



Effect of COVID-19 Pandemia Period on Consumers' Buying Behavior of Food Products: A Literature Review

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ABSTRACT

This study aims to explain the effects of the COVID-19 pandemic on consumers' buying behavior of food products by reviewing the literature with a deductive approach. Based on the current literature, it can be said that the perceived pressure of the consumers is arising from isolation, quarantine, and lockdown that bring economic and psychological uncertainty. As a result, consumers' tendency to hoarding for basic needs like food products may increase. This unexpected increase may also cause fluctuations in supply and demand balance. Because of these fluctuations, people may have trouble access to the goods they need.

Keywords: COVID-19, pandemic, consumer behavior, food product, hoarding

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Introduction

From the beginning of the COVID-19 pandemic period, consumer behavior has been changed dramatically. Consumers have become distant from the retail points and crowded places as a result of isolation for avoiding the virus infection risk. As a result of the change in consumer consumption routine, many firms had to stop their commercial activities permanently or temporarily. Panic has been arisen by the concerns of availability of the products and that drove some consumers to hoard especially for hygiene, food, or medical products. On the other hand, consumers also choose contactless or online shopping for avoiding the virus and buying more than they need as a caution of rising prices and depletion risk of products. It can be said that the warnings of the state have also got an effect on such behaviors of consumers.

Since the employees can't leave their houses and the consumers delay or cancel their buying decisions both supply and demand have been decreased in industries like hospitality, entertainment, and foodservice. On the other hand industries like mining faced excess supply. Since now, it's not clear how long it would take for these anomalies to become normal again.

The uncertainty brought by pandemic causes distrust and concern about the economy. This mood may have a negative effect on the consumption decisions of the consumers. In this case, consumers may decide to delay or retract their requests and needs for taking themselves under preservation.

Conversely, the consumers seem to stockpile food, hygiene, and medical products in this period.

In this research, consumer behavior frame has applied for understanding the economic results and reflections of the COVID-19 pandemic.

General Review of COVID-19 Pandemic

Coronaviruses are infamous for the epidemics they cause. In the last 20 years, there are two known coronavirus epidemics happened.²

The first of these epidemics named SARS-CoV has started in China in 2002 and resulted in 8000 cases and 800 deaths.³ The second one which named MERS-CoV has begun in Saudi Arabia in 2012 and resulted in approximately 2500 cases and 800 deaths.⁴ Another serious epidemic called H1N1 (aka. Bird flu virus) shows up in 2009 and also had serious consequences.⁵

Coronavirus belongs to a large RNA family and members of this family have caused a high level of mortality in large populations with severe acute respiratory syndrome. These pathogens are zoonotic which animals transmit to humans.⁶

China has been informed the World Health Organization (WHO) on 31 December 2019 that an unknown upper respiratory influence has been detected in Wuhan which is spreading far and wide. That was the day when the COVID-19 came up globally.⁷ WHO announced a new virus called 2019-nCoV was the reason for the influence on 12 January 2020 and then the name of the virus has been changed by WHO as SARS-CoV-2 on 11 February 2020.² The virus spread all over the world very fast and became a pandemic.⁸

COVID-19 Pandemic, which already has spread over 30 countries until now, is different than other diseases by its infectiousness rate on the incubation period.⁹ With the exception of Canada, which had its first death case of COVID-19 on 7 February 2020, every G7 country had a death case until January 2020 ends. According to the COVID-19 statistics announced by the governments, it's possible to say the epicenter of the disease moved from China to Europe, and then the USA by the time.¹⁰ On the other hand, these statistics only cover the positive test results, so the real number of infected people is probably higher than the announced one.¹¹

Even though the effects of the COVID-19 epidemic may vary from country to country; it can be said that some countries are more successful than others in narrowing down the spread of the pandemic.¹²

COVID-19 pandemic has different effects in every country. While the USA faced a lot of deaths and economic shrinkage¹³; Germany has managed the period more efficiently¹⁴ based on the mortality rate and economic data. On the other hand, South Korea has applied technologic methods like following the infected people by online systems to resist the spreading of the disease.¹⁵

Along with the contagion of the pandemic, the Ministry of Health of the Turkish Republic (MHTR) has established a scientific committee for the pandemic and published the COVID-19 Pandemic Guide.¹⁶ Then MHTR decided to take the temperature of the passengers from China at the airport with the thermal cameras and on 30 January 2020, the flights from China and flights to 16 countries have been canceled by the state of emergency declared by the MHTR. Also, people who came from abroad are taken to the quarantine at the student hostels for 14 days.¹⁷

After the first case detected in Turkey; some restrictions have been applied by the order of MHTR for the crowded places, a break has given for the face to face education at 16 March 2020, a strict lockdown has ordered for the people over 65 years old, flights for 71 countries have halted and the constructions have been completed for the pandemic hospitals immediately by the end of March 2020.¹⁸ After the dramatic increase in the number of cases, some new serious precautions have been revived by MHTR. These precautions are; lockdown for the people younger than 20 years old, 31 cities have been taken under quarantine by closing the entrances and exits, lockdowns has applied for the weekends all over the country, and wearing mask became mandatory. Additionally, the government froze the price for some products (like face mask) because of the price manipulations in the market.¹⁶

Turkish Ministry of Health has applied the filtration method that has proven positive results for preventing the pandemic.¹⁹ Filtration methods had been applied successfully for the SARS, MERS, and Ebola diseases. As a medical term, filtration means following up the infected individuals systematically for preventing them from transmitting the virus to other people and breaking the disease chain.²⁰

Table-1 shows the current state of the COVID-19 Pandemic in Turkey.

Table 1. Current state in Turkey on 6 May 2020, Resource: COVID-19 Guide of the Turkish Ministry of Health

Total COVID-19 Tests Made	2.267.412
Total Cases	168.340
Total Cases Resulted in Death	4.648
Total Intensive Care Patient	592
Total Intubated Patient	269
Total Recovering Patient	133.400

Global Effects of Pandemic

Modern economies are complex interdependent networks. In these networks there are so many actors as employees, firms, suppliers, consumers, banks, etc. and each of these actors is customers, employees, and/or creditors for another actor. Therefore the crises brought by pandemic cause a devastating domino effect in both singular and collective ways.²¹

According to the World Economic Forum, the world economy has 12% shrinkage between January 2020 to March 2020.²² Many countries have declared cautionary economic packages for preventing this shrinkage and ensure the economic balance. The Turkish government has announced the “Economic Stability Shield” package on 18 March 2020. The size of this package was 100 billion Turkish Liras.²³

Transportation opportunities governments limited transportation services globally and locally as a precaution measure.²⁴ That issue kept employees and consumers away from the retail points.²⁵ As a result of this, economic activity has slowed down. On the other hand, the limitations on transportation services affected oil prices globally.^{26, 27}

Munbodth²⁸ asserts that 20.000 retail stores in the United Kingdom might have to end their commercial activities and will be pulled out of the market because of the pandemic. Thereby this period of the pandemic is not only a problem for the huge enterprises but also the small ones.

Consumers' demand for goods and services had decreased because of the quarantine measures applied by many countries. As a result of this, manufacturing and supply chain activities have slowed down globally. With the effect of increasing the unemployment level on the economic shrinkage, it's expected that the demand will keep decreasing.

The worst-case scenario for the economic impact of the COVID-19 Pandemic is the global recession.²⁹ If the COVID-19 period takes longer than expected, credit default rates may increase dramatically.³⁰

Yet another problem is the anomalies in the dysfunctional markets led and triggered by consumers and companies. The pandemic caused both supply and demand shocks. In Turkey, the price of the face mask and hygiene products rose rapidly, and finally, the government had to interfere with the situation and forbade the face mask sales temporarily on 6 April 2020 and distributed by itself. The Turkish Presidency of Competition Agency also opened an investigation for the price manipulators.^{7,16}

Supply and demand have been decreased by the consumer's retrench their spendings and firm's reduction of production.³⁰ Global financial markets are also affected by alteration, and falls have been observed on indexes. It can be said that there are two types of consumers and firms in this case. The first type is the farsighted ones who make decisions based on expectations, and the second type is the ones who think simple and try to reach the optimum in long term.²⁴

Some researchers are comparing the results of the pandemic with the Great World Depression of 1929, yet some of them are expecting a “Greater Depression”³² at the end of the period. Conversely, some other researchers are insisting that these are completely different issues since the pandemic is a natural disaster.³¹ After all is said and done every single country, institution, industry, firm, and person have been affected negatively by this period.

General Effects of COVID-19 Pandemic on the Consumer Behavior

COVID-19 brings uncertainty in the global markets that also affect the consumer decision processes. Consuming occurs when a person needs or wants something. Need is anything necessary for a person to maintain his/her life. If these necessities aren't fulfilled at a certain level, the person may totter to continue his/her existence. Wants are desires, wishes, aspirations, and/or tendencies and they do not include any necessity.³³ We have decided to build this research on needs because of their inevitable character.

There are two widely accepted approaches for defining human needs. The first one is Maslow's³⁴ Theory of Hierarchy of Needs which has five ladders. The second one is Alderfer's³⁵ ERG Theory which has three ladders.

COVID-19 pandemic may cause unsatisfied needs from Maslow's³⁴ Hierarchy of Needs.

These unsatisfied needs from each level of the hierarchical pyramid and the reason for their unsatisfied state might be as below:

- The physiological needs level has threatened because the pandemic may cause a health impairment.
- Safety needs level has threatened since the pandemic period brings economic uncertainty and problems
- Because of the isolation measurements, people became more distant and, that issue threads the social needs level
- Since the natural flow of life has been interrupted, esteem and self-actualization steps had threatened.

ERG Model of Alderfer³⁵ defines the human needs for three levels. These levels are existence needs, relatedness needs, and growth needs. It could be said that pandemic is a threat to all three levels of Alderfer's ERG. ³⁵

- Since the COVID-19 Pandemic is a fatal disease the existence needs level had hanged by a thread,
- Isolation, quarantine, and lockdown measures may cause an interruption for the level of relatedness,
- The growth needs may get affected by the difficulties of reaching critical goods because of the problems in the distribution and manufacturing systems.

According to Starr³⁶ consumer expenses for food, health, and sheltering need increases in the economic stagnation periods. The reason for this situation is the rising anxiety of the consumers for the perceived risk for unsatisfying their basic needs because of the lack of financial funds. Bohlen et. al.³⁷ emphasize that consumers move through existential purchases from expensive and arbitrary spendings. To sum up, consumers are behaving strategically based on the level of their sources.

Consumer behavior may differ for each phase of economic boom, stagnation, and recovery. In the stagnation phase, consumers are more tend to cook at home and avoiding buying white appliances, and put emphasis on paying their rents. ³⁸

Consumer behavior is getting affected from the point of Maslow's Hierarchy of Needs ³⁴ and Alderfer's ERG approach ³⁵ since they can't satisfy their needs properly due to the devastating effects of the economic stagnation that brought by the COVID-19 Pandemic.

Consumers are expected to strive for supplying and keeping a certain amount of goods for satisfying their physiologic (by the definition of Maslow³⁴) or existential (by the definition of Alderfer³⁵) need. In the present case, consumers may delay or change their fourth and-or sixth level needs.

Consumers' Buying Behavior of Food Products and COVID-19 Pandemic Period

Even though very few effects of COVID-19 on consumer behavior are known, for now, it's obvious that the amount of home-made food increased since the restaurants can't serve in their places. So, out-of-home consumption of the food has been decreasing, and that brings an increase in the amount of retail food product sales. In this case, the manufacturers had to dislocate their goods from restaurants to retail points. The logistic systems were caught unprepared for this unexpected situation, and some distribution problems occurred.³⁹

Another important fact brought by the COVID-19 pandemic is the rising tendency for hoarding especially for food and hygiene products. Because of the anxiety state of the pandemic, the unexpected hoarding attack of consumers causes a demand shock in the retail market.⁴⁰ According to the research of Long and Khoi⁴¹, there is a positive correlation between perceived risk of the consumers and hoarding tendency. Research made in Sweden between 10 March 2020 to 19 March 2020 shows that consumers were buying food products more than normal conditions.⁴² This unexpectedly high amount of stockpiling of consumers finally led to depletion on 16 March 2020, and probably this depletion has stopped the stockpiling attack for a while.⁴² In Canada, consumers' expectations of a longer quarantine period made them deplete almost every meat aisles in the retail stores, and that caused inventory stockouts.³⁹ According to research made in Germany on 1242 people, 14% of the attendants indicated that they stockpiled a high amount of durable foods (like legumes, rice, pasta, or canned foods).⁴³ Consumers lost their rational state with the spread of the panic and begun stockpiling more than they actually need. This led to restraining other people to get the resources by a fast stock depletion on the retailers.⁴¹ An important motive for consumers to make stockpiling is disinformation spread by unfounded news and rumors which increase the perceived risk and anxiety of people.⁴⁴

Researches show that consumers prefer to buy long-life foods (like frozen or canned foods) rather than fresh foods. It's assumed that the demand for such long-life foods can be increase since the consumers are getting used to consuming these goods more and more in their daily life because of the pandemic. ⁴⁵

Consumers became more interested in healthy foods by the pandemic⁴⁵ and begun considering the nutritional value of the foods they buy.⁴⁶ It can be expected to see an increase in demand for the institutions which serve for obesity and obesity alike diseases since the consumers have changed their way of nutrition for enhancing immunity to avoid COVID-19 and the lack of physical activity because of the lockdowns.⁴⁴

By the growing concern of infection, consumers are avoiding physical contact with other people in the retail points. That brings an increasing demand for food products on online channels. For example, the online food selling rate was 1,5% before the pandemic, but this rate raised to 9% by the third week of March 2020 in Canada. ⁴⁵

Since the consumers are spending more time than ever at home because of the isolation and quarantine, they can evaluate many product alternatives online. This situation brings an important ethical and social duty for the companies is managing the B2C information flow correctly and properly for the products to them away from improper buying decisions. The messages given by the companies should be anxiety-reducing, evidence-based, and consumer-friendly. ⁴⁴

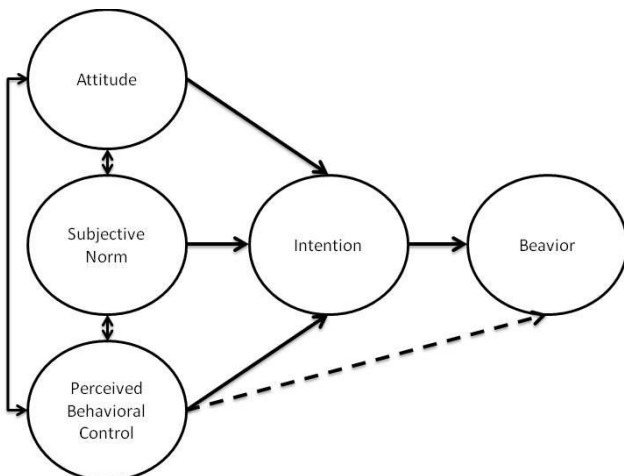
Discussion and Recommendations

Since nutrition is a physiological and existential need, food consumption is inevitable for humans. With the beginning of the COVID-19 Pandemic, one of the most salient problems consumers encountered is the method of maintaining food consumption in this new normal. Hoarding, having more online shopping, avoiding eating outside, and cooking more at home are some results of this problem. We believe the Theory of Planned Behavior and Technology Acceptance Model will provide a basis for explaining these results.

According to the Theory of Planned Behavior, there are three determiners for the intention: attitude, subjective norm, and perceived behavioral control (Figure-1).⁴⁷

The intention is a personal positive or negative evaluation of the results of behaving in a certain way.^{48,49} Consumers' level of perceived risk may arise for acquiring fundamental needs because of the isolation and lockdown measures of the COVID-19 Pandemic period. The subjective norm is a social pressure on the person to behave in a certain way.⁵⁰ From the beginning of the pandemic, probably every single person has been warned and oppressed by the other people in their social circle to prevent themselves from the disease. People younger than 20 and over 65 years old would felt that pressure more than other people since the precaution messages from the authorities usually targetted them in Turkey. Perceived behavioral control is about the abilities and resources of the person to behave in a certain way.^{47,51} Lockdown and isolation measures applied by the governments are restricting people and decrease perceived behavioral control. Also, the uncertainty of the period may affect perceived behavioral control negatively. Presumptively the constituents of the planned behavior may motivate consumers to avoid the crowded places (as retail stores like groceries, malls, supermarkets, etc.) with the high infection risk, online stockpiling and hoarding for passing the isolation and lockdown period without having a problem with the household resources and consuming healthy foods for boosting their immune system against the infection risk.

Figure 1. Theory of Planned Behavior, Resource: Ajzen, 1991:182



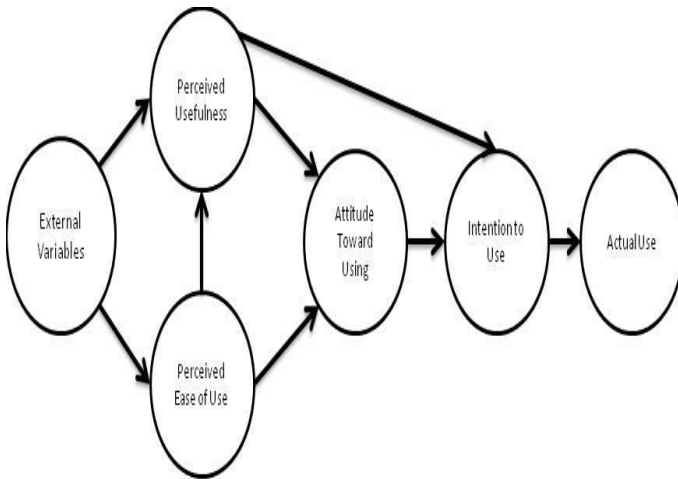


Figure 2. Technology Acceptance Model, Resource: Davis vd., 1989: 985

Despite these all negative circumstances the consumers still have to consume for satisfying their physiological and existential ^{34,35} needs. Thus the reason behind the rise in the online shopping rate is the social distance, isolation, quarantine, and lockdown measures. One of the most valuable pieces of evidence for proving this claim is the statistics shared by the Turkish Interbank Card Center (TICC). Based on the statistics of TICC 24% of the payments made by credit cards were for online shopping. On the other hand, 5 million cards had been used for the first time for online shopping between March 2020 to April 2020.⁵² Additionally, retailers have brought their logistics system into conformity with online shopping systems. This action of the retailers is a sign of their expectation on the boost of online shopping. Consumers increased demand for online shopping can be explained by using the “Theory of Planned Behavior” of Ajzen that has its roots in the “Reasoned Action Model”⁵³ of Ajzen and Fishbein and the “Technology Acceptance Model” (Figure-2) of Davis^{54,55}. For this acceptance, perceived ease of use and perceived usefulness of the Technology Acceptance Model⁵⁶ has a significant effect on intention of the Theory of Planned Behavior ^{47,48}.

From this point of view perceived usefulness of online shopping might be increased due to the physical shopping possibility of the consumers is restricted. By extensive use of smartphones and the ease of internet access with these devices may encourage consumers to try to experience the benefits of online shopping. Since there are too many online shopping options, consumers would probably choose the ones which are less risky and more user-friendly. On the other hand, there is a consumer population who have already experienced online shopping first time in their life because of the pandemic. So, the amount of online shopping should be observed after the pandemic to understand its real effect on consumers’ online shopping behavior.

According to Lustig and Mariscal “The degree and duration of consumer risk aversion will depend on the behavior of the virus itself, the availability of effective antiviral treatment, and the wide availability of a vaccine”.⁵⁷ For understanding the real effects of the COVID-19 on consumer behavior it’s obvious that the pandemic should be getting under control first. It can say that if a person decides to buy something but the COVID-19 interrupted it, probably that delayed decision will come true if the pandemic can be taken under control.

Herein the essential issue is understanding the reason behind the decreased demand. It might be because of a cautious wait and see mentality or a canceled demand. On the other hand, consumers who preferred to made online shopping should be investigated empirically to understand if they would keep shopping online after the pandemic. Probably the near future of the “New Normal” will bring us the answers to these questions.

References

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