Discriminant Analysis of Consumer Attitudes Towards Fashion

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Abstract: **The article examines the factors influencing consumers 'attitudes towards fashion fashion. The survey surveyed 1,700 people in Uzbekistan. A discriminant analysis was performed based on randomly collected data using a five-point Likert scale. Different aspects of determining the demand of the population for fashion products from different segments have been studied. Different aspects of consumers 'attitudes towards fashion were studied in terms of their age, gender, and income. Recommendations have been developed on strategic directions specific to different segments of consumers.**

Keywords: Fashion industry, marketing, marketing research, market segmentation, demand, discriminant analysis.

I. INTRODUCTION

The global market for garments is constantly evolving and evolving as a result of new designs created by the fashion industry, which means that businesses need to develop effective marketing strategies in market activities. In 2019, the global clothing and footwear market will reach 1.9 trillion. The fashion market is worth $ 35.8 billion. Was equal to USD. By 2020, while the size of the clothing and footwear market increased by 1.1 percent as a result of the COVID-19-related coronavirus pandemic, the value of the fashion market declined to $ 31.4 billion. USD. [7] Therefore, the world's garment and knitwear companies need to further improve the industry by looking for promising fashion trends in market development, identifying key revenue segments, forming brands and brands in the fashion market and using marketing strategies to increase their competitiveness.[4]

The fields of fashion and textiles, sewing are closely intertwined. Although the clothing industry is only seen as a source of raw materials for fashion, but they have different aspects. Each of these industries has a significant impact on the modern world, namely: interior design, media, cosmetics, retail, manufacturing and others. [8] Therefore, they are not only interconnected but also interactive. Consumers 'demand for clothing is based on fashion trends that affect the textile and clothing industries.[5]

If we analyze the retail sales of textiles, garments and knitwear in Uzbekistan, the retail sales of fabrics increased 8 times from 2010 to 2019 and amounted to 1541.7 billion soums. Retail sales of clothing, tablecloths and sheets, curtains and other textile products increased by 9 times compared to 2010 and in 2020 reached 2513.1 billion soums. Retail sales of knitted goods in 2010 amounted to 106.2 billion soums, in 2020 this figure increased by 7 times to 728.1 billion soums, sales of footwear increased by 8 times to 2425.7 billion soums. Retail sales of watches amounted to 5.2 billion soums in 2010 and 20.0 billion soums by 2020. Sales of jewelry in 2020 increased by 111.0% compared to 2010 and amounted to 35.3 billion soums. It is obvious that the population of the country has a demand for fashion products.[6]

The country hosts a variety of international art and entertainment events to shape consumer attitudes toward fashion, such as the International Maqom Conference, the Dance Festival, the International Crafts Festival, and the Sharq Taronalari International Music Festival. past The national traditions of the country serve as the basis for the formation of a unique national fashion industry as a result of wearing national costumes on the holidays "Navruz", "Independence Day", "International Women's Day". [1]

A discriminant analysis was conducted to determine whether the country's consumer attitudes toward fashion depended on their income.

II. LITERATURE REVIEW

Naresh K. Malhotra, David F.Birks's "Marketing research an applied approach" book presents a model and describe the general procedure for conducting discriminant analysis, with an emphasis on formulation, estimation, determination of significance, interpretation, and validation of the results. Linear Discriminant Analysis (LDA), Normal Discriminant Analysis (NDA) or Discriminant Function Analysis is a generalization of Fisher's linear discriminant, a method used in statistics, pattern recognition and machine learning to find a linear combination of features that describes or separates two or more classes or events. [10]

Linear Discriminant Analysis (LDA), as well as the related linear Fisher discriminant, are statistical and machine learning methods for finding linear combinations of features that best separate two or more classes of objects or events. [9] The resulting combination can be used as a linear classifier or to reduce the dimension of the feature space before further classification. LDA is a section of multivariate statistical analysis, the content of which is the development of methods for solving problems of distinguishing (discrimination) of objects of observation by a set of features. In other words, it allows you to study the differences between two or more groups of objects on several grounds simultaneously. [2] LDA is closely related to analysis of variance and regression analysis, which also attempt to express a dependent variable in terms of a linear combination of other features or dimensions. In these two methods, the dependent variable is a numerical value, and in LDA it is a nominal value (class label). In addition, LDA has similarities with principal component analysis and factor analysis, which look for linear combinations of quantities that best describe the data. [3]

III. RESEARCH METODOLOGY

Marketing research mainly uses discriminant analysis methods to compare the differences between groups of consumers and to study the relationships between them. Discriminant analysis is used in marketing in cases where one of the variables has a category, and the independent variables allow the evaluation of variables with different intervals.

A function that is generated by determining the linear combination of an independent variable and classifying the related variables is a discriminant function, which is expressed as follows.

$$D = b_0 + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4 \ldots + b_n x_n$$

in this,

D - discriminant indicator;

b - the weight of the discriminant coefficient inherent in the independent variables;

X - independent variables;

Based on the given function, the variables (X) selected by calculating the discriminant indicators (Y) are divided into different categories relative to each other. [1]

IV. ANALYSIS AND RESULTS

In the process of buying clothes, 78.5% of consumers buy from markets, 36.8% from "boutiques", ie specialty stores. 61.6% of respondents are members of social networking and telegram messengers, 31.7% on Instagram and 8.7% on Facebook. It was found that 54.2% of respondents get information about fashion from social networks, 43.4% from Internet sites, 29.9% from TV shows (movies, concerts, programs), 11.9% from acquaintances.

When assessing the factors that lead consumers to wear fashionable clothes and buy them in society, it was found that 26.7% of them pay attention to fashion for entertainment events (weddings, concerts). The results of the analysis revealed that consumers' attitudes towards fashion goods are a key factor in shaping fashion information from social networks, as well as purchasing fashion goods for entertainment events.[7]

Based on the above, in order to set strategic directions for the fashion industry through the platform https://docs.google.com/forms/ and in the "Abu Sahiy", "Bek Baraka" Namangan goods markets, "Anor" fashion houses among 1,700 consumers (https://forms.gle/Z9H3fBeFCzxGcjJn6) and the questionnaire was conducted by distributing questionnaires at clothing outlets. The social survey was conducted from November 2020 to September 2021. The survey surveyed 1,700 consumers, of whom 932 lived in rural areas and 768 in urban areas. Of the respondents surveyed, 857 were road workers and 943 were men. Respondents were asked to indicate their level of agreement with the following factors using a 5-point scale (1 = no, 5 = very interested.)

According to the survey, the highest consumer attitudes towards clothing fashion in the markets are among those aged 20-34, with an average of 57.1 percent, 26.6 percent high, and 3.4 percent very high. Those aged 35-

49 also had an average attitude towards fashion, with a figure of 66.9 percent.

The primary data collected from the questionnaires to determine the respondents' demand for fashion products were analyzed using the software package SPSS 22 Statistics. A discriminant analysis was conducted on the extent to which consumers were dependent on quality changes on selected factors. The purpose of discriminatory analysis in marketing is to identify differences and similarities of factors influencing the perception of fashion by occupations, age, gender, income, place of residence segments of consumers. Segment properties are determined based on the following factors:

- -level of interest in fashionable clothing (X1);
- -level of interest in clothing created by fashion designers (X2);
- level of interest in arts, entertainment (X3);
- -the extent to which the image of the dress is valued in gaining prestige in society (X4);
- the level of spending on the purchase of fashionable clothes (X5).

In order to determine the attitude of consumers of the country to fashion products, we set ourselves the following hypotheses.

H1-Consumers 'attitudes towards fashion products depend on their level of profitability and have a high level of impact.

In order to take samples from the questionnaire, the results of the survey will be checked on the basis of the SPSS Statistics module "KMO and Bartlett's test of sphericity" Alpha Krombach (a). When the KMO values reach a value of 0.56 to 1, it indicates the degree of conformity or inconsistency of the selected rows. According to the results of the Krombach Alpha test (alpha = 0.727), it was confirmed that it was possible to accept 5 independent variables observed for the sample.

In discriminant analysis, tests are required to assess the statistical significance of the selected variables. The value of Wilks' Lambda statistics varies in the range [0,1]. The functional value of the canonical discriminant is checked against the Wilks' Lambda test. The F criterion df1 = 5 and df2 = 1695 are taken on the basis of a 0.05 value of 'p-value' in the observations. A correlation matrix is constructed to determine the extent to which the functional correlation of the selected factors affecting a given dependent variable and to solve the problem of multicollinearity. Since the correlation between the factors assumes values close to zero, it is confirmed that the acceptance is reasonable for the model if there is no mean multicollinearity problem in the selected factors.

A multi-factor discriminant analysis should be conducted to substantiate that consumers 'demand for fashion products depends on their level of profitability and has a high level of impact, because the selected dependent variable is divided into 6 categories according to consumer income level, low, medium, high and categorized as high-income. (Figure 2)

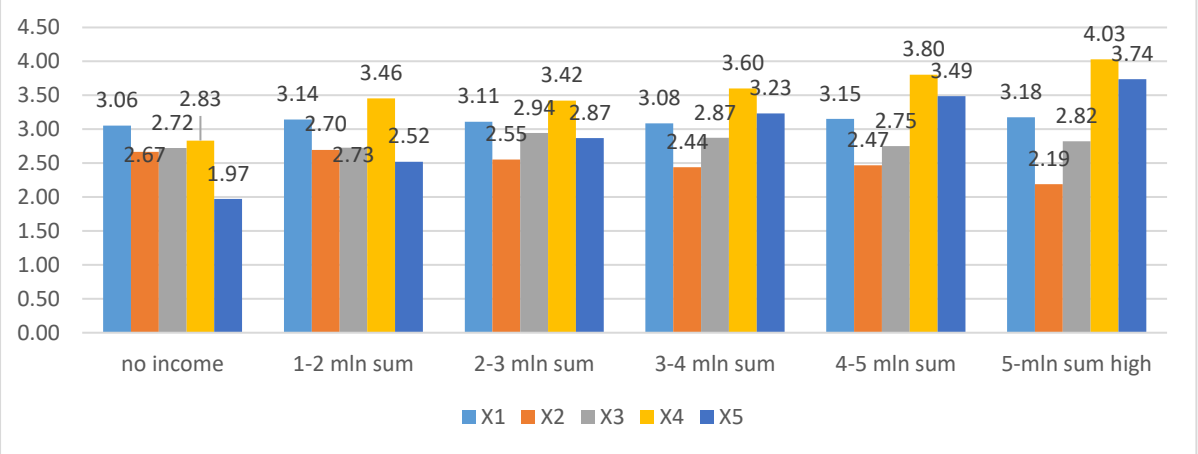

Figure 3. Consumers 'attitudes toward fashion products vary in their income

It is known from these indicators that high-income consumers are more important than low-income consumers in terms of the level of demand for fashion products. Consumers 'attitudes toward fashion products in terms of income were found to be higher than that of consumers with income divided into groups. Interest in clothing created by fashion designers was moderate, with differences in age and gender, while low-income consumers were found to be inferior to those in incomes interested in arts and entertainment. It has been found that high-income consumers buy clothes with a high regard for their image in the community.

The following functions were obtained based on the results of the analysis for each group to distinguish the most important factors in terms of consumer profitability and to measure the impact of the factors:

$$Y_{\text{have no income}} = -14{,}466+3{,}523X_1+0{,}207X_2+2{,}030X_3+4{,}223X_4-1{,}753X_5 \qquad (1)$$

$$Y_{few(1-2)} = -16{,}802+3{,}414X_1+0{,}042X_2+1{,}873X_3+5{,}296X_4-1{,}680X_5 \quad (2)$$

$$Y_{medium(2-3)} = -16{,}459+3{,}341X_1-0{,}234X_2+2{,}168X_3+4{,}810X_4-1{,}144X_5 \quad (3)$$

$$Y_{medium\ (3-4)} = -16{,}803+3{,}286X_1-0{,}453X_2+2{,}019X_3+4{,}933X_4-0{,}787X_5 \quad (4)$$

$$Y_{high\ (4-5)} = -17{,}626+3{,}380X_1-0{,}524X_2+1{,}761X_3+5{,}197X_4-0{,}662X_5 \quad (5)$$

$$Y_{very\ high\ (5\ юкори)} = -19{,}119+3{,}588X_1-1{,}032X_2+1{,}829X_3+5{,}531X_4-0{,}517X_5 \quad (6)$$

The factors influencing the level of consumer profitability in shaping their attitudes towards fashion products allow us to distinguish different features among the discriminant functions obtained on the basis of the identified factors. Based on the structured (4), (5), (6) functions, it is possible to increase the attitude of consumers to fashion products in terms of profitability and make targeted strategic decisions.

V. CONCLUSIONS

In conclusion, based on the results of the discriminatory analysis conducted to increase consumer demand for fashion products, the main focus should be on women living in urban areas aged 20-35 years. Women play a better role in understanding the communicative language of clothing, but also pay more attention to fashion and focus on defining their identity in clothing and fashion.

Factors influencing consumers 'attitudes towards fashion products Given the interest in fashion design services and arts and entertainment events, it is important to control the organization of clothing products and entertainment and other events in the country, taking into account our national traditions.

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