Determining the Decision-Making Style of Online Buyers (Case Study: Kowsar Isfahan Store)

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A R T I C L E   I N F O

A B S T R A C T

Objective: This study aimed to evaluate the decision-making styles of Sproles and Kendall among online buyers of the Kowsar Isfahan store. The main question of this research was to determine the priority and importance of Sproles and Kendall decision-making styles among the online buyers of this store.

Methodology: The primary tool for data collection was electronic questionnaires on the internet with 35 items, designed and distributed based on a 7-point Likert scale, and data were collected accordingly. The statistical sample of this research included 251 individuals from the statistical community. In the data analysis phase, confirmatory factor analysis was used to extract latent variables.

Findings: According to the results of this research, the online buying decision process involves six styles: perfectionism and sensitivity to quality, sensitivity to brand name, sensitivity to fashion, hedonism, confusion due to many options, and habitualness.

Conclusion: Among these styles, the decision-making style of perfectionism and sensitivity to quality was the dominant decision-making style of online buyers at the Kowsar Isfahan store.

Keywords: *Sproles and Kendall, purchase decision-making, online buyers*

1   Introduction

The increased consumption and penetration of the internet have transformed the online market into a significant distribution and communication channel where consumers and stores interact. Since the emergence of e-commerce, online sales have captured a substantial share of total sales revenue (Chiu et al., 2012; VanderMeer et al.,

IJIMOB

Rezaei Kojani et al.   International Journal of Innovation Management and Organizational Behavior 4:1 (2024) 157-169

2012). Therefore, to attract consumers in a highly competitive market, where all competitors and their products are easily accessible, retailers must better understand the behavior of online consumers and the nature of online shopping to effectively reach their consumers at the right time with the right message (Zhang et al., 2011). Many studies have directly addressed issues related to online behavior using traditional shopping knowledge. However, online shopping behavior differs from traditional shopping, and current knowledge about online consumer behavior is still limited, and the process of customer decision-making, searching, and using information in this environment is not yet clearly understood (Dennis et al., 2009). Thus, this research is motivated to enhance theoretical knowledge in this area by examining the decision-making styles of online buyers in the internet environment.

The internet affects all stages of the consumer's buying and post-buying process. For example, searching for options, gathering necessary information, evaluating different retailers simultaneously, providing personal information, and making payments in an online environment are entirely different (Constantinides, 2004; Moon, 2004). This environment can significantly impact customers in creating their decision-making processes to adapt appropriately to the new decision-making environment (Xia & Sudharshan, 2002).

Therefore, understanding online consumer behavior and developing theoretical knowledge and models to better understand consumers, segment the market, and ultimately increase profitability is of great importance (Rickwood & White, 2009). Hence, it is essential to examine tested consumer decision-making models and explore the online buying decision process in online stores.

In many studies, the proposed model by Sproles and Kendall has been introduced as influencing factors on purchasing and decision-making styles of consumers and has been examined (Sprotles & Kendall, 1986). Since the introduction of this model, extensive studies have been conducted to assess its generality in different countries and markets; these studies have shown that not all eight styles exist in different societies and consumers of different products. For example, Leo et al. (2005) confirmed six decision-making styles in Singapore and Australia; Wang et al. (2004) confirmed seven decision-making styles in China) and in some societies, some similar styles are accepted, and in others, different styles from this model are observed (Leo et al., 2005; Mokhlis & Salleh, 2009; Wang et al., 2004).

Some studies have attempted to fully examine the consequences of consumer decision-making style based on the Sproles and Kendall model. In Iran, several studies have been conducted on the decision-making styles of customers based on the Sproles and Kendall model (Bakhshandeh & Ghashghayi, 2020; Khodadad Hosseini & Asadollahi, 2018; Mokhlis & Salleh, 2009). Moreover, Tankesel et al. (2014) studied the decision-making styles of young Indians based on the Sproles and Kendall model (Tanksale et al., 2014). Bandara (2014) also studied the decision-making styles and local brands in Czech based on this model (Bandara, 2014). However, studies on the decision-making styles of online buyers are limited. Therefore, in this research, the decision-making styles of online buyers based on the Sproles and Kendall model are examined.

Based on the decision-making styles of the Sproles and Kendall model, the hypotheses of this research are:

1- The style of sensitivity to the brand name of goods exists among online buyers at the Kowsar Isfahan store.

2- The style of habitualness and loyalty to a brand name exists among online buyers at the Kowsar Isfahan store.

3- The style of sensitivity to price exists among online buyers at the Kowsar Isfahan store.

4- The style of confusion due to many options exists among online buyers at the Kowsar Isfahan store.

5- The style of perfectionism and sensitivity to the quality of goods exists among online buyers at the Kowsar Isfahan store.

6- The style of hedonism and the inclination to shop as entertainment exists among online buyers at the Kowsar Isfahan store.

7- The style of sensitivity to the trendiness of goods exists among online buyers at the Kowsar Isfahan store.

8- The style of impulses without prior planning and intention exists among online buyers at the Kowsar Isfahan store.

Finally, the priority and importance of the decision-making styles of the Sproles and Kendall model among online buyers at the Kowsar Isfahan store will also be examined.

2   Methods and Materials

This study is descriptive-applied in nature. The statistical population of this research comprises online buyers at the Kowsar Isfahan store. In this study, an electronic questionnaire was used, containing 35 specialized questions and 10 demographic questions, based on a 7-point Likert

scale ranging from "strongly disagree" to "strongly agree." The questionnaire link was sent to 450 members of the statistical population, and the completed questionnaires were returned to the researcher's email account drive. Out of these, 251 questionnaires were complete and citable. Subsequently, the research hypotheses were tested.

In this electronic questionnaire, certain demographic characteristics of the population members (age, gender, average monthly income, profession, level of education,

number of family members, and marital status) were also surveyed through 10 questions.

The questionnaire used in this study (Table 1) was designed based on various studies that have been conducted in Iran and other parts of the world (Khodadad Hosseini & Asadollahi, 2018; Masoumian Miandoab, 2020; Sprotles & Kendall, 1986; Tanksale et al., 2014). The content validity of the questionnaire was confirmed based on its repeated use in reputable domestic and international scientific research and feedback from experts and relevant professors.

Table 1

Items Used to Assess the Decision-Making Styles of Online Buyers

Decision-Making Style	Item Code	Example Items
Sensitivity to Brand Name	DMB1	Large and chic stores have the best products.
	DMB2	The higher the price of a product, the better its quality.
	DMB3	Products that are most advertised are usually the best choice.
	DMB4	I always choose the most expensive brands for purchasing.
	DMB5	I always select well-known and best-selling brands for buying.
	DMB6	I prefer to purchase the best trade brands.
Habit and Loyalty to Brand	DMH1	If I find a good product or brand, I stick with it.
	DMH2	I repeatedly buy brands that interest me.
	DMH3	The brands of products I buy are regularly replaced.
	DMH4	I always go to a specific store for purchases.
Sensitivity to Price	DMP1	I usually choose low-priced products.
	DMP2	I try to ensure the money I spend on a product is worth it.
Confusion with Many Choices	DMC1	Too much information about various products confuses me.
	DMC2	The plethora of different brands makes choosing difficult.
	DMC3	The more I know about a product, the harder it is to choose the best one.
	DMC4	Sometimes deciding which store to buy from is challenging.
Perfectionism	DMPe1	Obtaining a product with high quality is very important to me.
	DMPe2	I make a lot of effort to choose a high-quality product.
	DMPe3	My expectations regarding the products I buy are very high.
	DMPe4	I generally try to buy products with high quality.
	DMPe5	I complete my purchases quickly and choose the first brand or product I see that seems good enough.
	DMPe6	I usually try to buy the best quality available.
	DMPe7	A product must be perfect or the best to satisfy me.
Hedonism	DMR1	Shopping at stores wastes my time.
	DMR2	Shopping is not a pleasurable activity for me.
	DMR3	Going shopping is one of the pleasurable activities of my life.
	DMR4	Shopping is an entertainment for me.
Fashion-oriented	DMF1	Buying new and fashionable items is exciting for me.
	DMF2	I update my wardrobe according to the latest fashion.
	DMF3	I usually have at least one outfit that is trendy.
	DMF4	Being fashionable and trendy is very important to me.
Impulsive Tendencies	DMI1	I often make impulsive purchases that I later regret.
	DMI2	I generally decide to buy something on the spot.
	DMI3	I usually buy quickly, choosing the first product or brand that seems good enough.
	DMI4	I need to shop more carefully.

The reliability of the questionnaire was assessed using Cronbach's alpha and composite reliability. Initially, 40 electronic questionnaires were distributed on the internet among the online buyers of the target store as a pilot test, and after calculating Cronbach's alpha separately for each

variable, the reliability of the questions was confirmed. For analyzing the results obtained from this research and determining the decision-making styles of online buyers, factor analysis was employed using SPSS software, and for structural equation modeling, Lisrel software (version 8.8)

was used. Additionally, the Kruskal-Wallis test was used to determine the relationships between demographic variables and CSI dimensions.

3   Findings and Results

In this research, to investigate the repeatability, stability, and compatibility of the data collection tool, in other words, the validity and reliability of the questionnaire, the Cronbach's alpha method was used. A Cronbach's alpha value higher than 0.7 indicates acceptable reliability. However, Researchers suggest a threshold of 0.6 for Cronbach's alpha for variables with a few questions. As seen in Table 2, the Cronbach's alpha for each variable is above 0.7, indicating acceptable reliability. Questions with an alpha less than 0.7 were removed. Thus, as observed in Table

1, at this stage, questions related to the decision-making styles of price sensitivity and unplanned purchasing intentions due to low alpha values were removed. These questions also had very low factor loadings. Therefore, hypotheses 3 and 8 are initially rejected.

Confirmatory factor analysis, a specific case of structural equation modeling also known as a measurement model, examines the relationship between latent and observed variables, with factor loading as its primary output. Factor loading values range from -1 to +1. A prerequisite for convergent validity is that factor loadings greater than 0.3 are acceptable but weak, greater than 0.5 are good, and greater than 0.7 are ideal. As seen in Table 2, the factor loading values for the questions in the confirmatory analysis of the latent variables are all above 0.5 and are good.

Table 2

Reliability Test Results

Code	Factor Loading	Error Rate	AVE	CR	Overall Cronbach's Alpha
DMB1	0.64	0.59	0.52917	0.86746	0.852
DMB2	0.57	0.68	-	-	-
DMB3	0.58	0.67	-	-	-
DMB4	0.79	0.37	-	-	-
DMB5	0.88	0.23	-	-	-
DMB6	0.84	0.30	-	-	-
DMH1	0.84	0.29	0.5328	0.68936	0.644
DMH2	0.60	0.64	-	-	-
DMPe1	0.87	0.24	0.72628	0.94083	0.846
DMPe2	0.86	0.26	-	-	-
DMPe3	0.80	0.36	-	-	-
DMPe4	0.88	0.22	-	-	-
DMPe6	0.88	0.23	-	-	-
DMPe7	0.82	0.32	-	-	-
DMR1	0.32	0.90	0.53225	0.8005	0.754
DMR2	0.59	0.65	-	-	-
DMR3	0.96	0.09	-	-	-
DMR4	0.87	0.25	-	-	-
DMF1	0.73	0.46	0.6583	0.8848	0.867
DMF2	0.83	0.32	-	-	-
DMF3	0.83	0.31	-	-	-
DMF4	0.85	0.27	-	-	-
DMC1	0.74	0.45	0.59458	0.85319	0.827
DMC2	0.89	0.21	-	-	-
DMC3	0.69	0.53	-	-	-
DMC4	0.75	0.44	-	-	-

Chi-Square = 861.13, df = 284, P-value = 0.00000, RMSEA = 0.091, α = 0.870

The condition for convergent validity is that the average variance extracted (AVE) must be greater than 0.5. Values of average variance extracted reported in Table 2 are all above 0.5. Construct reliability, a measure for determining internal consistency, indicates that if a large number is

calculated, it means all criteria are consistent and aligned with a single theme. As seen in Table 2, all construct reliability values are greater than 0.7, thus indicating internal consistency.

The root mean square error of approximation (RMSEA) is one of the primary indices of model fit in structural equation modeling. A value of RMSEA less than 0.1 indicates a good model fit, between 0.1 and 0.05 indicates a very good fit, and between 0.05 and 0.08 indicates an excellent fit. The RMSEA value in this model is 0.091, indicating a good fit for this model.

For confirming or rejecting research hypotheses in structural models, t-values or significance levels must be reviewed. If these values are greater than 1.96 or less than -1.96, the research hypothesis is confirmed at a 0.95 confidence level. Standardized path coefficients and significance values are used to examine the hypotheses. Given that all values in Table 3 meet the necessary conditions to reject the null hypothesis, the null hypothesis is rejected, and hypothesis one is confirmed. Thus, the remaining six hypotheses are confirmed.

Table 3

T-Value Results for Hypothesis Confirmation

Hypotheses	T-Value	Confirmation or Rejection
H1	7.62	Confirmed
H2	4.03	Confirmed
H4	4.64	Confirmed
H5	7.6	Confirmed
H6	7.48	Confirmed
H7	7.5	Confirmed

Comparative analyses of two independent groups are divided into two categories. If the data are normally distributed, an independent t-test should be used, and if the data are not normally distributed, the Mann-Whitney test should be used. The Kolmogorov-Smirnov test is used to assess the normality of data distribution. As seen in the last row of Table 4, the Sig level in all groups is zero, indicating that the data are not normally distributed and non-parametric tests should be used for analysis.

Table 4

Kolmogorov-Smirnov Test Results

Family Size	Income	Occupation	Education	Age	Marital Status	Gender
244	238	248	250	248	249	251
1.7951	2.5966	6.1613	3.6480	2.9355	1.4378	1.4064
0.6211	1.3676	3.8068	1.0433	0.8654	0.5510	0.4921
5.220	2.926	3.301	4.112	4.485	5.948	6.165
0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 5

Mann-Whitney Test Results for Determining Independence of Male and Female Populations

Gender	Chi-Square	df	Asymp. Sig.	Hypothesis H0
Male	29.220	1	0.000	Rejected
Female	0.131	1	0.717	Confirmed
Male	2.042	1	0.153	Confirmed
Female	1.708	1	0.191	Confirmed
Male	4.348	1	0.037	Rejected
Female	0.728	1	0.394	Confirmed

The Mann-Whitney test is a comparative test used to compare the status of two independent groups (male and female populations in this study) when the data of a study are ordinal qualitative. It is equivalent to an independent t-test for two independent samples.

The Kruskal-Wallis test, similar to the F-test, is a non-parametric method used when, like the F-test, there are more than two groups. It also allows for the ranking of observations among independent groups, meaning the measurement scale must be at least ordinal. As seen in Table

6, the significance value obtained for the decision-making style of confusion with many options across different age groups and for the hedonistic and confused styles across different income brackets is less than 0.05. This indicates that there is a significant difference between them, and the null hypothesis (H0) is rejected. However, in other cases where the significance value is greater than 0.05, the null hypothesis is not rejected, meaning no significant difference exists.

Table 6

Kruskal-Wallis Test Results for Determining Independence of Decision-Making Variables

Category	Chi-Square	df	Asymp. Sig.	Hypothesis H0 Result
Age	8.947	5	0.111	Confirmed
Hedonistic	4.749	5	0.447	Confirmed
Brand Sensitive	2.619	5	0.758	Confirmed
Habitual	6.423	5	0.267	Confirmed
Perfectionist	5.514	5	0.356	Confirmed
Fashion-oriented	19.947	5	0.001	Rejected
Confused by Many Options				
Job	8.092	8	0.425	Confirmed
Hedonistic	12.954	8	0.113	Confirmed
Brand Sensitive	9.593	8	0.295	Confirmed
Habitual	10.873	8	0.209	Confirmed
Perfectionist	8.457	8	0.390	Confirmed
Fashion-oriented	14.584	8	0.068	Confirmed
Confused by Many Options				
Income	12.057	5	0.034	Rejected
Hedonistic	9.609	5	0.087	Confirmed
Brand Sensitive	2.105	5	0.834	Confirmed
Habitual	1.568	5	0.905	Confirmed
Perfectionist	0.635	5	0.986	Confirmed
Fashion-oriented	12.895	5	0.024	Rejected
Confused by Many Options				
Education	2.560	4	0.634	Confirmed
Hedonistic	4.126	4	0.389	Confirmed
Brand Sensitive	2.250	4	0.690	Confirmed
Habitual	6.117	4	0.191	Confirmed
Perfectionist	2.453	4	0.653	Confirmed
Fashion-oriented	3.355	4	0.500	Confirmed
Confused by Many Options				
Family Size	2.327	3	0.507	Confirmed
Hedonistic	0.944	3	0.815	Confirmed
Brand Sensitive	5.001	3	0.172	Confirmed
Habitual	2.994	3	0.393	Confirmed
Perfectionist	0.597	3	0.897	Confirmed
Fashion-oriented	2.062	3	0.560	Confirmed
Confused by Many Options	8.947	5	0.111	Confirmed

The Friedman test, a non-parametric equivalent to the ANOVA test used for comparing mean ranks among k variables, was employed to uncover the priorities in decision-making styles among online buyers from the identified styles. The rejection of the null hypothesis in this test means that there is a significant difference between at least two groups. The results of the Friedman test are observed in Table 7, indicating that the importance and characteristics of decision-making types differ, and the ranking of decision-making features is meaningful. As seen in Table 7, the significance level of the test (P-Value) is zero, suggesting the rejection of the null hypothesis, implying that the decision-making styles differ significantly. According to the ranking in the Friedman test, the perfectionist style is the most prevalent decision-making style among the study's statistical population.

IJIMOB

Rezaei Kojani et al.   International Journal of Innovation Management and Organizational Behavior 4:1 (2024) 157-169

Table 7

Initial Friedman Test Results

Rank	Decision-Making Style	Score
1	Perfectionist	7.85
2	Brand Sensitive	5.58
3	Hedonistic	4.96
4	Habitual	4.12
5	Fashion-oriented	3.80
5	Confused by Many Options	3.80
Total N = 214	Chi-Square = 806.472	df = 7

For analyzing research variables based on demographic factors and ranking different decision-making styles among online customers within each demographic classification, the Kruskal-Wallis test (and the Mann-Whitney test to determine the ranking of decision-making styles between genders) was used, and the results are reported in tables below. The dominant decision-making style in each classification is marked with an asterisk in these tables. For example, the dominant decision-making style in the age group under 20 years is hedonistic, which has the highest rank among other styles in the same age group.

Table 8

Mann-Whitney Test Results for Determining Ranking of Decision-Making Styles among Men and Women

Decision-Making Style	Gender	Count	Rank
Brand Sensitive	Female	139	114.71
	Male	92	117.96
	Total	231	-
Habitual	Female	138	121.68
	Male	94	108.89
	Total	232	-
Perfectionist	Female	137	117.54
	Male	88	105.93
	Total	225	-
Hedonistic	Female	141	134.95*
	Male	90	86.31
	Total	231	-
Fashion-oriented	Female	140	123.38
	Male	91	104.64
	Total	231	-
Confused by Many Options	Female	139	113.91
	Male	94	121.57*
	Total	233	-

Table 9

Kruskal-Wallis Test Results for Ranking Decision-Making Styles Across Different Age Groups

Decision-Making Style	Age Group	Count	Average Rank	Asymp. Sig.
Hedonistic	Under 20 years	4	177.00*	0.034
	21 to 30 years	59	121.47	0.034
	31 to 40 years	123	116.79	0.034
	41 to 50 years	32	96.03	0.034
	51 to 60 years	8	104.56	0.034
	Over 60 years	3	61.83	0.034
Brand Sensitive	Under 20 years	4	104.60	0.087
	21 to 30 years	59	115.20	0.087
	31 to 40 years	123	109.61	0.087

IJIMOB
International Journal of Innovation Management and Organizational Behavior

Rezaei Kojani et al.   International Journal of Innovation Management and Organizational Behavior 4:1 (2024) 157-169

		Count	Average Rank	Asymp. Sig.
	41 to 50 years	32	128.52	0.087
	51 to 60 years	8	151.56	0.087
	Over 60 years	3	107.83	0.087
Perfectionist	Under 20 years	4	74.63	0.191
	21 to 30 years	57	124.07*	0.191
	31 to 40 years	119	105.69	0.191
	41 to 50 years	31	115.31	0.191
	51 to 60 years	8	134.78	0.191
	Over 60 years	3	80.17	0.191
Habitual	Under 20 years	4	103.88	0.758
	21 to 30 years	59	110.88	0.758
	31 to 40 years	123	116.48	0.758
	41 to 50 years	32	115.94	0.758
	51 to 60 years	8	144.83	0.758
	Over 60 years	3	90.67	0.758
Fashion-oriented	Under 20 years	4	134.88	0.356
	21 to 30 years	60	109.08	0.356
	31 to 40 years	121	116.46	0.356
	41 to 50 years	33	124.21*	0.356
	51 to 60 years	8	117.88	0.356
	Over 60 years	3	39.00	0.356
Confused by Many Options	Under 20 years	4	154.88	0.001
	21 to 30 years	60	90.41	0.001
	31 to 40 years	123	122.31	0.001
	41 to 50 years	32	116.36	0.001
	51 to 60 years	9	181.44*	0.001
	Over 60 years	3	117.17*	0.001

Table 10

Kruskal-Wallis Test Results for Ranking Decision-Making Styles Across Different Jobs

Decision-Making Style	Job	Count	Average Rank	Asymp. Sig.
Hedonistic	Student	25	121.44	0.295
	Teacher	54	117.19	0.295
	Retired	8	89.25	0.295
	Retailer	2	64.50	0.295
	Office Worker	76	109.38	0.295
	Manufacturer	2	119.50	0.295
	Homemaker	15	152.17*	0.295
	Unemployed	8	117.63	0.295
	Other	39	111.59	0.295
Brand Sensitive	Student	24	129.98*	0.113
	Teacher	56	107.70	0.113
	Retired	8	142.50	0.113
	Retailer	2	61.75	0.113
	Office Worker	76	119.38*	0.113
	Manufacturer	2	173.75*	0.113
	Homemaker	15	131.10	0.113
	Unemployed	8	60.31	0.113
	Other	39	109.79	0.113
Habitual	Student	25	103.96	0.209
	Teacher	54	126.42*	0.209
	Retired	8	125.63	0.209
	Retailer	2	81.25	0.209
	Office Worker	78	107.47	0.209
	Manufacturer	2	149.50	0.209
	Homemaker	15	150.37	0.209
	Unemployed	8	92.63	0.209
	Other	39	116.03*	0.209
Fashion-oriented	Student	25	123.26	0.390

IJIMOB
International Journal of Innovation Management and Organizational Behavior

Rezaei Kojani et al.   International Journal of Innovation Management and Organizational Behavior 4:1 (2024) 157-169

Teacher	54	115.31	0.390
Retired	8	97.94	0.390
Retailer	2	59.00	0.390
Office Worker	76	116.24	0.390
Manufacturer	2	112.25	0.390
Homemaker	15	148.27	0.390
Unemployed	8	84.69	0.390
Other	39	106.79	0.390

Table 11

Kruskal-Wallis Test Results for Ranking Decision-Making Styles Across Different Educational Levels

Decision-Making Style	Education Level	Count	Average Rank	Asymp. Sig.
Hedonistic	Diploma or lower	13	119.88	0.191
	Associate's degree	10	103.45	0.191
	Bachelor's degree	62	125.92*	0.191
	Master's degree	103	110.22	0.191
	PhD	43	117.29	0.191
Brand Sensitive	Diploma or lower	14	98.61	0.389
	Associate's degree	10	147.50*	0.389
	Bachelor's degree	61	108.90	0.389
	Master's degree	103	119.35*	0.389
	PhD	43	116.37	0.389
Habitual	Diploma or lower	14	104.50	0.690
	Associate's degree	10	139.95	0.690
	Bachelor's degree	63	121.40	0.690
	Master's degree	102	113.40	0.690
	PhD	43	115.12	0.690
Fashion-oriented	Diploma or lower	13	101.58	0.653
	Associate's degree	9	125.78	0.653
	Bachelor's degree	63	122.75	0.653
	Master's degree	103	117.05	0.653
	PhD	43	105.91	0.653
Confused by Many Options	Diploma or lower	14	138.21*	0.500
	Associate's degree	11	141.55	0.500
	Bachelor's degree	62	112.58	0.500
	Master's degree	103	116.15	0.500
	PhD	43	112.22	0.500

Table 12

Kruskal-Wallis Test Results for Ranking Decision-Making Styles Based on Family Size

Decision-Making Style	Family Size	Count	Average Rank	Asymp. Sig.
Perfectionist	1 or 2 people	69	118.34*	0.507
	3 to 5 people	143	110.18	0.507
	6 to 7 people	11	133.73	0.507
	More than 7	3	86.33	0.507
Brand Sensitive	1 or 2 people	67	115.25	0.815
	3 to 5 people	144	115.13	0.815
	6 to 7 people	12	98.17	0.815
	More than 7	4	100.13	0.815
Hedonistic	1 or 2 people	69	110.60	0.172
	3 to 5 people	142	114.47	0.172
	6 to 7 people	12	144.33*	0.172
	More than 7	4	65.00	0.172
Habitual	1 or 2 people	69	110.60	0.393
	3 to 5 people	142	114.47	0.393
	6 to 7 people	12	144.33	0.393
	More than 7	4	65.00	0.393

IJIMOB

Rezaei Kojani et al.   International Journal of Innovation Management and Organizational Behavior 4:1 (2024) 157-169

Fashion-oriented	1 or 2 people	67	113.19	0.897
	3 to 5 people	145	114.21	0.897
	6 to 7 people	11	113.86	0.897
	More than 7	3	84.83	0.897
Confused by Many Options	1 or 2 people	69	109.55	0.560
	3 to 5 people	142	117.33*	0.560
	6 to 7 people	12	108.96	0.560
	More than 7	4	87.50	0.560

Table 13

Kruskal-Wallis Test Results for Ranking Decision-Making Styles Based on Different Income Levels

Decision-Making Style	Income Bracket	Count	Average Rank	Asymp. Sig.
Perfectionist	Less than 1 million	56	123.89*	0.034
	1 to 2 million	61	109.36	0.034
	2 to 3 million	54	121.76*	0.034
	3 to 4 million	33	91.53	0.034
	4 to 5 million	8	90.56	0.034
	More than 5 million	9	66.89	0.034
Brand Sensitive	Less than 1 million	57	104.21	0.087
	1 to 2 million	60	97.72	0.087
	2 to 3 million	57	121.76*	0.087
	3 to 4 million	32	118.19	0.087
	4 to 5 million	8	143.56*	0.087
	More than 5 million	9	144.67*	0.087
Hedonistic	Less than 1 million	56	111.66	0.191
	1 to 2 million	59	109.59	0.191
	2 to 3 million	56	113.68	0.191
	3 to 4 million	34	107.76	0.191
	4 to 5 million	8	125.00	0.191
	More than 5 million	9	137.61	0.191
Habitual	Less than 1 million	57	109.50	0.834
	1 to 2 million	59	109.59	0.834
	2 to 3 million	56	113.68	0.834
	3 to 4 million	34	107.76	0.834
	4 to 5 million	8	125.00	0.834
	More than 5 million	9	137.61	0.834
Fashion-oriented	Less than 1 million	57	111.45	0.905
	1 to 2 million	60	115.07*	0.905
	2 to 3 million	55	108.22	0.905
	3 to 4 million	32	111.91	0.905
	4 to 5 million	8	118.00	0.905
	More than 5 million	10	101.95	0.905
Confused by Many Options	Less than 1 million	56	111.66	0.024
	1 to 2 million	61	107.52	0.024
	2 to 3 million	57	117.94	0.024
	3 to 4 million	34	135.62*	0.024
	4 to 5 million	8	50.13	0.024
	More than 5 million	9	97.67	0.024

Among the respondents, 59.4% (149 individuals) were women and 40.6% (102 individuals) were men. Additionally, 61.8% (155 individuals) were married, and 38.2% (96 individuals) were single. Furthermore, individuals with a Master's degree comprised the largest educational group among the respondents, making up 43.6% (109 individuals). The statistical population was categorized into six age groups, with the highest frequency being among individuals aged 31 to 40 years, who constituted 53% (133 individuals) of the respondents. The majority of the respondents (33.1%, 83 individuals) were employed. Regarding income, 26.8% of the respondents earned between one and two million Iranian Rials per month, 25.2% earned less than one million Rials, 24.8% earned between two and three million Rials, 14.3% earned between three and

four million Rials, and the rest earned more than four million Rials.

Based on the results, it can be said that the decision-making styles identified among the online customers of this store include perfectionist, brand sensitive, hedonistic, habitual, confused by many options, and fashion-oriented. However, the decision-making styles sensitive to price and impulsive buying were not observed among them. Further analysis indicates that there is a significant relationship between job, gender, monthly income, family size, age group, marital status, and job in determining the decision-making style of online buyers (Table 8).

In terms of gender and different decision-making styles of online buyers, women tend to follow the hedonistic style, while men generally follow the style of being confused by many options (marked with an asterisk in Table 8). Regarding different age groups and decision-making styles, the largest group of online buyers in this store are aged between 31 to 40 years, who primarily exhibit the decision-making style of being confused by many options. Individuals aged 21 to 30 years follow the perfectionist style, and those between 41 to 60 years follow the brand-sensitive decision-making style. Individuals under 20 years generally exhibit the hedonistic decision-making style (marked with an asterisk in Table 9).

Regarding marital status and decision-making style, married individuals tend to follow the style of being confused by many options, and most single individuals use the hedonistic style in their purchasing decisions.

In terms of job and decision-making style, employees, who are the majority in the statistical population, are sensitive to brand, followed by teachers who predominantly exhibit the habitual decision-making style. Students follow the brand-sensitive style, and homemakers, who are the fewest in our population, follow the perfectionist style (marked with an asterisk in Table 10).

In terms of education and decision-making style, individuals with a diploma follow the style of being confused by many options; those with a bachelor's degree use the hedonistic style. Individuals with a master's degree (who form the majority of our statistical population) exhibit brand sensitivity, and as the level of education increases, so does the inclination and sensitivity of individuals to the quality of products; most individuals with a Ph.D. prefer the perfectionist style (marked with an asterisk in Table 11).

In terms of family size and decision-making style, individuals with 1 or 2 family members follow the hedonistic style; those with 3 to 5 members (who form the majority among online buyers) exhibit the decision-making style of being confused by many options, and individuals with 5 to 7 family members exhibit the habitual decision-making style (marked with an asterisk in Table 12).

In terms of average monthly income and decision-making style, the largest percentage of online buyers earns between one and two million Rials per month and predominantly follows the fashion-oriented decision-making style. Individuals earning between two and three million equally use both the hedonistic and brand-sensitive styles; those earning between three and four million follow the style of being confused by many options; and individuals earning more than four million primarily exhibit brand-sensitive decision-making (marked with an asterisk in Table 13).

4   Discussion and Conclusion

The results of this research confirmed six hypotheses through second-order factor analysis and rejected the third and eighth hypotheses based on Cronbach's alpha and first-order factor analysis. Based on these results, it can be stated that the decision-making styles of perfectionist, brand sensitive, hedonistic, habitual, confused by many options, and fashion-oriented exist among the online customers of this store and are identifiable. The decision-making styles sensitive to price and impulsive buying were not observed among them.

Given the average ranks obtained in the prioritization of styles among customers, the perfectionist decision-making style ranks first, brand sensitive second, hedonistic third, habitual fourth, and the styles of confused by many options and brand sensitive fifth in order of customer preference. This ranking indicates that the perfectionist decision-making style is the most prevalent among individuals.

Based on the results from statistical tests, we offer suggestions based on these findings, hoping they may provide some assistance to professionals and managers:

Considering that the perfectionist decision-making style is the most prevalent in the studied population, suppliers should pay particular attention to the quality of products they offer and demonstrate special sensitivity to the quality of the brand preferred by this group. Additionally, they can plan to retain or attract customers of any taste, including those for whom price is not a concern. For instance, the store could allocate a section of the products listed on the website to perfectionist customers. That is, offering products that are both reasonably priced and of suitable quality as well as

products that meet all the needs of a perfectionist customer, providing both high price and high quality.

To attract fashion-oriented customers, the online store should also feature technologically current products on their website.

Given the presence of brand-conscious decision-making styles among online buyers, company managers can adopt strategies aimed at maintaining or improving the current status of their product or store brand to attract and retain new customers.

Online stores should implement appropriate and targeted advertising strategies for those customers who are confused by many options, using this as an opportunity to outperform competitors.

Since customers with a habitual decision-making style tend to repeatedly purchase a specific brand or from a specific store, suppliers of fast-moving consumer goods should quickly adopt strategies to enhance their product positioning to be included in the list of preferred stores for these customers.

Considering that women globally tend to shop for their spouses, children, colleagues, friends, etc., offering good service to women can have a significant impact on a company's business since they introduce a wide range of potential customers (Bakhshandeh & Ghashghayi, 2020). As the female population among online buyers of this store is greater than that of males, marketers should strive to understand and manage the consumer behavior of women.

Proper website design, considering the mentioned criteria as one of the critical organizational assets, can help attract and retain customers, thereby increasing profitability; therefore, organizations need to design an appropriate website by considering technical factors and relevant indices. Website design should be appealing to customers, hence economic entities should survey their specific customers about each index mentioned in the analytical model before designing their website and invest appropriately in website design without worrying about the budget expenditure (Khodadad Hosseini & Asadollahi, 2018).

These suggestions aim to leverage the identified consumer behavior insights to better align business strategies with customer preferences and enhance market competitiveness.

Authors' Contributions

All authors have contributed significantly to the research process and the development of the manuscript.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We would like to express our gratitude to all individuals helped us to do the project.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethical Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

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IJIMOB
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Rezaei Kojani et al.   International Journal of Innovation Management and Organizational Behavior 4:1 (2024) 157-169

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