
Problems and the solutions of food supply chain and safety during and post COVID-19 from the perspective of consumers.

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Abstract:

The world is already in turmoil in Corona. Its impact is also noticeable in the food sector. New management is being seen in the field of food security, food affordability, food availability etc. The coronavirus disease (COVID-19) pandemic has heightened food security risks in Asia and the Pacific. (7) We have faced a number of problems in adapting to the current '**New Normal Situation**'. In the future, too, we need to go beyond the norm and plan for compensation.

The situation of Bangladesh is not exactly the same as the other countries. The views and awareness of people of this subcontinent are different from others. The experts see these types of problems in a way and, on the other hand, the general people see in other ways. It doesn't mean that they are totally unaware about these. Most of the time consumers see these types of problems from the expert view. But, here we try to find out the thinking of a consumer about the food supply chain in COVID-19 situation of Bangladesh. Every time the researchers find out the expert view, but here the find out is the consumer's view. As the majority of the world's people are passing their lives in confinement due to the lockdown of the ongoing pandemic crisis since last week of March 2020 that has had an impact on global food security. (4)

The wide scale lockdown has complicated the whole food supply chain from farm to table including food processing, supply and discharge, and consumption where people are engaged in different

segments of supply chain, for example, agricultural inputs suppliers, farmers, food processors, wholesaler and vendors, transportation, and different organizations remain under hurdle. (5)

Keywords:

COVID-19, Food Supply, Food Supply Chain, Consumers, Production, Transportation, Distribution, Retail.

Introduction:

Bangladesh is a developing country. The corona epidemic has had a profound effect on consumer behavior in this country. Growing consumer demand, together with social distancing and increased hygiene protocols, have also put pressure on critical e-commerce distribution networks, leading to delayed or non-deliveries. It seems hard work to go through this research. A lot of research papers among the world about the food safety and supply chain during the pandemic. But most of them are based on international problems of the food supply chain and safety which goes some different from the real situation of Bangladesh. Looking at the consumer's perspective makes our research more specific and it is very interesting to find it out. Here this article is a combination of surveyed data from consumers. There has already been a big effect on food related fields of Bangladesh in this situation. Many surveys have already been done to realize the real picture. BRAC's (NGO) conducted a rapid perception survey on COVID-19 conducted between 31 March to 5 April 2020, for instance, found that 18% and 10% of urban and rural respondents, respectively, had no food stored at home, while 37% and 21%, respectively, had only 1–3 days food reserve. (1)

As students, we are not too familiar with the research works. Collecting data from consumers is another big challenge in the lockdown situation. As most of the consumers are not familiar with supply chain terms, this survey has got more difficult. Analyze the data and using the results in an article is also challenging. For this pandemic situation, collecting data physically is a problem as well as risky too. We have collected data from consumers through online forms which is a work of hardship and fully technology based. So, the participants mostly have proper devices with technological knowledge. Again, most of the consumers of our country don't have the clear idea or any knowledge about the supply chain of any system. But they must have a view about the parts of the food supply chain like food production system, transportation, distribution etc. So, we have collected the data for individual parts of the supply chain from their perspective and compile all the parts together. By doing this, we have figured out the whole supply chain from their perspective.

As concern regarding Coronavirus grows, impact on consumer behavior begins to slow or stabilize in many regards.

Although most non-essential businesses have closed their doors, consumers are still holding tight to some familiar behaviors, including eating out though restaurant traffic is down significantly, the majority of consumers are still making occasional take-out or delivery orders to supplement their in-home eating behavior.

The COVID-19 global pandemic is having a profound impact on consumers' lives. As stay-at-home orders and country-wide lockdowns start to be eased, consumer behavior continues to be driven by new personal circumstances, such as changes in discretionary income and spare time, and reconsidered values and priorities.

Many of the consumers have lost their job, many of them have faced reduction in income. That has created a massive effect on the retailing part of the chain. Consumers have faced a shortage of money for collecting food items. The pandemic has induced panic buying of necessary items including food resulting in unnecessary stockpiling of perishable items. (10)

Fulfilling consumer demands, together with social distancing and increased hygiene protocols, have also put pressure on the distribution networks as well as critical e-commerce distribution networks, leading to delayed or non-deliveries.

COVID-19 outbreaks in Bangladesh during March of 2020. After some days of detection of the first case, the country went likely under lockdown. Movement of the general public, transportation of the general public have been hampered on a big scale. After concerning this topic, a relatable questionnaire has been made for the consumers. Questionnaires have been set in such a way that the general consumers understand easily what we have asked them. Because, the terms of the supply chain are not familiar to the general consumers. Google form has been used for collecting the data. 100 responses have been collected from the consumers that have been used for figuring out the perspective of consumers. We have found results which are very significant.

Thought of consumers:

The food supply chain of Bangladesh mainly depends on production, transportation and distribution parts.



In our survey, we have found 40% of the family have faced huge reduction of income in this pandemic. 50% have also faced this problem slightly. And 9% families aren't affected economically at all when 10% aren't sure about the income problem in the pandemic.



22% of families have faced problems a lot for food in this pandemic. 40% have faced moderate problems and 38% have not faced any problem for food.



The general consumers of our country mostly think that the production system of food in villages of Bangladesh has hampered this crisis. 66% of consumers think that the production system is hampered. Also, 24% of consumers think that there has been no effect on the production of food by the farmers in villages. But, 10% consumers are not sure about any effect on food production during this pandemic.

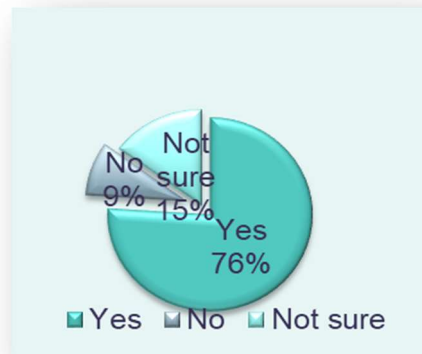


63% of consumers think that the transportation system of food in Bangladesh is affected by this pandemic situation. But 6% think totally opposite of that and 31% are not sure about this problem.



Also, 82% of consumers think that the distribution of food is also affected badly in this pandemic situation. Also, 7% of people think that no effect has happened. 11% of consumers have no feedback or opinion on this question.

Now, if we look at the retail buying part, we will also amaze. 67% of consumers are sure about the inflation of price when they buy food. 19% of them think that the price of food has raised slightly. But 14% are not sure about the inflation of retail prices.



When we ask consumers, “Is reducing the price a solution to their food related problem?” 76% of consumers are agreed about reducing the price of food as a solution. But 9% of our consumers don’t think this is an important solution for them. And another 15% consumers have no idea about that.

We asked them about, in which part of the supply chain we can make change for reducing the food related problem. 47% of consumers suggest making change in the food distribution system and 42% of them are suggesting to change the warehousing and handling system of food.

Finally we asked our consumers if they think there will be a big bad effect on food after the end of this pandemic situation. 71% of consumers are sure about that, there will be a big bad effect on food after this pandemic. 8% of consumers are not thinking that and another 21% are not sure about this.

Discussions:

From the month of March, we are facing the pandemic situation. The government is trying to make the people aware about the social distancing issue. The country was also under almost lockdown situation for several months. Obligation was applied on the people’s transportation from one district to another. Making crowds is also forbidden till now. But it is a great concern for us from the beginning of this situation that most people who live in villages are not aware about the pandemic situation. They go out of the house and do their activity as before. Same thing happened to the farmer. They think about the safety concern barely. In order to sustain food security and socio-economic development, the vulnerability of farming communities should be lessened by the Government and Non-Government organizations. (11)

In some cases, they go out, go to the field and cultivate as well. But in many cases the production system is hampered directly for the safety of the farmers. Many times problems occur due to the availability of fertilizer or seeds which are based on urban industries. There is a loss of about 3300 crores in agricultural (200 crore), industrial (1131 crore) and service (2000 crore) sector and the loss will increase with the extension of lockdown. (9) But that was a big problem because, after the month of May, the industries were opening very slowly. So, we can easily say from this logic that the food production which are directly farmer based like vegetable, grains etc. were affected moderately. But, in some cases the production of packed food is affected greatly. But at later, the production of packing foods were improved to the previous position gradually. From our survey, we get 61% of consumers think that the production system is affected in a big amount. Again, if we look at the transportation of food, we can see that the government didn't forbid the transportation of food goods like passenger transportation. The food products are transported as usual from the start of this pandemic. So, it seems that the transportation sector of food isn't affected at a good scale. But in our survey, we have found that 81% of consumers think that the transportation sector is affected which causes a big problem. The main problem of transportation was loss of production. For the distribution part, there might be some problems in the urban and city area. Because, in these areas, the concerned persons for distribution get some problems to go out and distribute it to the market which sometimes gets crowded. Persons who live in the city area are aware about their social distance issue much higher than any parts of the country. So problems occur in the retailing issue of the supply chain. We also get from our survey, 82% of consumers are agreed about the problem of this issue. The solutions from their perspective are also a bit confusing. Their suggestion is to make change on distributing, warehousing, pricing etc. at almost the same percentage. It is normal that they are not familiar with supply chain systems, but they sometimes think far from reality. Further, when we survey how many they face problems for food, only 22% get affected noticeably and 38% affected slightly. On the other hand, 76% of people think reducing the price is a solution. In low-income economies, the food security status of people is significantly influenced by both the physical availability of and economic access to food products. (8) But in reality, the price of foods in the market hikes little for some product and for most products, the price remains the same.

From here, we can easily relate one thing that the main problem occurs in the income of the people. Food demand is linked to income. Reducing income and uncertainty in earnings make people spend less which can result in shrinking demand. (2)

The problem in the food supply chain is major. Though, there have occurred some problems in the chain for pandemic but it affect the consumers. As in this survey, we work on the consumer's perspective, we will consider the solution from the consumers. From their perspective, there should be changes in the distribution and warehousing system of the chain as well as price too. Maybe their solution or problem findings are different from real situations, but it is their real perspective which we should know.

Conclusion:

COVID-19 isn't a situation that will end soon. It will be a long run that we have to stay with this situation. We have to take familiar steps to remain the situation stable for food. Consumer's view is the indication of the real situation. The change should be brought in the food supply chain system as early as can. The change should be relatively flexible for every part of the chain. Not only giving intensive to the farmers or producers, but also consider about the transportation and distribution part is very important. Every sector have to consider. Positive change in warehousing system can be a great solution. Everything what will done, have to take in mind about consumer's incomes.

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