

THE EFFECT OF COVID-19 ON MARKETING INNOVATIONS AND CORPORATE SOCIAL RESPONSIBILITY (CASE STUDY: ACTIVE COMPANIES IN FOOD INDUSTRY)

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Abstract: *In today's competitive world, marketing innovation is an important strategy for companies. Given the many changes in consumer behavior and the behavior of companies in the global COVID-19 virus crisis, especially in the field of food, understanding the effects of COVID-19 virus on customer behavior and expectations is essential for companies to succeed. Companies can also take of social responsibility, especially in times of crisis, and create a good positioning for themselves in the minds of customers. This study investigates the role of COVID-19 virus pandemic on marketing innovations and social responsibility of food companies. This research is descriptive-survey and we use questioner to gathering data. The statistical sample was selected by random sampling method from managers and experts active in the food industry in Tehran. Structural Equation modeling was analyzed using Smart PLS software. Findings showed that the COVID-19 virus epidemic has a significant effect on marketing innovations and corporate social responsibility. The results suggest that food companies need to increase marketing innovations and social responsibility behaviors to improve their success as the COVID-19 virus expands. Finally, practical suggestions were presented to improve activities and strategies for the success of companies and attract customers in critical illness conditions.*

Keywords: *Consequences of COVID-19, Marketing Innovation, Corporate Social Responsibility*

INTRODUCTION

The coronavirus first broke out in the last days of December 2019 in Wuhan, China. Data collected from Johns Hopkins University show that, the virus has spread to more than 185 countries, infected about 65 million people and killed about 1.5 million people (Worldometer, 2020). The COVID-19 crisis as a worldwide catastrophe has had a profound impact on the development of the global economy (He & Harris, 2020; Wang, 2020). The effects of this disease, which has affected the whole world, are inevitable.

Nowadays, in recent situation when the COVID-19 pandemic is developing, nations must compete with each other and with developed markets (Popkova, DeLo & Sergi, 2020). All over the world, the driving factor to declining household consumption and reductions in production is governments advise people to stay home and practice social distancing (Statistics Sweden, 2020). Also, people's concerns about health and safety, cause fundamental changes in their

preferences and purchasing patterns (Wang, Hong, Li & Gao, 2020).

Quarantine has become a daily occurrence all over the world, especially in the European Union. Restrictions on travel, reduction in the number of foreign trips, and a cessation of daily activities. Holding online business and training sessions has become routine and mandatory and in fact, all human beings and professions are learning to adapt to reality and new way of life and work. The impact of this epidemic on the global economy is significant. In order to combat the virus and prevent it from spreading, authorities around the world are considering measures such as some restrictions, quarantine and closure of businesses. With these measures and the closure of borders, many people have lost their jobs and much of the world's economic activity has stopped (Jiang & Wen, 2020). The data show that in China, despite the practical and effective measures taken by the government to prevent the spread of the virus, Gross Domestic Product (GDP) in the first quarter of 2020 decreased by 6.8%

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compared to an increase of 6.1% in 2019 (National Statistics Office of China, 2020). According to what Apple (phone maker company) said: disruptions in economic activity have led to a decline in production and supply of the country's products and a drop in profits. Singapore airlines has said that due to falling demand for air travel because of the prevalence of this disease, has reduced its flight schedules around the world and especially in the Far East. At the same time, it is clear that this global catastrophe has caused a major crisis for companies. Not only in China but in most countries, statistics show corporate bankruptcy and unprecedented unemployment in the world (Hironen et al., 2020). This requires that in order to better deal with this disease and prevent the aggravation of its economic consequences, to develop and implement appropriate strategies and conduct comprehensive research to manage the crisis.

To survive the COVID-19 crisis and look for possible market occasion, firms in developed countries have explored possible options in different forms and different degrees of marketing innovation strategies in almost all industries (Wang et al., 2020). Empirical study shows that companies should first focus on marketing innovation in order to survive in crisis period (Gustavsson & Larsson, 2020). The results showed that companies mostly focus on using innovative marketing ideas, better pricing and improvements in promotional activities (Pappas, 2015). Larsen and Gustavson (2020) found in a study that companies affected by COVID-19 were forced to change their marketing activities and use innovation in their activities as consumer behaviours changed. Hironen et al. (2020) stated in a study that dramatic changes in the consumer food basket and food marketing systems have been disrupted by the epidemic of virus.

Also, COVID-19 provides a great opportunity for businesses to move towards a true and credible CSR and help address global social and environmental challenges (Hey & Harris, 2020). This tragedy, which has resulted in the loss of many lives around the world, will live on in our memories and for generations and will have deep wounds in the personal, emotional, psychological, social, economic and cultural spheres. Such events will lead to unpredictable shocks. We can hope to prevent future panic attacks by examining and educating the effects of corporate social responsibility in this critical period. In fact, the ethical decision-making of the consumer is one of the missing links in this area as we face this epidemic diseases, that needs further investigation.

COVID-19 pandemic has exposed and exacerbated some ingrained social issues, such as poverty and inequality (He & Harris, 2020). The general narrative is that COVID-19 does not discriminate in terms of the medical fact that people from different demographic backgrounds are equally susceptible to the illness. However, COVID-19 does

discriminate as there are growing data showing that people from Bame backgrounds are more likely to contract the virus and become seriously ill or even die from it (Booth, 2020; Butcher & Massey, 2020). Many explanations beyond medical terms have been offered. Most of these explanations speak to the truth that there is still higher level of inequality in the developed world in terms of wealth, health, education, and so on. This offers significant opportunities for CSR. Companies, should focuses more of their efforts on tackling social issues on these fronts during this pandemic as well as in the long-run (UN.org, 2020). Hay and Harris (2020) state in a study that COVID-19 disease provides a great opportunity for businesses to turn to a more realistic and credible CSR and assist in addressing global social and environmental challenges.

Finally, they examined the impact of this epidemic on marketing. Previous studies on crisis management have focused on topics such as organizational capabilities (Parker & Amin, 2017; Andrew et al., 2017), corporate response (Hill et al., 2005; Rounian, 2006; Naidoo, 2010) and human resource management (Harvey & Heinz Aye, 2005; Lee & Warner, 2005; Sanchez et al., 1995). Issues such as marketing innovation and corporate social responsibility have been less addressed to attract customers. Research shows that, during the COVID-19 crisis, consumer expectations and consumer buying behaviors, especially in the field of food consumption, have changed dramatically (Kanter, 2020). This has doubled the importance of marketing innovations and social responsibility in order to survive. For example, during the outbreak of the virus, people should isolate themselves at home in order to follow health protocols and reduce physical contact to prevent infection. Therefore, companies should, strengthening their online business with rapid development and marketing innovations with rapid development and marketing innovations. Also, as poverty increased after the outbreak of COVID-19 virus, companies can use this opportunity and give them gifts for social responsibilities.

Therefore, among all affected countries, only companies that have embraced marketing innovation strategies and social responsibility have been able to cope to some extent with the economic crisis caused by the epidemic. So in order to deal with the crises caused by the outbreak of the disease for companies. The aim of this study was to investigate the impact of COVID-19 disease on marketing innovations and corporate social responsibility in the food industry and to provide practical suggestions in this area. Therefore, the questions that are raised in this study and we are looking for answers are: What effect does the outbreak of COVID-19 virus have on marketing innovations and corporate social responsibility? The results and suggestions of this study are used as a strategy for the success of companies, especially

food industry companies, in satisfying customers in the critical and competitive conditions of the outbreak of COVID-19 virus.

In the continuation of this manuscript, research literature and hypotheses, conceptual model, research methodology, data and findings analysis, discussion and conclusion are presented and finally suggestions for future research and references are presented.

THEORETICAL DEVELOPMENT

Consequences of COVID-19

Firms will face crisis inevitably by Disasters (Benson & Clay, 2004). The officially declared of coronavirus as a pandemic was in March 2020 (WHO, 2020) and in early February the first case was detected in Sweden (Statista, 2020). The COVID-19 pandemic has caused a chain of events and led to an economic crisis. As consumers stay at home and economies are shut down because of COVID-19 outbreak, it is probably to cause bankruptcy for many well-known brands in many industries (Tucker, 2020). Fundamental changes on people preferences and purchasing patterns is obvious as concern about health and safety increase among society (Wang et al., 2020).

We have become more conservative and protective after a pandemic outbreak. If the unimaginable happens again we have to be prepared by save resources. Countries are starting to store things like food, equipment, and medicine or prepare to produce them locally. Have reliable supply chains is essential for larger global firms that do not break. Consequently, to avoid stopping production in the future, pandemic will make these companies to rethink about their supply chains and move them closer to where they are needed furthermore, authorities said that other people from other countries are dangerous as they may carry the virus. A closed border means that danger is from outside. In the coming years international flights will not be preferred by many (Donthu & Gustafsson, 2020).

Marketing Innovation

Today, with the increasing acceleration of changes and transformations, the process of continuous change and transformation has become major currents, that govern human life. Therefore, companies and organizations that want to create or maintain a competitive advantage, have to be flexible and accept changes. In such an era, innovation has become the mainstay of organizations. Today, in a highly competitive world organizations are successful and can survive that has the ability to cope and adapt to change and

constantly apply new thoughts and ideas in the organization (Mirkamali & Chupani, 2011). The concept of innovation has attracted the attention of many researchers. This concept was first introduced by Champiter in 1934 as a process of creating new brands, products, services and processes and its impact on economic development. Then, various scientists have interpreted this concept differently for the long-term survival of organizations and innovation is considered as a very important factor in organizations (Khan et al., 2009). An organization that has the ability to present new ideas and use them properly, has not turned away from change in any way and it can act as a factor in making a difference in its environment.

Innovation is the formation of ideas, the acceptance and implementation of new ideas in processes, products and services and the desire for change through the adoption of new technologies, resources, skills and management systems (Ussahawanitchakit, 2088). Innovation is applicable to companies in various fields. Today, success will not be possible in competitive market without a strong brand and marketing (Aghaei, 2020), so that marketing is complementary factor in brand success (Aghaie, Vahedi, Asadollahi & Safari-Kahre, 2014). Owners gain, economic and strategic value with Brands (Aghaei, Vahedi, Kahreh & Pirooz, 2014; Gil, Andrs & Salinas, 2007), and applying innovation in brand marketing, can ensure the success of the brand in attracting customers and creating value for owners.

Marketing innovation strategies are defined as firms' commitments to involving new or significantly improved marketing methods and there can enable companies to use their resources efficiently to response to the demand of customers and create superior customer value (Hunt & Morgan, 1995; Hurley & Hult, 1998; OECD, 2005; Wang et al., 2020). All of these innovations can happen within any of the ingredients of the marketing mix, including product, location, price, and promotion. For example, companies can use the Internet to innovate in marketing.

Firms usually have different motivations for innovation During the COVID-19 crisis, according to its affect. (Wang et al., 2020). In terms of the external environment, when firms, necessarily firms which take a large percentage of offline businesses affected by the COVID-19 crisis; This strategy can innovation the existing business to alleviate the huge impact of the crisis (Du, 2018). With regard to internal advantages, it is suitable for a firm with relatively lower dependence on external resources if marketing innovation strategy relies on the firm's own resources and capabilities (Gandia & Gardet, 2019), and stronger reconfiguration capabilities, to upgrading and optimizing available business by alteration and reconfiguration of resources within the organization (Makkonen et al., 2014; Wang et al., 2020). During the crisis experimental results of previous study

proves that new technologies, like rise of internet have had a great impact on the marketing innovations (Campo et al., 2014; Nicolau & Santa-María, 2013). Firms access, to an indefinite number of consumers by low cost (Consiglio et al., 2018; Campo et al., 2014). Economic profitability positively influenced by marketing innovation activities (Nieves & Diaz-Meneses, 2016; Gustavsson & Larsson, 2020). Also, empirical results from a study by Campo et al. (2014) shows that hotels innovation in the financial crisis in 2008 cause customer service quality improvement, also increase value and customer satisfaction. There are three key terms to sustain and gain competitive advantage and financial interest (Medrano et al., 2016; Anning-Dorson et al., 2018). Also, Jiang et al. (2020) in their research entitled the effects of COVID-19 on marketing and hotel management have expressed the perspective of the industry in the current situation. Go beyond the usual views on hotel hygiene and cleanliness and make guests understand the cleanliness of hotel and pay more attention to marketing. Jiang et al. (2020) in another study examined the impact of this disease on the marketing strategies of Chinese companies with an emphasis on innovation and they found that, paying attention to marketing innovation could be the key to the success of these companies. Wang et al. (2020) in a study identifying corporate marketing innovations using two dimensions, the motivation to create innovations, the level of joint innovations and how Chinese companies innovate, examines corporate marketing strategies. Impact of external environment, internal benefits and characteristics of companies and implement marketing innovation strategies of Chinese companies was examined in this research.

Corporate Social Responsibility

There is no consensus among management on providing a single definition of social responsibility. Corporate social responsibility is understood as the commitment of an individual or organization to the form of society, which includes people as well as the physical environment. When the consequences of doing their activities do not only affect them. Definition provided by the World business forum for sustainable development in 2001 which is about the commitment of business and commerce to work together for sustainable economic development, working with workers, their families, the local community, and ultimately, society as a whole, so that they can improve their quality of life. So the main idea of CSR is that companies are committed to working to meet the needs of stakeholders. In other word CSR is a set of management activities that ensure the positive impact of the company's operations on the community; Or operations in such a way that the laws, ethics, business and public expectations of the business satisfy or achieve more (Kansal et al., 2014). Due to the growth and development

of organizations and increasing their role in society, the social consequences and activities of the organization and their effects on various stakeholders have become increasingly important. So the moral and social performance of organizations has a significant impact on their overall performance. The concept of social responsibility has become the dominant paradigm in the field of management of organizations in the last decade. And these large and well-known global organizations see responsibility for society and the social environment as part of their corporate strategy and they have begun reporting on their moral, social, and environmental behavior. In Parkinson's words, "organizations make private decisions that have public consequences" (Bart, 2009).

Today, COVID-19 poses challenges to firms and organizations with regard to ethical conducts and CSR. Some firms/retailers have tried to profiteering from this crisis. In order to limit the possible palmate of profiteering, in the UK for example its competition guardian, the Competition and Markets Authority (CMA), establish a special group to punish the companies which drive benefit from pandemic by swell prices or and or allegations about products. Inevitably this crisis has put companies under test for having ethical business obligation and CSR (He & Harris, 2020). As much as firms genuinely and its CSR authenticity increase, make the connection between its customers and the general public more strong during the current crisis with regard to their efforts in conflicting the virus, they have built up strong prospect from leading brands, particularly their favorable brands. That, brands helping their employees, donating money and equipment during the crisis, makes consumers feel proud. During this crisis, relation between the brand and consumer can be more meaningful and lasting than during "peaceful" times. However, the pandemic has made firms to collapse, COVID-19 pandemic offers great chance for companies to actively employ their CSR strategies and agenda. When resources are restricted and survival is under threat it is becoming more important to understand what drives some firms to be more ethical and socially responsible (He & Harris, 2020).

Corporate social responsibility can be achieved through actions in the areas of 1. Health and hygiene to perceive the health of products by customers in conditions of illness, 2. Economic to help low-income people, 3. Emotional to attract customers' feelings and empathy with the company, and 4. Psychology to create a positive mindset in customers. For example, Amazon strongly expanded online grocery delivery to provide a needed service for whom affected by the pandemic (Amazon, 2020). The companies fulfillment centers began facing a lack of organizational commitment from workers, as there need increased for smooth run with full capacity, and workers protested risky conditions such as not having adequate protective equipment and working among many that have tested positive, or even

died, from COVID-19 (Weise & Conger, 2020). The real story mentioned here is a good example of organizations implementing CSR policies to try to do the right thing during the COVID-19 pandemic (Aguinis et al., 2020).

In this regard, Bundy and Pepper (2015) in their research stated that social assessments and crisis management are formed by explaining social cognitive mechanisms, and it affects how an organization perceives the onset of a crisis and it affects how an organization perceives the onset of a crisis. In particular, it highlights the role of social approval and evaluators' general attitudes toward an organization not only as an important outcome of crisis management but also as an important predictor. In particular, it highlights the role of social approval and evaluators' general attitudes toward an organization not only as an important outcome of crisis management, but also as an important predictor. Aguinis et al. (2020) found in a study that the perception and implementation of organizational social responsibility behaviors by employees can have a positive outcome for the organization and lead to its success.

Based on the theoretical foundations, background, issue and objectives, the following hypotheses have been proposed for consideration in this study:

H1: Pandemic of COVID-19 virus has a significant effect on marketing innovations.

H2: Pandemic of COVID-19 virus has a significant effect on corporate social responsibility.

Also, according to the theoretical foundations, objectives and hypotheses of the research, the conceptual model of the present research is as follows and shows the effect of COVID-19 on marketing innovations and corporate social responsibility.

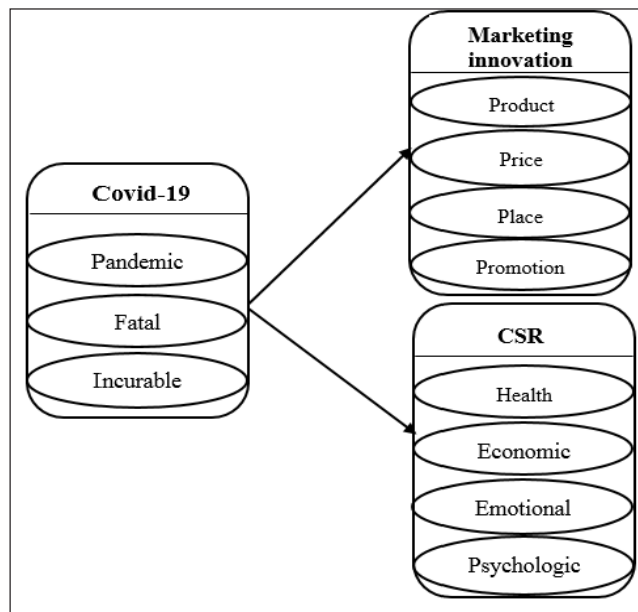


Fig. 1: Conceptual Model of Research

METHODOLOGY

According to importance of issues related to customer buying behavior in critical situations, the purpose of this study is to investigate the impact of the prevalence of COVID-19 on marketing innovations and social responsibility of food industry companies. This study is practical in term of purpose and is among the descriptive-survey research that has been done cross-sectional.

Data were collected using a questionnaire tool in the fall of 2020. There are 22 questions that were researcher-made questionnaire and were designed using the opinions of experts in this field and were designed in two parts including demographic information and specialized questions. The population of this study consists of managers and experts in the food industry in Tehran. Due to the large size of the statistical community and its unlimited size, using the Cochran's formula for the state of unlimited community which is equal to 385 people, the sample size was calculated, and random sampling method is used in this research. In this regard, 400 questionnaires were distributed, of which 363 were returned to researchers, 43 questionnaires were excluded from the analysis due to difficulties in completing and incomplete information, and 320 questionnaires remained for analysis, which were used for statistical analysis. To analyze the data, structural equation modeling method was used using Smart PLS software.

In this study, face validity method, CVI index and construct validity (factor) have been used to evaluate the validity of the questionnaire. The content and appearance (face) validity of the questionnaire was confirmed using the opinion of experts and the CVI index with the opinion of experts was 0.86, which is more than 0.7, so the research questionnaire has a good validity. Also, the validity of the structure was evaluated by analysis of factor load and significance of indicators and questions, the results of which are presented in Tables 2 and 3 and indicate the appropriate validity of the questionnaire. In order to evaluate the reliability of the questionnaire, Cronbach's alpha test was used, which showed that the questionnaire has high reliability. So that the total reliability of the questionnaire is equal to 0.924. The reliability of the variables is presented in the table below. Structural equation models are usually a combination of measurement models and structural models, and for this purpose, the composite reliability measurement and the average variance extracted are calculated. Values greater than 0.5 are used for the amount of variance extracted and more than 0.7 are used for the composite reliability. The calculated values for the research variables are described in the table below.

$$CVI = \frac{\sum CVR}{\text{Number of remaining questions}} = \frac{19}{22} = 0/86$$

Table 1: Questionnaire Characteristics (Reliability Indices and Convergent Validity Index)

| Variable | Cronbach's Alpha | Composite Reliability | AVE | Indicators | Questions Number | Cronbach's Alpha |
|-----------------------|------------------|-----------------------|-------|------------|------------------|------------------|
| COVID-19 | 0.776 | 0.803 | 0.587 | CO1 | 2 | 0.766 |
| | | | | CO2 | 2 | 0.735 |
| | | | | CO3 | 2 | 0.849 |
| Marketing innovations | 0.794 | 0.791 | 0.594 | IN1 | 2 | 0.829 |
| | | | | IN2 | 2 | 0.860 |
| | | | | IN3 | 2 | 0.765 |
| | | | | IN4 | 2 | 0.786 |
| CSR | 0.758 | 0.735 | 0.519 | SR1 | 2 | 0.776 |
| | | | | SR2 | 2 | 0.943 |
| | | | | SR3 | 2 | 0.894 |
| | | | | SR4 | 2 | 0.775 |

According to Table 1, the Cronbach's alpha value for all variables and the whole questionnaire is more than 0.7 and therefore the research questionnaire has good reliability. Also, the composite reliability for all variables is more than 0.7 and the AVE index is more than 0.5, which indicates the confirmation of the reliability of the research questionnaire.

FINDINGS

In this section, first the data distribution (normal or abnormal) is examined, then the analysis of factor load and significance of indicators and questions, and finally the structural equation modeling and research hypotheses are investigated using Smart PLS software.

Various methods are used to test the normality of the data. In this study, to examine the normality of variables, Kolmogorov-Smirnov test was used, the results of which are presented in the table below.

Table 2: Investigating the Normality of Research Variables

| Variable | COVID-19 | Marketing Innovation | CSR |
|---------------------------|----------|----------------------|-------|
| Number | 320 | 320 | 320 |
| Kolmogorov-Smirnov Test | 0.127 | 0.207 | 0.276 |
| Significance factor (sig) | 0.021 | 0.037 | 0.000 |

Wherever the significance number of the test is greater than the considered significance level (0.05), the null hypothesis (normality of the distribution of variables) is accepted. Based on the results of this test, all research variables have an abnormal distribution. Therefore, in the following, we use Smart PLS software and tests with abnormal assumptions to confirm or reject the hypotheses.

Before entering the testing phase of research hypotheses and conceptual models, it is necessary to ensure the accuracy of measurement models of research variables. The following models for measuring research variables are discussed. This was done by analysis of factor load and significance of indicators and questions. The results of this analysis of all research variables show that all appropriate measurement models and all numbers and model parameters are significant. Given that all factor loads in all dimensions are greater than 0.5 and the mean of extraction variances (AVE) is greater than 0.5, there is a construct validity of convergent validity.

The results of factor analysis are presented in Table 3. The results of factor load and significance of indicators and questions show that all questions have the necessary validity to measure research variables. Criteria for approving or rejecting a question to measure a variable are significant numbers. If the significance number is greater than 1.96 or less than -1.96, it indicates that the question is appropriate for measuring the desired dimension. If the number is significant in the high range, the mentioned question is not suitable for measuring the dimension. The variables and questions are in a good position in terms of factor load, significance coefficients and other validity indicators.

Table 3: Factor Load Values and Significance Coefficients of Items

| Variables | Indicators | Factor Load of Indicators | Significance of Indicators | Questions | Load Factor Questions | Significance of Questions |
|---------------------------------|------------|---------------------------|----------------------------|-----------|-----------------------|---------------------------|
| COVID-19 | CO1 | 0.725 | 21.846 | Q1 | 0.91 | 24.31 |
| | | | | Q2 | 0.68 | 21.79 |
| | CO2 | 0.848 | 53.144 | Q3 | 0.76 | 33.16 |
| | | | | Q4 | 0.85 | 43.15 |
| | CO3 | 0.700 | 18.787 | Q5 | 0.78 | 18.81 |
| | | | | Q6 | 0.74 | 17.75 |
| Marketing innovations | IN1 | 0.551 | 18.157 | Q7 | 0.56 | 16.92 |
| | | | | Q8 | 0.62 | 19.12 |
| | IN2 | 0.779 | 26.082 | Q9 | 0.71 | 28.86 |
| | | | | Q10 | 0.77 | 20.03 |
| | IN3 | 0.842 | 36.746 | Q11 | 0.90 | 29.86 |
| | | | | Q12 | 0.69 | 37.38 |
| IN4 | 0.588 | 13.228 | Q13 | 0.52 | 15.11 | |
| | | | Q14 | 0.59 | 12.72 | |
| Corporate Social Responsibility | SR1 | 0.542 | 16.304 | Q15 | 0.79 | 21.12 |
| | | | | Q16 | 0.50 | 11.22 |
| | SR2 | 0.736 | 20.322 | Q17 | 0.71 | 21.17 |
| | | | | Q18 | 0.78 | 25.29 |
| | SR3 | 0.718 | 21.076 | Q19 | 0.77 | 25.57 |
| | | | | Q20 | 0.73 | 24.05 |
| SR4 | 0.667 | 16.570 | Q21 | 0.80 | 18.49 | |
| | | | Q22 | 0.69 | 14.35 | |

In the following, the correlation between research variables is examined. As the results in Table 4 show and there is a positive and significant relationship between all research variables.

Table 4: Pearson Correlation Coefficient to Investigate the Relationship Between Variables and Differential Validity of Structures

| Variables | COVID-19 | Marketing Innovations | CSR |
|-----------------------|----------|-----------------------|-----|
| COVID-19 | 1 | | |
| Marketing innovations | 0.573 | 1 | |
| CSR | 0.561 | 0.458 | 1 |

After examining the correlation of variables, we must test the hypotheses. Smart PLS software, was used to evaluate the studied model. The non-parametric bootstrap test with 500 replications is also used to estimate standard errors and test hypotheses. The basic criterion for evaluating endogenous latent variables is the coefficient of determination R^2 .

The values (0.67, 0.33 and 0.19) for R^2 in the PLS route models are high, medium and weak, respectively. Each path coefficient in the PLS structural model can be considered equivalent to a standardized beta coefficient in ordinary least squares regressions. The COVID-19 variable as the latent variable is exogenous and the variables of marketing innovation and corporate social responsibility are latent variables are endogenous. The results in two modes of significant number and path coefficient are shown in the Fig. 2 and 3.

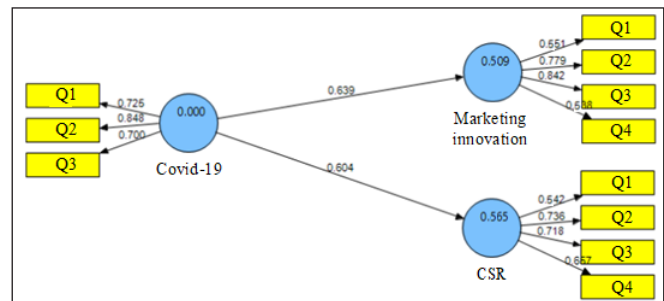


Fig. 2: Model in the Case of Path Coefficients

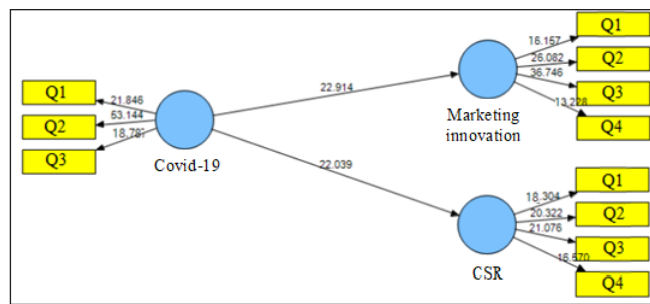


Fig. 3: Model in the Case of Significant Coefficients

According to Fig. 2, the value of R^2 for the variables of marketing innovation and social responsibility is equal to 0.509 and 0.565, respectively. Therefore, the value of R^2 is at an acceptable level for latent variables and it is convenient, and the COVID-19 predicted the values of 0.509 and 0.565 of the variables of marketing innovations and corporate social responsibility of the company.

Also, according to Fig. 3, the results of significant numbers show the effect of one structure on another, to confirm a hypothesis at the level of 0.05, its value must be outside the range of 1.96 to -1.96. Therefore, the findings indicate that the significant coefficients obtained were out of range, therefore, two research hypotheses have been confirmed. In fact, COVID-19 has a significant impact on marketing innovation and corporate social responsibility.

The coefficient results also show the effect of one structure on another, according to Fig. 2, the coefficient obtained for the variables of marketing innovations and corporate social responsibility are 0.639 and 0.604, respectively. So, COVID-19 has an effect of 0.639 and 0.604 on the variables of marketing innovations and social responsibility of the company.

The findings of the research hypotheses are summarized in Table 5.

Table 5: Results of Models and Hypotheses

| Row | Hypotheses | Path Coefficients | Significant Coefficients | Result |
|-----|---|-------------------|--------------------------|---------|
| 1 | The effect of COVID-19 on Marketing Innovations | 0.639 | 22.914 | Confirm |
| 2 | The effect of COVID-19 on CSR | 0.604 | 22.039 | Confirm |

Goodness of Fit of Model

In this study, GOF index has been used to measure the fit of the structural model. The value of the average subscription represents the percentage of changes in the indices that are justified by the corresponding structure. The researchers reported the acceptable level for statistical subscription more than 0.5 (Lee & Wu, 2007). In PLS software modeling there is no standard for measuring the whole model but, a general measure of goodness of fit (GOF) has been proposed by Tenenhaus et al. (2005). This index considers both measurement and structural models and is used as a measure to predict the overall performance of the model. This criterion is calculated as the geometric mean R^2 and the mean subscription

$$GOF = \sqrt{Average(AVE) * Average R^2}$$

Table 6: Average Share of Latent Variables

| Latent Variables | AVE | R^2 |
|-----------------------|-------|-------|
| COVID-19 | 0.587 | - |
| Marketing innovations | 0.594 | 0.509 |
| CSR | 0.519 | 0.565 |
| Average of values | 0.566 | 0.537 |
| GOF | 0.551 | |

GOF values greater than 0.36 are very appropriate, 0.25 moderate and 0.1 weak (Cohen, 1988). A value of 0.551 obtained for GOF indicates that the model under study has good predictive power and it has a good fit so the findings confirm the overall validity of the model. Also, the value of R^2 is more than 0.5 and indicates the proper fit of the model.

DISCUSSION AND CONCLUSION

The spread of the corona virus has affected all companies, in some of them this effect was negative. And it has imposed many problems and the sales of many companies have been minimized. On the other hand, the virus has severely affected and changed the behavior of consumers in various industries. But note is that the corona virus does not mean the destruction of businesses. Companies should implement a series of strategies in this period to take advantage of the situation or reduce its negative consequences. One of these strategies is to pay more attention to marketing and social responsibilities in order to support the people. Research in this area is limited and still companies and food industry that are studied in on this, are looking for effective strategies to overcome the crisis in the face of the COVID-19 virus

pandemic. Therefore, the present study investigates the impact of COVID-19 on marketing innovations and corporate social responsibility in the food industry. In this regard, data were collected using a questionnaire tool and analyzed using Smart PLS software. This study intends to provide practical suggestions in this field by examining the impact of COVID-19 epidemic on marketing innovations and corporate social responsibility. The findings of this study show that the research model has a good fit and the results are reliable.

Implications for Asian Business Context

Due to the increasing importance of customer-oriented perspective in today's markets and changes in customer tastes and increased competition, not paying attention to changes in customer behavior can lead to business failure. The recent crisis caused by the outbreak of the COVID-19 virus has affected consumer behavior and changed their expectations. This study provides a better understanding of the effects of the COVID-19 virus outbreak on businesses, and in particular marketing changes that are forcing companies to innovate in their business marketing; It also highlights the importance of corporate social responsibility activities to customers during the difficult times of the virus. This research will provide practical suggestions based on the obtained results by examining the expressed components. Considering the use of data from food industry companies in Iran from Asia for this research, the results of this research can be used for various businesses in Asia. The results and suggestions of this study are used as a success strategy for companies, especially food industry companies, in satisfying customers in the critical and competitive conditions of the outbreak of COVID-19 virus.

In line with the research hypotheses, the results indicate that COVID-19 has a significant effect on marketing innovations, which is equal to 0.639. Confirmation of the first research hypothesis according to the results of Parker and Amine studies (2017); Andrew et al. (2018); Jiang et al. (2020), Larsen and Gustavson (2020) and Wang et al. (2020) and it is quite consistent based on the confirmation of the first research hypothesis, it is suggested that active food industry review and change their marketing campaigns. In fact, companies have to adapt to the conditions in this period and run campaigns and appropriate advertising activities. What needed for companies in this era is developing contingency marketing programs. These programs or campaigns should meet the effects of the COVID-19 virus. Conducting market research to obtain information related to this period is another suggestion to managers and activists of the food industry in the country. Having accurate information from customers in this period will help a lot in the type of reaction of the

organization. Information such as the type of purchases, the place of purchases, the amount of change in the volume of purchases, customer sensitivities, etc., is a great help to companies in developing appropriate marketing plans. In fact, the role of the corporate market research unit in this period is important. As the presence of customers and consumers in the online areas has increased, it is recommended that the active food industry enter these areas seriously. Therefore, one of the practical suggestions of this research is the development of communication with reputable online stores throughout the country and concluding a sales contract with them. Due to the development of online sales in the country, these companies can develop their connections with online stores in order to develop sales. For this purpose, they should collect a list of these stores throughout the country and after validating these stores, enter into a contract with them to supply their food products. Companies can reduce customer profits and offer discounts to customers during this period of declining sales, to gain customer satisfaction and create a good position for themselves among customers.

The second hypothesis of the research was also proved and the effect of COVID-19 epidemic on corporate social responsibility is significant and the value of this effect is 0.604. This result is in line with the research of Hay and Harris (2020), Papkova et al. (2020), Aguinis et al. (2020) and Bundy and Pepper (2015). Therefore, in this regard, it is suggested that companies operating in the food industry consider the health sensitivity of customers in the current situation in all their marketing activities and put the development of health culture at the forefront of their activities in order to instill a good perception in customers. Consumers, should be concerned about health issues in the current situation and organizations need to address these concerns in a variety of ways. Among these activities, observing all health steps to present the product to customers or consumers and informing this issue through various media for customers and consumers.

Due to the fact that different laws and restrictions have been implemented in different parts of the country, it is suggested to develop appropriate strategies according to the type of effects of this disease in different parts of the country and focus on trends and behavioral changes of consumers in different geographical areas. Also, many families in this situation have an unfavorable economic situation and reducing profits and prices or providing gifts related to maintaining health along with food products and sending them to customers and consumers is another offer related to corporate social responsibility is another way to help financially and attract customers' emotions. For example, in order to pay attention to customers and consumers and show your concern products such as antiseptic gels, masks or industrial alcohols can be sent to customers. Another

practical suggestion in this area is to offer promotions and discounts to different groups of society, especially medical staff groups. In general, according to the second hypothesis of the research, it can be stated that customers' concerns regarding the purchase of food products should be identified and solutions should be provided to reduce these concerns and makes the shopping healthy.

Researchers are advised to investigate the effect of COVID-19 virus on sustainable consumption behavior in future research due to changes in consumer behavior. Also examine the effect of the COVID-19 virus on industries other than the food industry. One of the limitations of this study is the difficulty of collecting data in corona conditions and lack of background in the field of variables.

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