure shares differed significantly across the four ethnic groups and that the relationship between the latent quality variables and the expenditure shares also differed significantly across the four ethnic groups, as hypothesized. Overall, annual total expenditure had the largest effects on the expenditure shares for White households, and the smallest effects on the shares for Asian households. The effects of the latent quality variables on the expenditure shares were significantly different for more of the clothing categories for Asians than for the other ethnic groups; however, the effects of the latent quality variables on the

expenditure shares were significantly different for only a few of the clothing categories for Hispanics as compared to Whites.

The results support the conclusions of Paulin (1998), and Wagner and Soberon-Ferrer (1990), in that different ethnic groups have distinct expenditure patterns possibly due to differences in socio-economic characteristics; such characteristics may signify, for example, resources and constraints faced by a household. Possibly due to cultural and lifestyle differences, the categories of clothing that satisfy more social-psychological, as compared to physical needs, may differ across ethnic groups. In this research, the distinct expenditure patterns and tastes of the four ethnic groups are reflected in the significantly different effects of annual total expenditures on the expenditure shares for each category of women's clothing, as well as in the significantly different effects of the latent quality variables on several expenditure shares, for the four ethnic groups.

#### Implications and Suggestions for Future Research

The findings of this study show that the relationship between U.S. households' characteristics and their expenditure shares allocated among various categories of women's clothing differs according to ethnic group. Along with household socio-economic characteristics, latent quality variables also impact women's clothing expenditure shares, and the effects of the latent quality variables on the expenditure shares differ by ethnic group. Thus, it is important to include prices or a quality variable when cross-sectional data are used to estimate consumer demand for clothing.

The U.S. population is projected to become increasingly ethnically diverse (U.S. Bureau of the Census, 1998). Understanding differences in clothing expenditure patterns among ethnic groups will help apparel manufacturers and retailers to better develop apparel marketing strategies for distinct market segments. Firms need to consider the impact of the different socio-economic characteristics of ethnic groups on consumers' clothing expenditures, and plan their clothing marketing mix accordingly; based on this research, the categories or quality of clothing that will sell more will depend upon the ethnic mix of

the target population. For example, firms marketing high quality women's apparel should concentrate on Asian, Hispanic, or White households consisting of unmarried, childless young persons with high incomes. As seen in Table 9, households fitting this profile will likely choose higher quality women's clothing than will Asian, Hispanic or White households consisting of older persons with children, or Asian, Hispanic or White households consisting of married persons. The results of this research may be useful in developing marketing plans for specific apparel categories or for specific ethnic groups. For example, firms interested in expanding sales of high quality women's suits should target Asian or Hispanic households at upper-income levels and with few or no children. Based on this research, Asian or Hispanic households with high annual total expenditures and few children will choose higher quality and devote larger expenditure shares for women's suits than will those with low annual total expenditures and many children. Firms targeting Black consumers with high incomes should concentrate on trousers and nightwear. Based on this research, Black households with high annual total expenditures will choose higher quality and devote larger expenditure shares for women's trousers and nightwear than will those with low annual total expenditures.

Future research incorporating price data, or information on clothing characteristics, such as fiber type, fabric type, color, and design, may provide a better picture of differences in consumer tastes according to ethnic groups. If such data were available, a demand system approach could be used, permitting cross-equation restrictions and taking into account the interdependency of consumer demand for different goods. A demand system approach was attempted during an early stage in this research, but SEM is very restrictive in terms of parameter identification; in the SEM format, the parameters of an Almost Ideal Demand System for women's clothing categories could not be identified, because the latent variables for each clothing category had to be simultaneously estimated.