

Design and validation of an effective model for evaluating the role of online advertising on the consumer purchasing decision process (Case study: Food chain stores in Guilan province)

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Abstract

Social networks and social media provide customers with the opportunity to talk about products and services purchased and to share their experiences with others. The purpose of this study is to design and validate an effective model for evaluating the role of online advertising on the consumer purchasing decision process in food chain stores in Guilan province (with a quantitative approach). The present study is conducted with a quantitative approach. The statistical population in a small part also includes customers of food chain stores in Gilan province. Using the Cochran's formula for indeterminate communities, 384 people have been calculated as a sample. Cluster sampling method and available individuals were used for sampling. Semi-structured interview and Likert scale questionnaire were used to collect data. An initial model was designed to analyze the data using structural-interpretive modeling and MICMAC software. Structural equation modeling and SMART-PLS software were used to validate and present the final model. Findings showed that online advertising has an impact on strategic social media marketing, sponsored content, content marketing and further these variables lead to the management of consumer experience. Emotional commitment to the brand, perceived risk, consumer satisfaction affect the management of the consumer experience and ultimately leads to the decision to buy the consumer. Increasing the understanding of the role of social media for stakeholders in the field of marketing is essential and by applying the achievements of the present study, it is possible to improve online advertising on the consumer purchasing decision process.

Keywords: online advertising role model, consumer purchasing decision process, mixed approach, food chain stores
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1 Introduction

In the age of technology, having the right management in marketing and advertising is very important for success among business competitors. Commercial advertising is one of the successful factors of goods or services that can be introduced to everyone through advertising. Today, advertising has become an industry and technique and every

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company or organization that can be more successful has a share. There will be more of the market. Today, advertising has taken on an international form and companies are more than ever thinking of crossing the borders of their countries and reaching global markets [8]. Internet marketing, which is called e-marketing, web marketing or online marketing, refers to making money, selling products and providing services through the Internet. Customer data management and electronic communication with customers are also summarized in the field of Internet marketing [10]. Internet marketing combines the technical and creative features of the Internet, including design, development, advertising and sales. The advent of the Internet has made it possible for almost everyone to sell their goods, products or services with just a few clicks from buyers [2]. Today, the need for advertising to grow the business is obvious to everyone. In a world of turbulent competition, advertising is an effective means of introducing goods, products and services to the customer. With the advancement of technology and the development of the Internet, online advertising has become especially important. In this busy world, many people are looking for the shortest way to get information about their product; Obviously, the first answer to this need is the Internet. Therefore, they turn to the Internet, which is available to everyone today, and search for the product they want on the Internet [7].

In such a situation, online advertising is a convenient, low-cost and efficient option to inform the surrounding world about the company's products or services. Compared to traditional advertising, online advertising has significant advantages, including two-way communication with the audience, a direct link to the product list, the ability to statically and dynamically target customers, global and 24 -hour access, Easy to send and maintain and update, high measurement and tracking capability, ad message design and sales capability. In addition, the cost of online advertising is much lower than other media [1]. One of the significant phenomena in the domestic business environment as well as internationally in the last two decades has been the expansion of chain stores. In fact, the shape of the retail industry has moved in a direction that has led to the dominance of chain stores. With the increase in the number of chain stores, the level of competition between these stores has also increased sharply. In such a situation, utilizing the capabilities of internet marketing and especially online advertising can play a decisive role in gaining a competitive advantage and increasing the market share of chain stores .N. At the same time, it should be noted that in order to increase the effectiveness of online advertising, it is necessary that all the factors involved in the impact of this type of advertising on customers' buying behavior be considered by store managers. On the other hand, each society has its own characteristics and it is not easy to generalize the patterns developed in one country to the effectiveness of online advertising to other societies.

The necessity of conducting the present research and presenting a model in terms of helping the advancement of science is that no study has been done so far on examining the role of online advertising on the intention of customers of the food chain store in Guilan province. Also, the importance of this research is that the development of information, communication and Internet technologies has provided many opportunities for various types of advertising and communication with consumers in different markets, and in the meantime, it is necessary for food chain stores in Gilan province to keep up with this technology. Therefore, since online and offline advertising affects the intention of customers to buy, there is a need for more detailed research to conduct online communication between consumers through the online communities of food chain stores and increase awareness of the consumer purchasing decision process. Another necessity of the present study is the existence of a vacuum in previous researches. According to the studies conducted in previous domestic and foreign studies, the role of online advertising on the decision-making process of consumers in food chain stores in Guilan province has not been studied in any of the scientific interventions in the country. Therefore, there is a need for a deeper study in this area. Given the research gap in this field, the results of this research can help to develop and expand knowledge in this field. The results of this study can also help increase the understanding and insight of chain store managers about the role of online advertising in the intention to buy consumers and understand how they can provide an effective and positive experience for their customers. Therefore, the present study aims to investigate the design and validation of an effective model for evaluating the role of online advertising on the consumer purchasing decision process in food chain stores in Guilan province.

2 Theoretical foundations of research

The nature of online advertising is such that, unlike traditional advertising, it allows for two-way interaction between the brand (product) and consumers. This two-way relationship plays an important role in increasing customer engagement and ultimately their emotional dependence on a brand. According to the hypothesis of cognitive evaluation, two-way interactions and increasing customer engagement in online advertising, not only cause customer participation in the value creation process, but also creates a kind of emotional commitment among consumers [4]. Much of the literature on marketing and online advertising emphasizes the obvious importance of consumer satisfaction. Studies show that the targeted design of online advertising creates a sense of satisfaction in them because it meets the needs of customers from different sectors. Here, unlike traditional advertisements, which have a general nature,

online advertisements are displayed in different ways for different categories of customers, which has an effective role in increasing customer satisfaction. This increase in satisfaction can ultimately be reflected in the decision-making process of a product or brand [13].

One of the most important aspects of designing an online advertising template is customer experience management. Researchers in the field of online marketing have identified several dimensions of experience and built a customer experience scale that includes four dimensions: sensory, emotional, intellectual and behavioral. The researchers showed that this scale is reliable and valid and is different from other criteria of the brand such as brand evaluation, brand engagement, brand consistency, customer interest and brand personality. In addition, customer experience, variables such as customer satisfaction and loyalty directly and indirectly affect the relationship with the brand personality [12]. Significantly, the customer experience in the marketing method has attracted a lot of attention. Professional marketers have realized that understanding how a customer experiences a product or brand is critical to the development of product marketing strategies for services [9]. Consumer experience, to a large extent, depends on psychological factors as opposed to material factors. A good experience is more important to the customer than quality and performance. This experience can be in the form of explanations from others, admiration for looks, mysterious smiles and jealous looks. All of these are part of the rich foundations of the customer experience that capture the mind as well as the heart to determine the brand image. Has constant customer needs. These needs include practical needs related to the purchase of a product or service and emotional needs and brand-derived communication [3].

One of the most important considerations in designing online advertising is the perceived risk of the customer. Risk arises from the lack of uncertainty that is always present throughout the life of the organization and it is quite obvious that the risk can not be completely eliminated, but it can be reduced with foresight or properly managed and guided. Therefore, risk can be measured and measured indefinitely [7]. Studies show that online advertising content can play an important role in increasing customer trust and thus reduce perceived risk. The importance of this issue stems from the fact that perceived risk is inversely related to the intention to buy; Therefore, by reducing the level of perceived risk, potential customers can be persuaded to buy a product or service [16]. Online advertising has been considered as a factor influencing customers' buying behavior by business managers as well as marketing researchers. Evidence shows that accurate and realistic design of online advertising can increase the willingness of customers to buy a product or brand. At the same time, a review of the research literature shows that there is no universal model for explaining the impact of online advertising on consumer behavior. The multiplicity of studies conducted in this field and the reporting of different and sometimes contradictory results in relation to the indicators of the effectiveness of online advertising clearly show that the model developed in one society can not be easily generalized to other consumer communities. Therefore, the development of indigenous patterns tailored to the conditions of each community is one of the basic requirements in online marketing activities. Related research in this study, [15] entitled The effect of advertising on consumer purchasing decision, the results showed that there is a relationship between socio-economic factors, advertising effectiveness and consumer purchasing decision style. This study showed that there is a significant and positive effect of advertising on consumer shopping decision-making style with regard to home appliances. [11], The effect of advertising on consumer shopping behavior in Malaysian restaurants, the results of this study showed that the results of this study showed that there is a lot of information available through social media and advertising and they have a positive effect on consumer shopping behavior Do. [14], The Role of Relationship Marketing in Consumer Purchasing Decisions of Travel Agencies Virtual is in the market, because establishing a relationship with the customer is considered as a distinction and a positive influencing factor, but from the consumer perspective, the relationship with the travel agency increases when trust in service is increased.

3 Research method

This study is a fundamental research that aims to investigate the design and validation of an effective model for evaluating the role of online advertising on the consumer purchasing decision process in food chain stores in Guilan province with a quantitative approach. It is also a cross-sectional research based on how the data is collected. The statistical population of the study includes customers of food chain stores in Guilan province. Using the Cochran's formula for indeterminate communities, 384 people have been calculated as a sample. Cluster sampling method and available individuals were used for sampling. The main tool for collecting research data in the quantitative section is a questionnaire. The validity of the questionnaire was confirmed by calculating the value of AVE. Cronbach's alpha of the general questionnaire was calculated to be 0,836. Cronbach's alpha and combined reliability for all dimensions were also calculated. Based on the results of the external research model, convergent validity and composite reliability, the research hypotheses can be tested and the results of the model implementation are reliable. Structural-interpretive modeling method has been used to design the initial model. Then, structural equation modeling method has been used to validate the designed model. The software used in this section are MicMac and LISREL, respectively.

4 Research findings

Designing an initial model for evaluating the role of online advertising on the consumer purchasing decision process in food chain stores in Guilan province. Based on The research model The next step is to identify the internal relationships of the role of online advertising in the consumer purchasing decision process. This section focuses on the indicators of the first quarter (improvement) and the second quarter (continuation). Structural-interpretive modeling method has been used to design the final model. The pattern of relationships between the identified indicators is determined using the pattern in Table 1.

Table 1: Signs used in structural-interpretive pattern design

O	X	A	V	A symbol
Lack of relationship	Two-way relationship	i has variable j on	has an effect on j variable i	Relation

By identifying the relationships of the indicators, a structural self-interaction matrix (SSIM) is formed.

The received matrix (RM) is obtained by converting the structural interaction matrix itself into a double value matrix of zero and one. In the received matrix, the elements of the original diameter are equal to one. Secondary relationships must also be controlled to ensure. That is, if A leads to B and B leads to C, then A must lead to C. That is, if the direct effects should be considered based on the secondary relations, but this has not happened in practice, the Table 2 should be corrected and the secondary relation should also be shown.

Table 2: Structural self-interaction matrix of research

CS	CBI	SMM	PR	CEM	BEC	OA	SC	CM	SSIM
V	O	X	V	V	V	A	X		CM
O	V	X	V	V	V	A			SC
V	V	V	O	V	O				OA
O	V	A	O	A					BEC
V	V	A	V						CEM
O	V	A							PR
V	V								CBI
A									CS

The following formula shows how to determine access using the proximity matrix: Equation 1: Determine the final access matrix

$$M = (A + I)^n \quad (4.1)$$

Matrix A is the initial access matrix of the identity matrix and the final access matrix. The matrix empowerment operation is performed according to Boolean rules (Equation (4.2)). Relation 2: Boolean Laws

$$1 \times 1 = 1; 1 + 1 = 1 \quad (4.2)$$

The final access matrix is presented in Table 3. Once the achievement matrix is formed, the "achievement set" and the "prerequisite set" must be identified to determine the relationships and level the indicators. For the variable, the access set (output or effects) includes the variables that can be reached through the variable. The set of prerequisites (inputs or effects) includes the variables through which the variable can be reached. The set of inputs and outputs for each element is used to form the infiltration-dependence power matrix (MICMAC analysis). The infiltration-dependence power matrix is presented in Table 4. In the model (ISM), the interrelationships and effectiveness between criteria and the relationship of criteria at different levels are well shown, which leads to a better understanding of the decision-making space by managers. To determine the key criteria of penetration power and dependence of the criteria in the final access matrix is formed. Figure 1 shows the power-dependence diagram for the studied variables.

Table 3: Achievement matrix after compatibility

CS	CBI	SMM	PR	CEM	BEC	OA	SC	CM	RM
1	0	1	1	1	1	0	1	1	CM
0	1	1	1	1	1	0	1	1	SC
1	1	1	0	1	0	1	1	1	OA
0	1	0	0	0	1	0	0	0	BEC
1	1	1	1	1	1	0	1	1	CEM
0	1	0	1	0	0	0	0	0	PR
0	1	0	0	0	0	0	0	0	CBI
1	1	0	1	0	0	0	0	0	CS

Table 4 Influence power and degree of dependence Influence power and degree of dependence of online advertising pattern variables.

Table 4: Achievement matrix after compatibility

Level	Influence power	Degree of dependence	Reserch variabe
4	8	4	(CM) Content marketing
4	8	4	(SC) Sponsored content
5	9	1	(OA) Online advertising
2	2	6	(BEC) Emotional commitment to the brand
3	5	5	(CEM) Consumer experience management
2	2	6	(PR) Perceived risk
4	8	4	(SMM)Social media marketing
1	1	9	(CBI) Consumer purchasing decision
2	2	6	(CS) Consumer satisfaction

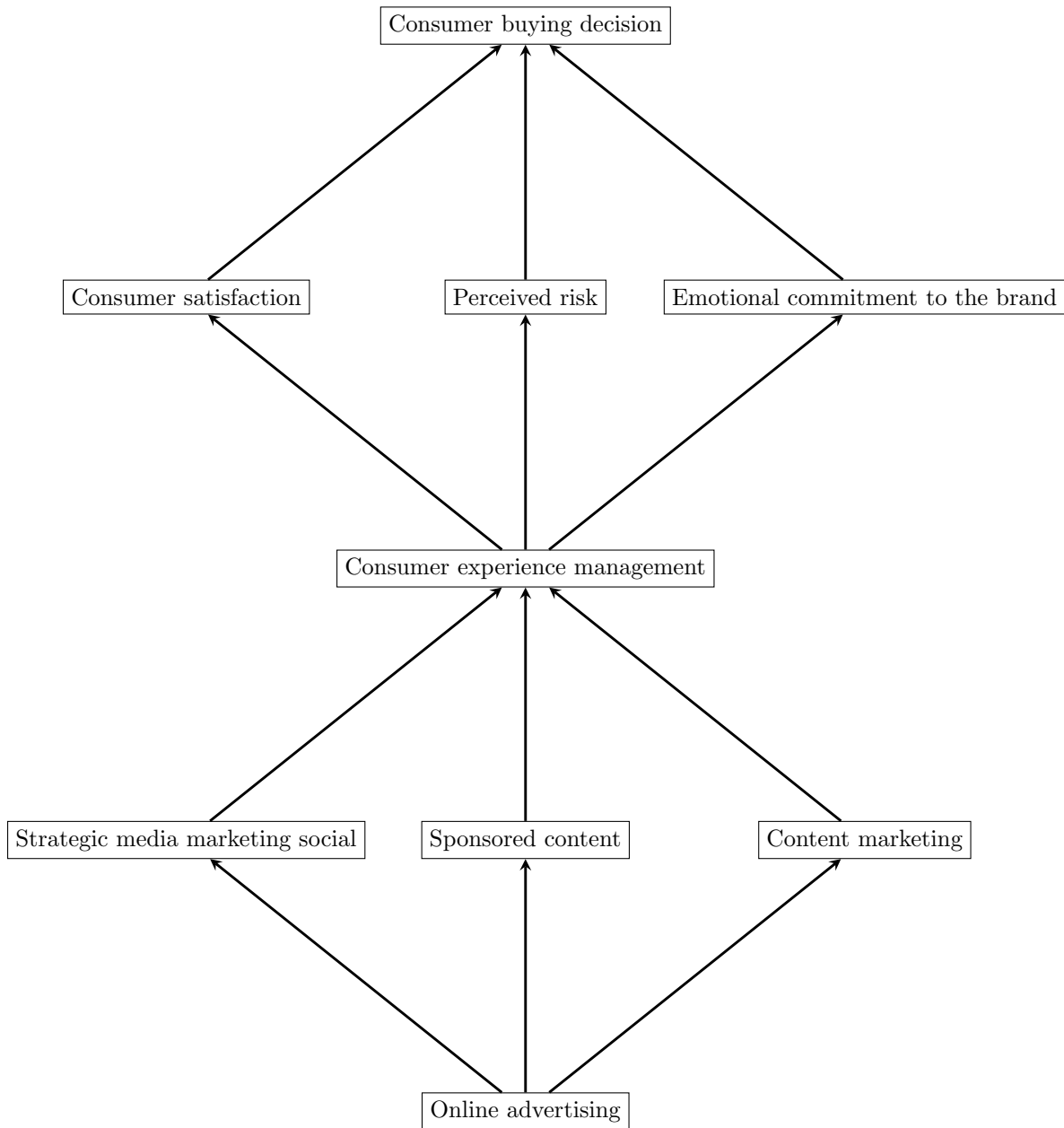
After determining the relationships and the level of the mentioned indicators, they can be designed as a model. For this purpose, first the indicators are adjusted 8 according to their level from top to bottom, respectively. In the present study, qualitative indicators are located at 5 levels. The basic model of the effectiveness of evaluating the role of online advertising on the consumer purchasing decision process in food chain stores in Guilan province is shown in Figure 1.

Validation of the initial model of the effectiveness of evaluating the role of online advertising on the consumer purchasing decision process in food chain stores in Guilan province After designing the initial model of the effectiveness of evaluating the role of online advertising on the consumer purchasing decision process in food chain stores in Guilan province, the Structural Equation Model (SEM) method was used to validate and present the final model. The final structural model of the research is shown in Figures 2(a) and 2(b). In this model, which is the output of smart-pls software. A summary of the results related to the standard factor load of factor relations is presented. The t-statistic is also presented to measure the significance of the relationships. The value of t-statistic obtained must be greater than the critical value of 1,96, which can be claimed with 95% confidence that the hypothesis is confirmed

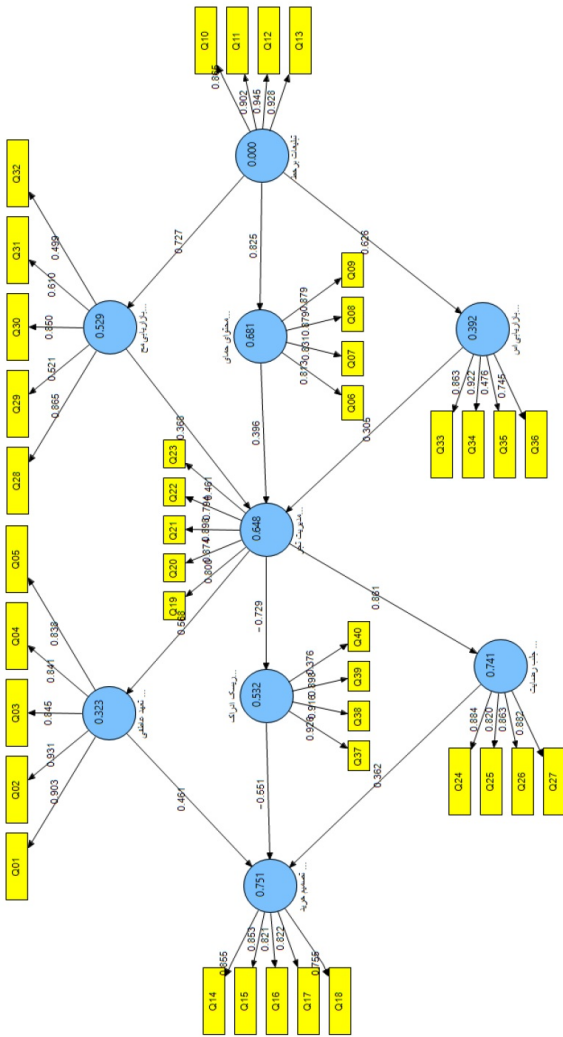
5 Discussion and conclusion

According to the results of previous studies, some aspects of the role model of online advertising on the consumer purchasing decision process have been neglected. Most studies have focused on components such as product quality enhancement, website design, perceived benefit, customer trust, and after-sales service. However, in the results of the present study, innovative dimensions such as emotional commitment to the brand, sponsored content, online advertising, consumer experience management, content marketing, strategic social media marketing, perceived risk, consumer purchasing decision and consumer satisfaction with related subcomponents It was presented that almost all

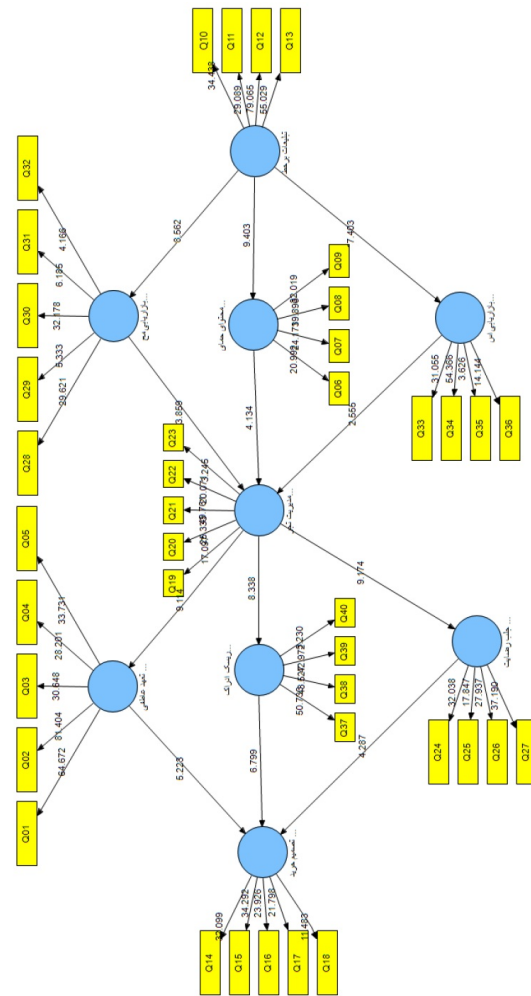
Figure 1: Effectiveness model for evaluating the role of online advertising on the consumer purchasing decision process in Gilan food chain stores



objectives cover the role of online advertising in the consumer purchasing decision process. Nowadays, the increasing relationship between brand authenticity with other marketing concepts and consumer behavior has been emphasized and the search for brand authenticity of goods by consumers has become one of the foundations of contemporary marketing and brand authenticity has differentiated the enterprise. In this area, it shows that sensory branding, recognizing consumers' inner feelings and emotions, consumers' value and building trust in the brand are aspects of brand originality that influence the consumer's purchasing decision. [6] has also been confirmed. Also, consumer behavior of men and women in shopping decisions is different, which should be considered by online store managers in order to use scarce marketing, which the results of research by [5] confirms. Appropriate pricing on different brands increases the level of customer engagement and this issue increases the psychological response and perception of fair price of products, which is in line with the results of agricultural studies (2019) and [2]. Also, causal conditions in creating a model to evaluate the role of online advertising affect the consumer purchasing decision process in food chain stores in Gilan province. In this regard, it is suggested that relevant managers strengthen sensory branding



(a) Validation output of the model with partial least squares method (significance level values)



(b) Validation output of the model with partial least squares method (standard values)

in food chain stores affected by recognizing inner emotions Consumers and Consumer Value Lead to Brand Trust. The use of storefronts, layouts, etc. also increase the consumer’s emotional commitment to grocery stores. Regarding bedding conditions, it is suggested that the relevant managers increase the consumer awareness of food chain stores and increase the consumer’s purchasing decision by employing experts in the field of content production based on new digital marketing methods and the use of appropriate influencers to publish advertisements. It is also suggested to increase the satisfaction of consumers by sponsoring content production methods and producing entertainment and educational content for consumers. Regarding online advertising, it is suggested that the managers of food chain stores in Gilan province seek to gain value and present innovative advertisements. If the mentioned cases are implemented, the possibility of creating communication and word of mouth marketing among the consumers of food chain stores in Gilan province will increase and this will lead to an increase in the consumer’s purchasing decision. In addition to the above, evaluating the performance of online advertising is also effective in improving the online advertising process. Regarding consumer experience management, it is suggested that chain store managers increase interaction and communication with consumers by increasing awareness of consumers’ behavioral intentions and increasing their participation. This will be possible by understanding the needs of consumers and responding to them quickly and effectively. Regarding content marketing, it is recommended that relevant managers produce, analyze and promote valuable content for consumers by hiring consultants and marketing specialists in chain stores. It is also important to review product details and provide useful information to consumers along with creating and distributing relevant and valuable content to increase consumer purchasing decisions. Marketing consultants will be able to significantly increase consumer satisfaction with the store by providing comprehensible content that aligns with the store’s goals and relevant images, content, and videos. Regarding strategic social media marketing, it is recommended that store managers take

Table 5: Summary of validation results of the final research

Result	Amara t	yyyyyyyy	The dependent variable	independent variable
Confirmation	562/8	727/0	Content marketing	Online advertising
Confirmation	403/9	825/0	Sponsored content	Online advertising
Confirmation	403/7	626/0	Strategic social media marketing	Online advertising
Confirmation	859/3	368/0	Consumer experience management	Content marketing
Confirmation	134/4	3396/0	Consumer experience management	Sponsored content
Confirmation	555/2	305/0	Consumer experience management	Strategic social media marketing
Confirmation	114/9	568/0	Emotional commitment to the brand	Consumer experience management
Confirmation	338/8	729/0	Perceived risk	Consumer experience management
Confirmation	174/9	861/0	Consumer satisfaction	Consumer experience management
Confirmation	223/5	461/0	Consumer purchasing decision	Emotional commitment to the brand
Approved	551/0	799/6	Management of the consumer experience	Perceived risk
Confirmation	287/4	362/0	Consumer buying decision	Consumer satisfaction

the necessary steps to advertise on high-traffic sites and develop the store's vision. Also, formulating store missions and setting long-term goals of the store is effective in accelerating and facilitating the consumer purchasing decision process. Regarding the perceived risk, it is suggested that the relevant managers be able to reduce the purchase and performance of the store to a minimum by developing a vision and understanding of consumers. They also urgently need to gain the trust and satisfaction of consumers in order to earn money in the future, and in this regard, they must take strategic measures.

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