

Investigation of the Relationship Between Consumer Decision Making Styles and In-Store Consumer Behavior in the COVID-19 Process

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Abstract

Purpose of the research; in this study, the relationship between consumer decision-making styles and in-store consumer behavior in the Covid-19 process was examined. In addition, the effect of consumer decision-making styles sub-dimensions on in-store consumer behavior was investigated. In the study, correlational research technique, one of the quantitative research methods, was used to examine the relationship between consumer decision making styles and in-store consumer behavior. Target population of the study consists of consumers residing in Konya (Turkey) and shopping in the retail sector. Since it is not possible to reach all of these consumers within the scope of the research, the research was carried out with the convenience sampling method, one of the non-probabilistic sampling types. In this context, by using the data of the research conducted online with 469 participants, the relationships between variables were tested and the hypotheses put forward theoretically were tested. In the research, a questionnaire that was created and developed through consumer decision making styles and in-store consumer behavior variables was used. Statistical package programs were used to analyze the data and descriptive statistics, confirmatory factor analysis and structural equation modeling (SEM) were performed. In line with the findings of the research, it was determined that three (Perfectionist high quality conscious, novelty fashion conscious, price-value conscious) of the eight sub-dimensions of consumer decision-making styles have a statistically significant ($p < .001$) and a moderate effect on in-store consumer behavior. In line with the empirical results, it was determined that the perfectionist high quality conscious, novelty fashion conscious and price-value conscious sub-dimensions of consumer decision-making styles in the Covid-19 process had a significant effect on in-store consumer behavior. On the other hand, it has been determined that there is no statistically significant ($p > .005$) effect of brand-conscious, recreational/hedonistic, acting with impulsivity, confused by over choice and loyal consumer decision-making styles on in-store consumer behavior.

Keywords

COVID 19, Consumer Decision Making Styles, Consumer Behavior.

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Introduction

In the past period, it is observed that manufacturers have changed their marketing understanding and turned to in-store marketing tools, (promotion, sample distribution, to make in-store sweepstakes, etc.) based on the idea of influencing consumers' decisions in the store, as well as traditional marketing tools. As a matter of fact, in a study conducted in Italy, it was concluded that at least two of every three purchases were made from stores (Bellini, Cardinali et al., 2017). On the other hand, the widespread use of new shopping tools has enabled consumers to access product and price information at any time and place, both outside and inside the store. These developments enabled consumers to go to the store preparedly than in the past and to shop faster by searching only for the products they plan to purchase (Bellini, Cardinali et al., 2017). Another important development in the business world is the increase in the selection possibilities for customers, which causes a great confusion. Therefore, making decisions for consumers has become an important problem of daily life. Determining consumer typologies in this confusion can provide important advantages for businesses to determine their target audience, to plan their campaigns and sales messages and to attract more customers (Sprotles & Kendall, 1986).

On the other hand, extraordinary periods affect human behavior in different ways and some changed behaviors do not return to the past. The COVID-19 epidemic has also led to an extraordinary period. Indeed, in order to control the spread of the disease, some countries have had to declare full-time curfews and some countries have had to declare partial curfews. Since all elements of the economy are in some way related to public health measures and curfews, these practices caused changes in market dynamics and negatively affected the economic conditions of countries (Mehta, Saxena et al., 2020). Many scientists argue that after the pandemic there will be significant changes in consumer behavior. Therefore, understanding the societal response to the COVID-19 phenomenon is an important issue and studies are needed in this area. It should not be forgotten that consumers are the driving force of the market, competitiveness, growth and economic integration. Another issue that should not be forgotten is that the economic instability caused by COVID-19 has caused a transformation on consumer behavior. It is still a question of how long this transformation will take in the process of COVID-19 (Mehta, Saxena et al., 2020). Based on all these explanations, in this study, the relationship between consumer decision-making styles and consumer behavior for the store was examined in the context of the COVID-19 Pandemic process.

Literature Review

In-Store Consumer Behavior during COVID-19 Period

Important changes may occur in the purchasing behavior of consumers in times of economic crisis. The main reason for this change is the difficulties caused by the economic crisis periods. For example, the decrease in income level and savings, the risk of increased opportunity cost in consumption decisions, increase in layoffs, etc. causes question marks in the minds of consumers. Therefore, consumers seek lower prices and use e-commerce widely (Mansoor & Jalal, 2011). Studies have shown that the change in consumer behavior in times of global economic crises before COVID-19 changed according to societies. For example, panic buying behavior, which is observed intensely in some western societies, was not observed in some societies. For example, as a result of a study investigating the financial crisis in Asia, it was observed that consumers learned more about the product before purchasing, reduced their consumption and avoided waste during the crisis period. In the same study, it was determined that consumers tend to use basic necessities instead of luxury products, local branded products instead of foreign branded products, cheaper products instead of expensive products, and smaller packaged products instead of large packaged products (Ang, Leong et al., 2000). Although the COVID-19 Pandemic has its own characteristics, it is an extraordinary period in essence. Therefore, it would not be wrong to expect some changes in in-store consumer behavior. As a matter of fact, in a study about what kind of changes occurred in consumer behavior during the COVID-19 Pandemic process, the following results were reached; During the pandemic period, consumers started to purchase unknown brands due to the difficulties in the availability of products. They have begun to be more careful in their expenditures due to economic instability and layoffs. Consumers also avoid entering crowded places

in order not to be affected by the epidemic and do not prefer to purchase Chinese origin products with the effect of public sharing. In addition, consumers make their store visits when there is no crowd (46% of the participants stated that they make their shopping between 07:00 and 10:00 in the morning.) as much as possible, especially when purchasing pharmaceutical and household cleaning products, consider the quality factor, and stock up on some product groups with the concern of not being able to find them (Jha & Pradhan, 2020).

The extraordinary conditions of the economic crisis affect retailers as well as consumers and cause changes in their routine practices. To give an example to this, in the global financial crisis that emerged in 2008, retailers have reconsidered the elements of the marketing mix, taking into account the change in the purchasing behavior of consumers and tried to determine the best approach for the crisis period. In this context, they created a reasonable price structure, carried out unconventional promotions and displayed a value-oriented approach in the product groups they sold. Another important effort of the retailers at that time was the emotional loyalty programs they put into practice in order not to lose existing customers and increase their loyalty (Mansoor & Jalal, 2011). It is possible to encounter application differences in times of economic crisis in the period of COVID-19. For example, Unilever has chosen to stop and restructure its advertisements in order to save on outdoor advertising in the face of the change in consumer behavior during the COVID-19 period. The company also started looking for cheaper alternatives and prepared for the expected permanent changes in consumer behavior. Consumers' staying at home for a longer period of time during the COVID-19 process led to an increase in the tendency to cook at home and an increase in the sales of household goods and cleaning supplies. Considering these developments, Unilever has increased its efforts in this direction (Vancic & Pärson, 2020).

It was observed that eight factors were determinant in the change in in-store consumer behavior during the COVID-19 pandemic. These factors are contact limitation, food supply security, product familiarity, shopping time optimization, keeping distance, product packaging, number of stores and finally personal security. *The Contact Limitation Factor* includes behaviors that are expected to reduce the risk of meeting other people while shopping in the store. One of the important measures at this point is to reduce the number of people who shop in the family. As a matter of fact, Burke, Midgley et al. (2020) stated that in case of close contact with an infected person, the rate of infection is 0.45%, but for household members this rate is 10.5%. This points to a serious risk for the spread of the virus within the family. However, shopping is a powerful socialization tool (Keller & Ruus, 2014) and changes in attitude towards shopping together can affect family relationships.

The Food Supply Security Factor includes behaviors related to purchasing and stocking of non-perishable food products. This factor emphasizes the purchase of frozen, canned or food products with long expiration dates. The underlying idea of this sensitivity is that if there is a problem in the global food chain, there is no food shortage. Another goal is to reduce an individual's risk of getting infected by leaving home less for shopping. To date, there is no evidence that the COVID-19 pandemic has affected global food security. However, since the onset of the COVID-19 pandemic, consumers have demonstrated stocking behaviors that diverge significantly from their usual shopping behavior (Shahidi, 2020). As a matter of fact, in a study conducted for the COVID-19 period, it was observed that consumers' perceptions that there was both product and resource scarcity during this period caused changes in their usual attitudes (Hamilton, 2021). This result supported a study conducted before COVID-19 that showed that perceived product shortages affect consumer preferences (Hamilton, Thompson et al., 2019). This trend towards stockpiling observed during the economic crises before COVID-19 was also observed in the period of COVID-19 (Pantano, Pizzi et al., 2020). However, except for panic periods, stocking of grocery products is a rarely observed behavior. At this point, what should not be overlooked is that this behavior pattern can continue after panic periods (Pizzi & Scarpi, 2013). In this respect, it would not be wrong to expect that the stocking trend for these products will continue after COVID-19 due to the lack of stock in some product groups in the first days of the epidemic (Huang, Dawes et al., 2017). During panic times, there may be exceptional approaches to price sensitivity. As a matter of fact, in the period of COVID-19, many consumers accepted price increases of up to 300% for certain product categories and purchased products.

The Product Familiarity Factor includes the purchase of products familiar to the consumer as well as the purchase of trusted brands. This type of approach may result from a desire to minimize shopping time. This approach may also stem from the notion that it is not reasonable to try unknown products during

the epidemic (Szymkowiak, Kulawik et al., 2020). In short, the purchase of previously known, trusted or customary products will be an important measure to be taken during the pandemic period. As a matter of fact, in a study, it was seen that the COVID-19 epidemic caused significant changes in consumers' buying behavior of fresh vegetables, and that consumers made their purchases from local producers that they knew more (Butu, Brumă et al., 2020).

The Shopping Time Optimization Factor involves reducing the time spent in a store. The aim of this factor is to minimize the relationship time of the individual in order to eliminate the risk of exposure to the virus after the relationship with other customers or employees. This is not only related to fast shopping, but also to reluctance to talk directly to other people in the store (Szymkowiak, Kulawik et al., 2020). On the other hand, external interventions due to the pandemic can also cause changes in consumer behavior. For example, during the pandemic, governments' regulations to restrict people gathering and hours of waiting have led to long queues outside the stores. Although many studies have shown that there is a negative relationship between customer satisfaction and waiting time in the literature (Anić, Radas et al., 2011), it has been observed that this situation does not cause any dissatisfaction for the consumers who wait in the store for a long time in case of panic. In the pandemic period, the increase in the supply of products by order, the decrease in in-store density and the shortening of the shopping time are among the indicators of the consumer behavior differentiation in the context of the shopping time optimization factor.

The Keeping Distance Factor is about attitudes towards keeping distance between individuals in order to reduce the risk of virus transmission in store purchases. Warnings about maintaining the physical distance that should be at least one meter between individuals are constantly made by both the media and public institutions (Szymkowiak, Kulawik et al., 2020). A customer waiting in line must keep distance from the customer in front of him, and another customer must keep the distance from him when choosing products. It should not be forgotten that maintaining social distance plays an important role in preventing virus spread. Social distance, which is among the measures of the COVID-19 pandemic, has led to the development of a negative perception on some consumers. As a matter of fact, some consumers perceived social distance as a form of social exclusion that negatively affects their lives, although it plays an important role in preventing the spread of the epidemic. Therefore, there are concerns that COVID-19 social isolation creates anxiety, depression and stress (Holmes, O'Connor et al., 2020). Although it is not always possible, efforts to control the distance by a wide range of consumers indicate the change in consumer behavior in this area.

The Product Packaging Factor relates to attitudes towards packaged and unpackaged foods. Although ready to be eaten, unpackaged products (vegetables, breads, unpackaged dried fruits, candies, dried fruits, etc.) are among the frequently consumed product groups. Although there is an understanding that the consumption of these product groups has a negative effect on the spread of the epidemic, there are also groups that do not adopt such concerns. In the pre-pandemic period, the trend against single-use plastic packaging and encouraging the purchase of unpackaged food products is still adopted by some customers (Beitzen-Heineke, Baltă-Ozkan et al., 2017). However, since consumers and shop assistants choose products by touching them in stores, the virus may be transmitted to unpackaged foods (Malenovská, 2020). In this context, consumers' refraining from purchasing unpackaged food products or unpackaged convenience foods and limiting the purchase of unpackaged vegetables can be effective in preventing virus spread. Although there was an intense sensitivity in this area in the early stages of the pandemic, with the prolongation of the pandemic period, consumers lost their sensitivity in purchasing such products in the first periods.

Number of Stores Factor: This factor includes indicators of how many stores a consumer makes their purchases from and whether they are afraid to shop from unknown stores. This factor is also related to the time optimization factor. Because going to unfamiliar stores often increases the time spent on shopping. Due to the search for trust brought by the pandemic period, the major players of the retail industry have largely preserved their existing customers. On the other hand, the intense demand for the products of some brands during the COVID-19 period caused these brands to run out of stocks and to experience product availability problems. For this reason, consumers who could not provide the brand they were constantly purchasing turned to different brands and over time they turned into consumers of this new brand (Pantano, Pizzi et al., 2020). On the other hand, due to the restrictions imposed after COVID-19 threatened communities, there were problems in going to the stores, and when concerns about health problems were added, consumers turned to different distribution channels. As a matter of fact, although there has been a steady but limited growth in online grocery shopping in the last decade,

online grocery shopping has experienced an explosion in the COVID-19 process (Harris, Riley et al., 2017). For example, retailers such as Ocado (in the UK) and Carrefour (in France) have had to set up online queues or shut down online websites to deal with excess demand (Pantano, Pizzi et al., 2020). In a study, it was observed that the COVID-19 epidemic caused significant changes in the fresh vegetable purchasing behavior of consumers and 60% of consumers preferred to shop online (Butu, Brumă et al., 2020). In another study, it was emphasized that older consumers welcomed the security offered by technology and turned to online purchases they had never thought of before. This study also showed that elderly consumers benefit from home delivery service and discover the safety and benefits of cashless payment. For example, officials of Miss Fresh, an online retailer in China, reported a 237% increase in purchases by users over 40 (Pantano, Pizzi et al., 2020).

Personal Security Factor: It is about taking personal safety precautions during shopping and includes the use of protective equipment such as gloves or masks and the use of disinfectants. For example, the use of disinfectants to sterilize handles after touching freezer doors is one of the indicators of this factor. According to this factor, the use of contactless payment methods is also a protective measure. Because it is stated that cash money can be a source of virus contamination (Szymkowiak, Kulawik et al., 2020) and consumers have changed their payment habits to avoid this risk and have turned to contactless payment. During the COVID-19 process, it has been observed that there are differences among consumers in terms of approach to the anti-contamination biometric surveillance measures implemented (e.g. body scan, face recognition, GPS tracking, etc.) by retailers and public institutions within the scope of public regulations. While these practices are perceived as a violation of privacy in some cultures, they are considered reasonable in some cultures because they reduce the spread of the virus (Pantano, Pizzi et al., 2020).

Consumer Decision Making Styles

Consumer decision making style is the mental orientation that characterizes the consumer's approach to making consumption choices. The scale of consumer decision-making style used in the study and created by Sprotles and Kendall (1986) is accepted as one of the main reference studies in this field and it references 8 types of consumer decision-making styles:

Perfectionism or High-Quality Consciousness: This factor reveals the perfectionist and high quality conscious consumer character who seeks the best quality in products (Sprotles & Kendall, 1986). The search for quality also means a lasting desire for a product. As a matter of fact, according to a study, Chinese consumers spend more time searching for products with high quality and performance than American consumers. Because Chinese consumers expect products to have a long life (Doran, 2002).

Brand Consciousness measures consumers' tendency to purchase expensive and well-known brands. High scorers are the group of people who believe that a higher price means better quality (Sprotles & Kendall, 1986). In a study conducted on the Indian apparel retail industry, the following results were obtained: Participants stated that product design, being a reliable brand, social interactions, discounts, considering the brand as fashion status, the symbols of the brand and the uniqueness of the brand led them to buy branded clothes (Kansra, 2014).

Novelty-Fashion Consciousness: This factor measures the characteristics of an innovation/fashion conscious consumer. High-rated consumers are open to innovations and are fashion-conscious (Sprotles & Kendall, 1986). In a study conducted on elderly participants in Hong Kong, the results of factor analysis according to gender were compared and it was concluded that fashion awareness was emphasized as an important factor for men, but it was a part of the other two factors (development function and participation interest) for women (Au, Lam et al., 2016).

Recreational, Hedonistic Shopping Consciousness: This factor measures a recreational and hedonistic shopping awareness characteristic. High-rated consumers have an approach that regard shopping as an enjoyable activity and shopping for fun (Sprotles & Kendall, 1986).

Price and "Value for Money" Shopping Consciousness: This factor measures the characteristic of a price-value conscious consumer looking for value for money. Highly rated consumers look for discounted prices and are generally interested in getting their money's worth (Sprotles & Kendall, 1986).

Impulsiveness: This factor measures an impulsive, careless consumer orientation. Consumers with high scores for this factor do not plan their shopping (Sprotles & Kendall, 1986). In the study conducted by Kacen and Lee (2002), it has been concluded that consumers in collectivist societies make less impulsive purchases than individualistic

consumers.

Confusion from Overchoice: This factor measures the characteristic of a consumer who is confused by the increase in brands, stores and consumer information, etc. High-rated consumers are the ones who have the most trouble choosing among the many brands and stores (Sprotles & Kendall, 1986). For example, it has been observed that western consumers make more effective evaluations based on the individual characteristics of a single brand, whereas eastern consumers make a more effective comparison between brands and attributes (Cowley, 2002).

Habitual, Brand-Loyal Orientation toward Consumpt: This factor measures a consumer orientation that is loyal to the brand. High-rated consumers are likely to own favorite brands and stores and adopt the habit of choosing accordingly (Sprotles & Kendall, 1986).

Research Hypotheses and Conceptual Model

In this study, a theoretical model was created to determine the role of consumer decision-making styles sub-dimensions on in-store consumer behavior by making use of the data obtained from the literature. In this context, the conceptual model and hypotheses of the research are as follows:

“Consumer Decision Making Styles and In-Store Consumer Behavior in the COVID-19 Process”

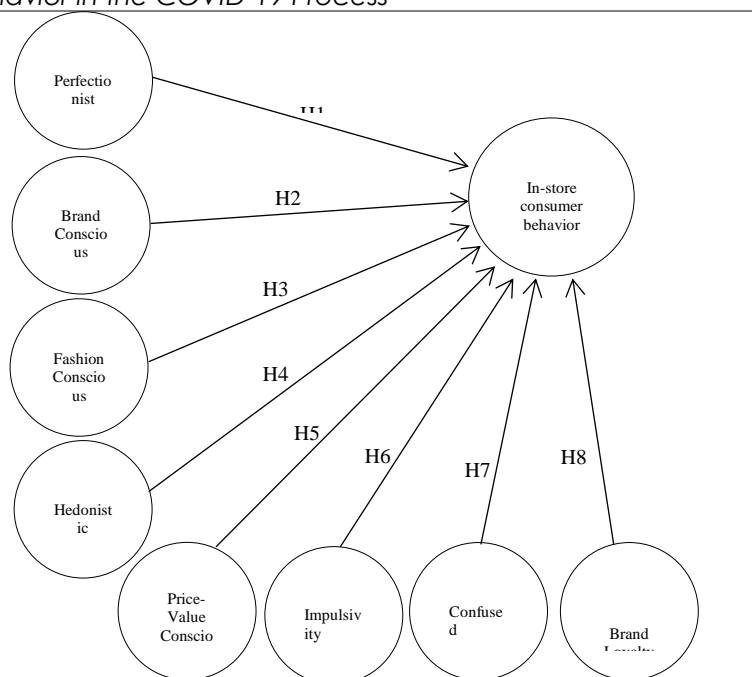


Figure 1. Conceptual model

H₁ “Perfectionist High Quality Conscious” consumer style among Consumer Decision-Making Styles has a significant effect on in-store consumer behavior.

H₂ “Brand Conscious” consumer style among Consumer Decision-Making Styles has a significant effect on in-store consumer behavior.

H₃ “Novelty Fashion Conscious” consumer style among Consumer Decision-Making Styles has a significant effect on in-store consumer behavior.

H₄ “Recreational, Hedonistic” consumer style among consumer decision-making styles has a significant effect on in-store consumer behavior.

H₅ “Price-Value Conscious” consumer style among Consumer Decision-Making Styles has a significant effect on in-store consumer behavior.

H₆ “Acting with Impulsivity” consumer style among Consumer Decision-Making Styles has a significant effect on in-store consumer behavior.

H₇ “Confused by Over Choice” consumer style among Consumer Decision-Making Styles has a significant effect on in-store consumer behavior.

H₈ “Brand Loyalty” consumer style among Consumer Decision-Making Styles has a significant impact on in-store consumer behavior.

Methodology

Population and Sampling

The type of this research is a cross-sectional study in the context of handling time. The universe of the research consists of consumers who live in Konya (Turkey) and shop in the retail sector. However, reaching all of these consumers is extremely difficult due to time constraints, cost and transportation difficulties, etc. For this reason, purposeful sampling method, which is one of the non-probabilistic sampling types, was used in the study. The research was conducted online on 475 participants. The questionnaires of 6 participants were removed due to incomplete and incorrect data, and the analyzes were carried out on 469 participants.

Data Collection Method and Tools

Questionnaire technique, one of the most common data collection methods, was carried out online in order to obtain primary data in the study. The questionnaire form used in the study consists of two parts. In the first part, [Mishra \(2010\)](#) scale, which adapts [Sproftes and Kendall \(1986\)](#) 40-item “Consumer Style Inventory” (CSI) scale, was used for the questions of the “Consumer Decision-Making Style” scale. The second part consists of questions on the scale of “In-store Consumer Behavior”. These questions are questions created by [Szymkowiak, Kulawik et al. \(2020\)](#) benefiting from previous studies ([Bergkvist & Zhou, 2016](#); [Churchill Jr, 1979](#); [Lee & Cadogan, 2016](#); [Peter, 1981](#); [Rossiter, Fowler et al., 2019](#); [Sarstedt, Diamantopoulos et al., 2016](#)).

The research questionnaire was prepared in Turkish. There are 70 questions (Consumer Decision-Making Style: 42 questions + In-store Consumer Behavior: 28 questions) in 2 parts in the questionnaire study. All of the expressions in the scales used were scaled according to a 5-point Likert scale. Likert scale questions are between 1-Strongly Disagree and 5-Strongly Agree. While preparing the questionnaire, a detailed literature study was conducted and the scales mentioned above were used. In addition, in this study, scale expressions were designed for the retail industry in the context of the Covid-19 process. In the analysis of the data, basic level and advanced statistical package programs were used in a coordinated manner as they complement each other. In this context, frequency analysis, descriptive statistics, confirmatory factor analysis and Structural Equation Modeling (SEM) analysis were performed.

Limitations of the Research

The data of the research were obtained from the consumers residing in Konya (Turkey) in the retail sector in the context of the Covid-19 process by using the purposeful sampling method due to the time constraint and the difficulty of sampling. In this context, the generalizability and external validity of the research results are limited. Another limitation of the research is that only the relationship between in-store consumer behavior and consumer decision-making style sub-factors was examined. Therefore, another limitation is that another mediator or predictor variable was not included in the model and the research scope. Another limitation of this research is that this research was conducted on retail industry consumers and the scale expressions were designed for the Covid-19 process. In addition, research results are limited to the dates when the research data were collected, September 2020-October 2020.

Findings And Comments

Table 1 contains socio-demographic data regarding the gender, age, education status, monthly income, marital status, profession and shopping preferences of the participants.

Table 1
Sociodemographic Characteristics of the Participants (n=469)

Demographic Variables	Value	Frequency	Percent	Demographic Variables	Value	Frequency	Percent
Gender	Male	202	56,9	Marital Status	Married	147	31,3
	Female	267	43,1		Single	322	68,7
	Total	469	100,0		Total	469	100,0
Age	20 Years and Under	45	9,6	Occupation	Public Sector	80	17,1
	21-39	383	81,7		Private Sector	100	21,3
	40-55	41	8,7		Housewife (Not Working)	65	13,9
	Total	469	100,0		Student	156	33,3
Education	Elementary Education	43	9,2	Payment Preference in Shopping	Cash	209	44,6
	High school	79	16,8		Contact Credit Card	57	12,2
	Associate Degree	66	14,1		Contactless Credit Card	120	25,6
	University	248	52,9		ATM Card	83	17,7
	Postgraduate	33	7,0		Total	469	100,0
Monthly Income	2500 and Below	267	56,9				
	2501-5000	151	32,2				
	5001-7500	42	9,0				
	7500 TL and Above	9	1,9				
	Total	469	100,0				

Looking at [Table 1](#), it is seen that 56.9% of the participants are men and 43.1% are women. When the age ranges of the participants are examined, it is seen that the rate of the participants aged 20 and under is 9.6%, the rate of the participants in the 21-39 age range is 81.7% and the rate of the participants in the 40-55 age range is 8.7%. When the education levels of the participants are examined, it is seen that the vast majority (52.9%) are university graduates. 33.3% of the participants are students, 21.3% are private sector employees, 17.1% are public sector employees and 13.9% are housewives. While 56.9% of the participants have an income of 2500 TL or less, 32.2% of them have an income of 2501-5000 TL and 9% of them have an income between 5001-7500 TL. The remaining 1.9% has an income of 7500 TL and above. On the other hand, when the payment preference in shopping of the participants were examined, it was determined that 44.6% of them used cash, 25.6% contactless credit card, 17.7% ATM

card and 12.2% contact credit card.

Confirmatory Factor Analysis Results

Confirmatory factor analysis was applied to “Consumer Decision-Making Styles” and “In-Store Consumer Behavior” scales used in the research, and the goodness of fit values of the established measurement models were tested. “Goodness of fit index (gfi)” are used in defining how well conceptually generated model explains the obtained data. Goodness of fit index (GFI) tested via “Confirmatory Factor Analysis” (CFA). The results of the confirmatory factor analysis show that the model structures of the goodness of fit values of the consumer decision-making styles factor and in-store consumer behavior factor can be accepted.

Consumer Decision Making Styles Scale Measurement Model (Confirmatory Factor Analysis)

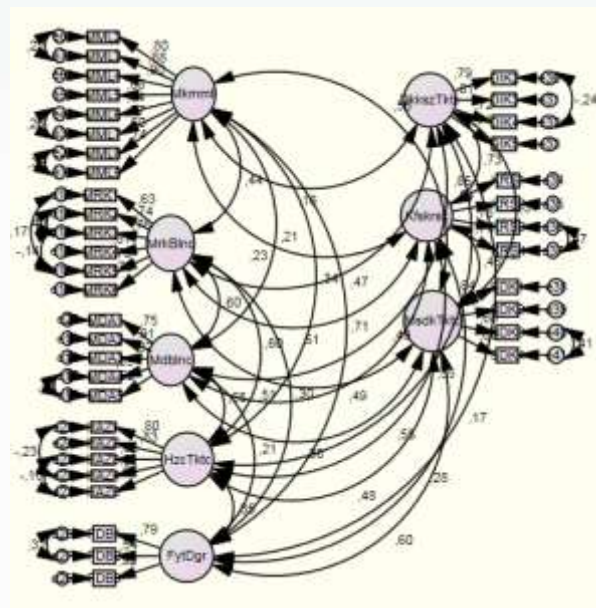


Figure 2. Consumer decision making styles confirmatory factor analysis

The goodness of fit values calculated in line with the Consumer Decision Making Styles Scale CFA result is the stage where the decision is made to accept and reject the model. In order for a model to have a perfect fit structure, the RMSEA value should be 0.08 or less (Jöreskog & Sörbom, 1993; Maggioni, Sands et al., 2019). The RMSEA value of the research model is 0.069. $\chi^2 / df = 3.24$ and $p < 0.000$.

Table 2
Consumer Decision Making Styles Scale Goodness of Fit Values

	χ^2	p	χ^2/df	CFI	NFI	IFI	GFI	AGFI	RMSEA	SRMR
Acceptable Goodness of Fit Index Model	Lowest	>0,05 Insignificant	≤5	≥0,90	≥0,90	≥0,90	≥0,85	≥0,80	≤0,080	≤0,090
Goodness of Fit Index	2145,288	0,000	3,24	0,89	0,85	0,89	0,85	0,79	0,069	0,087

As a result of the consumer decision-making styles measurement model, observed variables whose regression coefficients were standardized below 0.70 were removed from the factor and CFA was re-performed. In this direction, CFA was re-performed by removing 2 observed variables (in order, starting from the lowest) whose coefficients were below the expected value from the consumer decision-making styles factor. As a result of the questions removed and the modification indexes performed, it

was determined that the goodness of fit values of the model were at an acceptable level. The satisfactory result of the model fit shows that the estimated structural coefficients can be evaluated in terms of testing the hypotheses (Sarstedt & Cheah, 2019). The CFA results of the measurement model are shown in Table 1.

In-Store Consumer Behavior Scale Measurement Model (Confirmatory Factor Analysis)

When the in-store consumer behavior measurement model (CFA) analysis and the goodness of fit values are examined, it is seen that the fit values of the factor are above the acceptable level.

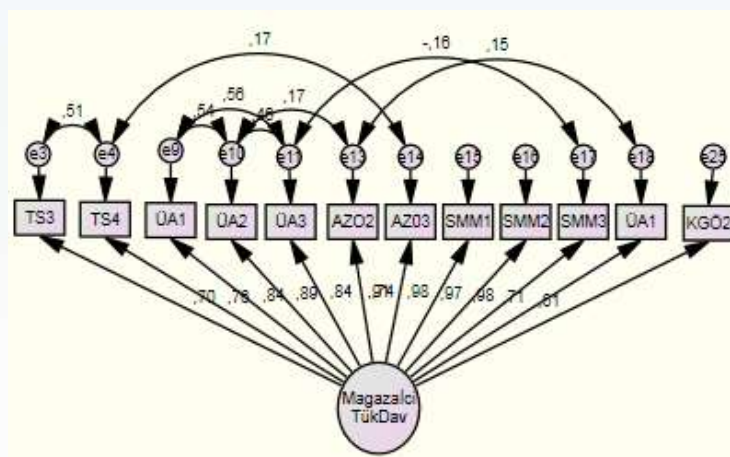


Figure 3. In-Store consumer behavior confirmatory factor analysis

As a result of the measurement model (CFA) performed for the in-store consumer behavior factor, it was observed that the standardized regression coefficient values of some observed variables were below 0.70. The 14 observed variables below the expected value were removed from the scale (in order, starting from the lowest) and CFA was performed again. After all the remaining observed variables were found to have the expected value, the modification indices were carried out in order to achieve the perfect fit of the model's goodness of fit values.

Table 3
In-Store Consumer Behavior Scale Goodness of Fit Values

	χ^2	p	χ^2/df	CFI	NFI	IFI	GFI	AGFI	RMSEA	SRMR
Acceptable Goodness of Fit Index of Fit Index Model	Lowest	>0,05 Insignificant	≤ 5	$\geq 0,90$	$\geq 0,90$	$\geq 0,90$	$\geq 0,85$	$\geq 0,80$	$\leq 0,080$	$\leq 0,090$
Goodness of Fit Index	152,492	0,000	3,31	0,98	0,97	0,99	0,94	0,90	0,070	0,026

As a result of CFA, it is seen that the goodness of fit values of the in-store consumer behavior factor are $\chi^2 / df = 3.31$ and $p < 0.000$ and $RMSEA = .070$. When the other goodness of fit indices were examined, it was determined that the in-store consumer behavior factor had acceptable goodness of fit values, moreover, the factor had excellent goodness of fit values.

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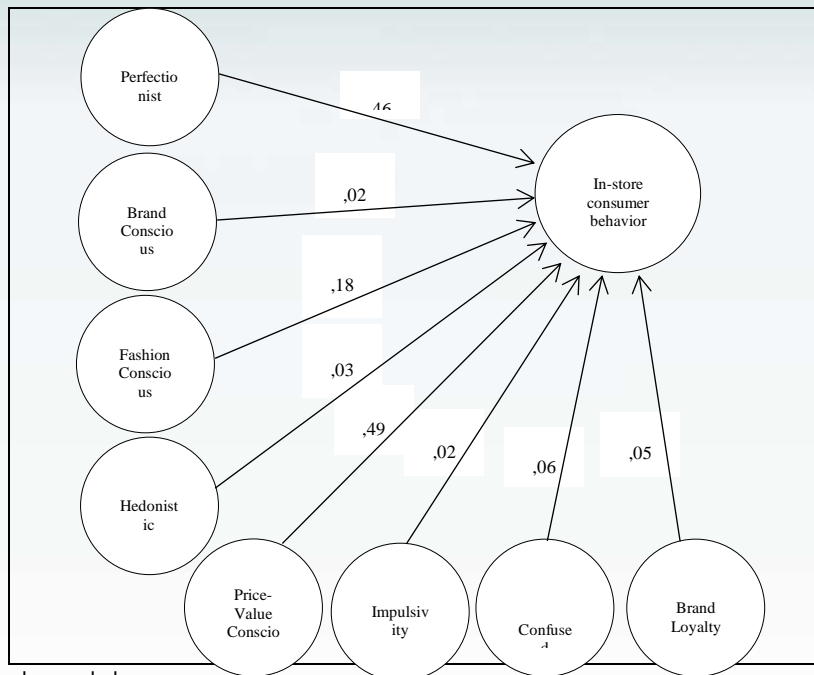


Figure 4. Conceptual model

Table 4
Structural Model Results 1

Dependent Variables	Independent Variables	Total Effect (SRW)	S.E.	C.R.	P
In-Store Consumer	Perfectionist/High Quality	,460	,047	9,602***	
In-Store Consumer	Brand Conscious	,021	,044	,484*	
In-Store Consumer	Novelty Fashion Conscious	,182	,050	3,675***	
In-Store Consumer	Recreational, Hedonistic	,037	,043	,862*	
In-Store Consumer	Price-Value Conscious	,493	,039	10,106***	
In-Store Consumer	Acting with Impulsivity	,026	,038	,686*	
In-Store Consumer	Confused by Over Choice	,063	,037	1,675*	
In-Store Consumer	Brand Loyalty	,055	,030	1,842*	

***p<0,001, *p>0,05

The research findings obtained from the structural model showed that three of the eight sub-dimensions of consumer decision-making styles (Perfectionist high quality conscious, Novelty fashion conscious, Price-value conscious) had a statistically significant ($p < .001$) and moderate effect on in-store consumer behavior. In other words, two dimensions consisting of “Perfectionist High Quality Conscious” ($\gamma = .460$; $p < .001$) and “Price-Value Conscious” ($\gamma = .493$; $p < .001$) consumers, which are among the consumer decision-making styles, have statistically significant effects on in-store consumer behavior. On the other hand, although the dimension formed by “Novelty Fashion Conscious” consumers, another consumer decision-making style, has a significant effect on in-store consumer behavior ($\gamma = .182$; $p < .001$), its effect level is considerably lower than the other 2 dimensions. On the other hand, it was determined that other consumer decision-making styles such as “Brand Conscious”, “Recreational, Hedonistic”, “Acting with Impulsivity”, “Confused by Over Choice” and “Brand Loyalty” do not have a statistically significant effect ($p > .005$) on in-store consumer behavior.

Discussion And Conclusion

The unique conditions of economic crisis periods also cause changes in consumer behavior. Although the COVID-19 pandemic was first recognized as a health crisis due to its content, it has turned into a global economic crisis due to its rapid and worldwide spread. The epidemic that occurred in Wuhan, China in December 2019 was declared as a global epidemic by the World Health Organization on March 11, 2020. Since the COVID-19 pandemic is a worldwide epidemic, it is also possible to evaluate this process as a period of economic crisis. Therefore, it would not be wrong to say that some changes in in-store consumer behavior can be expected during the epidemic process. As a matter of fact, when the in-store purchasing behaviors during the economic crisis periods before COVID-19 are examined, it is possible to clearly see this differentiation.

The aim of the research is to determine whether there is a relationship between consumer decision-making styles and in-store consumer behavior in the Covid-19 process. As a result of the research, it was determined that three of the eight sub-dimensions (Perfectionist high quality conscious, Novelty fashion conscious, Price/value conscious) of consumer decision-making styles have a statistically significant ($p < .001$) and moderate effect on in-store consumer behavior. In other words, two dimensions consisting of "Perfectionist High Quality Conscious" ($\gamma = .460$; $p < .001$) and "Price-Value Conscious" ($\gamma = .493$; $p < .001$) consumers, which are among the consumer decision-making styles, have statistically significant effects on in-store consumer behavior. On the other hand, although the dimension formed by "Novelty Fashion Conscious" consumers, another consumer decision-making style, has a significant effect on in-store consumer behavior ($\gamma = .182$; $p < .001$), its effect level is considerably lower than the other 2 dimensions. On the other hand, it was determined that other consumer decision-making styles such as "Brand Conscious", "Recreational, Hedonistic", "Acting with Impulsivity", "Confused by Over Choice" and "Brand Loyalty" do not have a statistically significant effect ($p > .005$) on in-store consumer behavior.

When the literature is examined, it has been observed that there have been significant changes in consumer behavior during the COVID-19 pandemic process. For example, during the COVID-19 pandemic, there have been great changes in spending. This change was observed at the point of demographic characteristics (age, income level and gender) as well as product groups and shopping channels (Borsellino, Kaliji et al., 2020).

In the study conducted by Loxton, Truskett et al. (2020), it was concluded that the change in consumer behavior during the COVID-19 epidemic was similar to the changes in consumer behavior observed in previous crises. The study also concluded that during the epidemic period, panic purchases were experienced in accordance with Maslow's hierarchy of needs systematic, the herd psychology was acted on, and the media had a significant effect on consumer purchasing behavior. According to the Panic buying scale developed by Lins and Aquino (2020), men buy more with panic than women. As a result of the study conducted using the same scale, it was concluded that there was a positive relationship between impulsive purchasing and past and future temporal focus and risk perception, but a negative relationship with optimism and age. In the study conducted by Vancic and Pärson (2020), it was concluded that quality perceptions and price sensitivity of meat, fruits and vegetables changed during the COVID-19 pandemic. The results of the study by Chronopoulos, Lukas et al. (2020) show that consumer spending is relatively stable in the early stages of the COVID-19 crisis (18 January-21 February 2020) in Great Britain (GB; England, Scotland and Wales). However, with the entry into force of the curfews (22 February-22 March 2020), optional expenditures decreased significantly in a short time and this situation continued during the ban (23 March-10 May 2020). The result of the study conducted by Laato, Islam et al. (2020) showed that people will continue to make unusual purchases as long as they continue to isolate themselves. According to Cranfield (2020), price and income level are important factors in shopping behavior and purchasing choice, and it is difficult to understand how COVID-19 affects consumer demand for food, ignoring socio-demographic factors (gender, age, education, employment status and household income). The study conducted by Jha and Pradhan (2020) concluded that the "Quality" factor plays an important role in shaping the consumer's decision to purchase a product in the COVID-19 process. In addition, it is among the other findings of the study that there are differences in spending limits in all sectors except the education sector during the pandemic process.

In the process of COVID-19, there are different approaches to what retailers should do in order to positively affect consumer behavior. In one of these approaches, Pantano, Pizzi et al. (2020) emphasized that the answers to some questions would be useful in the management of this process. These questions

(1) How do out-of-stock products and long waiting queues affect consumers' choices and satisfaction levels? (2) How do local retailers support the economy? and how does it contribute to sudden changes in demand? (3) How can consumers make a safe purchasing activity in emergency situations? How is the safety of vulnerable people and those performing compulsory duties such as doctors and nurses ensured? (4) How can retailers reshape consumer satisfaction and well-being in emergencies? (5) How can retailers use this emerging Pandemic process to differentiate from their competitors?

Suggestions

The COVID-19 process presents enormous, unprecedented challenges for both retail managers and academics. Retail stores have been significantly affected by this epidemic process. This change is still going on. These studies on the epidemic period will also contribute to the epidemic periods to be experienced in the next period. For this reason, overcoming the difficulties brought by the epidemic periods requires a strategic approach over the applications of crisis periods. Therefore, it is important to examine the facts of the pandemic period and its impact on consumers in detail. In this context, it would be an appropriate approach to urgently rethink the strategies and tactics regarding the pandemic by both retailers, marketing professionals and academics.

In this study, the relationship between consumer decision-making styles and in-store consumer behavior in the Covid-19 process was examined on a Konya scale. In future studies, the relationship between consumer decision-making styles and e-commerce purchasing behavior, impulsive buying behavior or panic buying behavior can be examined in the COVID-19 period. In addition, the study can be conducted in other regions and during or after the COVID-19 period.

References

- Ang, S. H., Leong, S. M., & Kotler, P. (2000). The Asian apocalypse: crisis marketing for consumers and businesses. *Long Range Planning*, 33(1), 97-119. Doi:[https://doi.org/10.1016/S0024-6301\(99\)00100-4](https://doi.org/10.1016/S0024-6301(99)00100-4)
- Anić, I. D., Radas, S., & Miller, J. C. (2011). Antecedents of consumers' time perceptions in a hypermarket retailer. *The Service Industries Journal*, 31(5), 809-828. Doi:<https://doi.org/10.1080/02642060903067530>
- Au, J., Lam, J., & Ho, C. (2016). Design preferences and experience of older people's choice in fashion in Hong Kong. *International Journal of Fashion Design, Technology and Education*, 9(3), 183-191. Doi:<https://doi.org/10.1080/17543266.2016.1154110>
- Beitzen-Heineke, E. F., Balta-Ozkan, N., & Reefke, H. (2017). The prospects of zero-packaging grocery stores to improve the social and environmental impacts of the food supply chain. *Journal of Cleaner Production*, 140, 1528-1541. Doi:<https://doi.org/10.1016/j.jclepro.2016.09.227>
- Bellini, S., Cardinali, M. G., & Grandi, B. (2017). A structural equation model of impulse buying behaviour in grocery retailing. *Journal of Retailing and Consumer Services*, 36, 164-171. Doi:<https://doi.org/10.1016/j.jretconser.2017.02.001>
- Bergkvist, L., & Zhou, K. Q. (2016). Celebrity endorsements: a literature review and research agenda. *International Journal of Advertising*, 35(4), 642-663. Doi:<https://doi.org/10.1080/02650487.2015.1137537>
- Borsellino, V., Kaliji, S., & Schimmenti, E. (2020). COVID-19 drives consumer behaviour and agro-food markets towards healthier and more sustainable patterns. *Sustainability*, 12(20), 8366. Doi:<https://doi.org/10.3390/su12208366>
- Burke, R. M., Midgley, C. M., Dratch, A., Fenstersheib, M., Haupt, T., Holshue, M., . . . McPherson, T. D. (2020). Active monitoring of persons exposed to patients with confirmed COVID-19—United States, January–February 2020. *Morbidity and Mortality Weekly Report*, 69(9), 245–246. Doi:<https://dx.doi.org/10.15585/2Fmmwr.mm6909e1>
- Butu, A., Brumă, I. S., Tanasă, L., Rodino, S., Dinu Vasiliu, C., Doboş, S., & Butu, M. (2020). The impact of covid-19 crisis upon the consumer buying behavior of fresh vegetables directly from local producers. Case study: The quarantined area of suceava county, Romania. *International journal of environmental research and public health*, 17(15), 5485. Doi:<https://doi.org/10.3390/ijerph17155485>

- Chronopoulos, D. K., Lukas, M., & Wilson, J. O. (2020). Consumer spending responses to the COVID-19 pandemic: An assessment of Great Britain. Available at SSRN 3586723. Doi:<https://dx.doi.org/10.2139/ssrn.3586723>
- Churchill Jr, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of marketing research*, 16(1), 64-73. Doi:<https://doi.org/10.1177%2F002224377901600110>
- Cowley, E. (2002). East–West consumer confidence and accuracy in memory for product information. *Journal of Business Research*, 55(11), 915-921. Doi:[https://doi.org/10.1016/S0148-2963\(01\)00211-9](https://doi.org/10.1016/S0148-2963(01)00211-9)
- Cranfield, J. A. (2020). Framing consumer food demand responses in a viral pandemic. *Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie*, 68(2), 151-156. Doi:<https://doi.org/10.1111/cjag.12246>
- Doran, K. (2002). Lessons learned in cross-cultural research of Chinese and North American consumers. *Journal of Business Research*, 55(10), 823-829. Doi:[https://doi.org/10.1016/S0148-2963\(00\)00222-8](https://doi.org/10.1016/S0148-2963(00)00222-8)
- Hamilton, R. (2021). Scarcity and coronavirus. *Journal of Public Policy & Marketing*, 40(1), 99-100. Retrieved from <https://pesquisa.bvsalud.org/global-literature-on-novel-coronavirus-2019-ncov/resource/pt/covidwho-970446>
- Hamilton, R., Thompson, D., Bone, S., Chaplin, L. N., Griskevicius, V., Goldsmith, K., . . . O'Guinn, T. (2019). The effects of scarcity on consumer decision journeys. *Journal of the Academy of Marketing Science*, 47(3), 532-550. Doi:<https://doi.org/10.1007/s11747-018-0604-7>
- Harris, P., Riley, F. D. O., Riley, D., & Hand, C. (2017). Online and store patronage: a typology of grocery shoppers. *International Journal of Retail & Distribution Management*, 45(4), 419-445. Doi:<https://doi.org/10.1108/IJRDM-06-2016-0103>
- Holmes, E. A., O'Connor, R. C., Perry, V. H., Tracey, I., Wessely, S., Arseneault, L., . . . Overall, I. (2020). Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science. *The Lancet Psychiatry*, 7(6), 547-560. Doi:[https://doi.org/10.1016/S2215-0366\(20\)30168-1](https://doi.org/10.1016/S2215-0366(20)30168-1)
- Huang, A., Dawes, J., Lockshin, L., & Greenacre, L. (2017). Consumer response to price changes in higher-priced brands. *Journal of Retailing and Consumer Services*, 39, 1-10. Doi:<https://doi.org/10.1016/j.jretconser.2017.06.009>
- Jha, S., & Pradhan, V. (2020). Factors causing change in customer behaviour during COVID-19 Pandemic. *Journal of Critical Reviews*, 7(19), 3792-3804. Retrieved from <http://www.jcreview.com/fulltext/197-1597232430.pdf>
- Jöreskog, K. G., & Sörbom, D. (1993). LISREL 8: Structural Equation Modeling with the SIMPLIS Command Language: Scientific Software International. Retrieved from <https://books.google.com.pk/books?id=f61i3quHcv4C>
- Kacen, J. J., & Lee, J. A. (2002). The influence of culture on consumer impulsive buying behavior. *Journal of consumer psychology*, 12(2), 163-176. Doi:https://doi.org/10.1207/S15327663JCP1202_08
- Kansra, P. (2014). Determinants of the Buying Behavior of Young Consumers of Branded Clothes: An Empirical Analysis. *IUP Journal of Brand Management*, 11(3), 57-70. Retrieved from <https://ssrn.com/abstract=2629994>
- Keller, M., & Ruus, R. (2014). Pre-schoolers, parents and supermarkets: co-shopping as a social practice. *International Journal of Consumer Studies*, 38(1), 119-126. Doi:<https://doi.org/10.1111/ijcs.12073>
- Laato, S., Islam, A. N., Farooq, A., & Dhir, A. (2020). Unusual purchasing behavior during the early stages of the COVID-19 pandemic: The stimulus-organism-response approach. *Journal of Retailing and Consumer Services*, 57, 102224. Doi:<https://doi.org/10.1016/j.jretconser.2020.102224>
- Lee, N., & Cadogan, J. (2016). Welcome to the desert of the real: reality, realism, measurement, and C-OAR-SE. *European Journal of Marketing*, 50(11), 1959-1968. Doi:<https://doi.org/10.1108/EJM-10-2016-0549>
- Lins, S., & Aquino, S. (2020). Development and initial psychometric properties of a panic buying scale during COVID-19 pandemic. *Heliyon*, 6(9), e04746. Doi:<https://doi.org/10.1016/j.heliyon.2020.e04746>
- Loxton, M., Truskett, R., Scarf, B., Sindone, L., Baldry, G., & Zhao, Y. (2020). Consumer behaviour during crises: preliminary research on how coronavirus has manifested consumer panic buying, herd mentality, changing discretionary spending and the role of the media in influencing behaviour. *Journal of risk and financial management*, 13(8), 166-186. Doi:<https://doi.org/10.3390/jrfm13080166>

- Maggioni, I., Sands, S., Kachouie, R., & Tsarenko, Y. (2019). Shopping for well-being: The role of consumer decision-making styles. *Journal of Business Research*, 105, 21-32. Doi:<https://doi.org/10.1016/j.jbusres.2019.07.040>
- Malenovská, H. (2020). Coronavirus persistence on a plastic carrier under refrigeration conditions and its reduction using wet wiping technique, with respect to food safety. *Food and environmental virology*, 12(4), 361-366. Doi:<https://doi.org/10.1007/s12560-020-09447-9>
- Mansoor, D., & Jalal, A. (2011). The global business crisis and consumer behavior: Kingdom of Bahrain as a case study. *International Journal of Business and Management*, 6(1), 104-115. Retrieved from <https://pdfs.semanticscholar.org/55f8/5c69644c6b13ad414588672138ffdb45c3bf.pdf>
- Mehta, S., Saxena, T., & Purohit, N. (2020). The new consumer behaviour paradigm amid COVID-19: Permanent or transient? *Journal of Health Management*, 22(2), 291-301. Doi:<https://doi.org/10.1177%2F0972063420940834>
- Mishra, A. A. (2010). Consumer decision-making styles and young-adult consumers: An Indian exploration. *Management & Marketing-Craiova*(2), 229-246. Retrieved from <https://www.cceol.com/search/article-detail?id=201348>
- Pantano, E., Pizzi, G., Scarpi, D., & Dennis, C. (2020). Competing during a pandemic? Retailers' ups and downs during the COVID-19 outbreak. *Journal of Business Research*, 116, 209-213. Doi:<https://doi.org/10.1016/j.jbusres.2020.05.036>
- Peter, J. P. (1981). Construct validity: A review of basic issues and marketing practices. *Journal of marketing research*, 18(2), 133-145. Doi:<https://doi.org/10.1177%2F002224378101800201>
- Pizzi, G., & Scarpi, D. (2013). When out-of-stock products DO backfire: Managing disclosure time and justification wording. *Journal of Retailing*, 89(3), 352-359. Doi:<https://doi.org/10.1016/j.jretai.2012.12.003>
- Rossiter, C., Fowler, C., Hesson, A., Kruske, S., Homer, C. S., & Schmied, V. (2019). Australian parents' use of universal child and family health services: A consumer survey. *Health & social care in the community*, 27(2), 472-482. Doi:<https://doi.org/10.1111/hsc.12667>
- Sarstedt, M., & Cheah, J.-H. (2019). Partial least squares structural equation modeling using SmartPLS: a software review. 7, 196–202. Doi:<https://doi.org/10.1057/s41270-019-00058-3>
- Sarstedt, M., Diamantopoulos, A., Salzberger, T., & Baumgartner, P. (2016). Selecting single items to measure doubly concrete constructs: A cautionary tale. *Journal of Business Research*, 69(8), 3159-3167. Doi:<https://doi.org/10.1016/j.jbusres.2015.12.004>
- Shahidi, F. (2020). Does COVID-19 affect food safety and security? *Journal of Food Bioactives*, 9, 1–3. Doi:<https://doi.org/10.31665/JFB.2020.9212>
- Sprottles, G. B., & Kendall, E. L. (1986). A methodology for profiling consumers' decision-making styles. *Journal of Consumer Affairs*, 20(2), 267-279. Doi:<https://doi.org/10.1111/j.1745-6606.1986.tb00382.x>
- Szymkowiak, A., Kulawik, P., Jeganathan, K., & Guzik, P. (2020). In-store epidemic behavior: scale development and validation. arXiv e-prints. Retrieved from <https://arxiv.org/abs/2005.02764v1>
- Vancic, A., & Pärson, G. F. A. (2020). Changed Buying Behavior in the COVID-19 pandemic: the influence of Price Sensitivity and Perceived Quality. Retrieved from <https://www.diva-portal.org/smash/get/diva2:1453326/FULLTEXT01.pdf>