



Running on a Fumes Amid Covid-19 Pandemic: A Case Study of Sri Lankan Food Manufacturing Firms

Perera T.^{1*}, Maldeniya P.²

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^{1*} Tharindu Perera, Assistant Lecturer, Department of Business Administration, Faculty of Management Studies and Commerce, University of Sri Jayewardenepura, Nugegoda, Western Province, Sri Lanka.

² Pushpakumari Maldeniya, Professor, Department of Business Administration, Faculty of Management Studies and Commerce, University of Sri Jayewardenepura, Nugegoda, Western Province, Sri Lanka.

The COVID-19 pandemic has become a global issue with a significant effect on the global economy. Economists and business leaders believe that its effect will be much worse than during the 2008/09 financial crisis. This effect becomes more challenging for the manufacturers when their supply chains have been severely affected by the pandemic. This is a key moment for the management to adopt new ways of doing things purely as a matter of survival. As Covid-19 is a new experience for many business leaders, they would face numerous challenges to decide on recovery planning. Therefore, the firm's management had to look at challenges and opportunities in the environment and had to make different and more robust plans during the COVID-19 pandemic. Almost all the manufactures started to redesign their business to tackle the challenges faced during the COVID-19 pandemic. Hence, the objective of this study is to identify the challenges faced by Sri Lankan food manufacturing firms during the COVID-19 pandemic. This study was conducted under the qualitative research approach which was guided by the paradigm of interpretivism. Five Sri Lanka food manufacturing companies have been selected for the in-depth interview to satisfy the quest for this knowledge and thematic analysis was used to analyze the data. We were able to discern the challenges that could be classified under particular categories such as challenges pertaining to operation management, supply chain management, marketing and relationship management and human resource management. The findings of this study will be useful insights for the management, when formulating efficacious strategies and policies to cope with inevitable future crisis and offers a groundwork for further empirical studies

Keywords: COVID-19, Business Challenges, Food Manufacturing Industry

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Tharindu Perera, Assistant Lecturer, Department of Business Administration, Faculty of Management Studies and Commerce, University of Sri Jayewardenepura, Nugegoda, Western Province, Sri Lanka. Email: tharindusandaruwan@sjp.ac.lk	Tharindu Perera, Pushpakumari Maldeniya, Running on a Fumes Amid Covid-19 Pandemic: A Case Study of Sri Lankan Food Manufacturing Firms. IJEBHB. 2021;2(3):48-61. Available From https://ijebhb.com/index.php/ijebhb/article/view/72	

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Introduction

The COVID-19 pandemic has affected almost every country in the world, hence, World Health Organisation (WHO) declared this COVID-19 as a pandemic on March 11, 2020 (WHO, 2020). This global pandemic caused serious challenges for the global economy and affected divergently the different industries. Business is facing the biggest challenge ever in history because the International Monetary Fund (IMF) (2020) estimates that the global economy will contract by 3 per cent, much worse than during the 2008/09 financial crisis, and estimates will probably be revised down (UNICEF, 2020). Moreover, the severe spread of the virus caused many interruptions to our societies, increased unemployment rate and inequity of income distribution, remittances are falling rapidly and loss of lives. The travel bans and regional lockdowns enforced by governments blocked the movement of the products and labour required for the operations. Further, raw material manufacturing and logistics activities also have been suspended due to the challenges of coping with Covid-19.

As Covid-19 is a new experience for many business leaders, they would face numerous challenges to decide on recovery planning. Even though recovery is expected in 2021 by the IMF, still a new variant of coronavirus spreading all over the world very fast impacts the global economy and every aspect of businesses. Notwithstanding, during this crisis, the business had to face countless challenges including, cash flow reductions, delays happened in the recovery process, cancellation of orders, instability of supply chains and changes in customer needs and the emergence of new competitors after this crisis. Therefore, these business firms had to accept a great deal of responsibility when meeting the Covid-19 challenge, purely as a matter of survival.

This is a key moment for the management to discover new ways of doing existing things to overcome their unprecedented challenges. Therefore, the firm's management had to look at challenges and opportunities in the environment and had to make a different and more robust plan during the COVID-19 pandemic.

Under those circumstances, management needs to suggest innovative approaches for businesses to manage and organize their limited resources (Budhwar & Cumming, 2020; Verbeke, 2020).

As a result of that, almost all the industries started to redesign their business to tackle the challenges faced during the COVID-19 pandemic. For that, it is vital to have a deep understanding of the industry challenges and opportunities caused by Covid-19. Thusly, the companies who respond the quickest to this crisis by identifying industry challenges and opportunities, they all showed strong sales growth.

When governments imposed regional lockdowns and travel bans, people were forced to remain in houses, thus caused to reduce the demand for the good and services beyond their necessities (Aftab et al., 2021). While almost all manufacturing firms across the world have been affected by COVID-19 the demand for the necessities such as food items, sanitisers, toilet paper and medicines go up expeditiously while the demand for some other products such as garments and sports items fall drastically (Bagshaw & Powell, 2020; Alhroob, Irbihat, Albashabsheh, & Javed, 2017; Husain & Javed, 2019; Husain, Javed, & Araimi, 2021; Javed, Atallah, Aldalaien, & Husain, 2019). A study conducted by Kumar and Abdin, (2021) concluded in this pandemic situation, customers are largely spending on essential items and their consumption behaviours and patterns went a drastic change. According to Yeganeh (2021) even though traditional retailers in the food industry are suffering from the effects of lockdowns, reputed retailers were able to report a significant boost in their sales. During the pandemic, there were sudden demand spikes and a decrease in raw material supply caused a dual disruption for manufactures who produce high-demand items (Ivanov & Dolgui, 2020).

With the advent of the Coronavirus, still, there is a lack of research studies regarding what are the challenges and strategies adapted by different industries to cope with the Covid-19 pandemic and notably, most of the literature was not identified the challenges faced by the food manufacturing industry. According to researchers' knowledge, none of the studies has previously investigated the challenges faced by food manufactures in developing economies like Sri Lanka.

Therefore, the researchers hope this study will contribute to filling the knowledge and contextual gap pertaining to the highly contemporary important research area in order to survive with unforeseen and inevitable future crises. Even though the Covid-19 pandemic situation caused enormous challenges to the food industry, the companies who quickly respond to the challenges successfully showed strong sales growth and increased their market share as well. Still, no one could estimate how long this would take to reach a normal situation and most economists and business leaders believe that the post-Covid-19 world will not be the same as before. Hence, when managing and surviving such a global crisis, the business must know where they stand and their strength before choosing which actions to take or which ways to go. For that identifying challenges and formulating efficacious strategies are vital in the time of crisis in order to show a strong resilient ability. Therefore, the objective of this study is to identify the challenges faced by Sri Lankan food manufacturing firms during the COVID-19 pandemic.

Literature Review

History shows that innovation often thrives during times of crisis as well as accelerating the adoption of developing technologies. At the same time, organizations realize that remote work provides them multiple advantages such as lower overhead expenses, higher managerial control, more sound information systems and fast-tracking digital decision-making (Yeganeh, 2021). But while the pandemic has made the adoption of developing technologies and innovation a necessity for some companies it has also restricted opportunities for others. Aftab, Naveed, Hanif, (2021). found that most medium-scale businesses have not allowed telework opportunities, this is mainly because of the unprecedented financial difficulties, lack of resources and nature of business. Therefore, the companies that are the quickest to respond to this crisis by developing entirely new ideas, will do well. The workplaces are undergoing rapid digital transformation and full automation to cope with crises and are expected to continue in more digital transformations in the future (Goswami, 2020). Moreover, Innovation is mostly driven by two major factors of events causing extreme societal and economic pressures and technology opportunities.

Both these factors can be seen during the Covid-19 pandemic and therefore it is assumed that there would be able to see significant ongoing innovations throughout the society with many innovations which will have a long-term societal impact (Zimmerling & Chen, 2021).

Manufacturing industries can be identified as a sector that is severely affected by the Covid-19 crisis (Harris, et al., 2020). During the Covid-19 pandemic, the manufacturing sector struggled immensely and has not been able to operate well even after the ease of lockdowns in many countries. It is because that many companies were not in a position to conform to new regulations established by authorities (Abdallah, 2020). Pandemics and epidemic outbreaks create manufacturing risk with high uncertainty, increasing propagation and long-term disruption to manufacturers, supply chain actors and to the customers. Okorie, et al. (2020) explain that the Covid-19 pandemic influences the manufacturing sector mainly in two ways. They are the endogenous disruption of manufacturing processes and systems and extreme shifts in demand and supply caused by exogenous supply chain disruption (Javed & Husain, 2021; Javed & Khan, 2017; Javed & Malik, 2021; Rutskiy et al., 2021). Some manufacturing companies had to reduce their operational activities and halt production during the pandemic. The entire manufacturing industry was disrupted and companies had to make changes and take precautionary measures to continue operations (Dar, Gladysz, & Buczacki, 2021). Exit strategy also considers as one of the last possible reactions if other strategies are deemed unsuccessful. A successful business downsizes or exit may lead to free up new resources which can utilize to strengthen existing strategies or strategic renewals (Ren et al., 2019).

Supply chains in firms generally face various types of risk and such risk can be categorized mainly into two groups as operational risk and disruption. The third category of risk is suggesting by scholars very recently which is named extraordinary risks. It refers to epidemic or pandemic outbreaks for commercial products (Paul & Chowdhury, 2020). The impact of this risk is varied according to product types such as high-demand and essential items, regular items and fashion products (Paul & Chowdhury, 2020).

Various recovery strategies have been suggested by scholars for extraordinary risk and some of such commonly used relational strategies are supply chain collaboration and information sharing (Chen, Das, & Ivanov, 2019). According to Paul and Chowdhury (2020) with the advent of the Coronavirus, the demand for essential products increases expressively; as a result of that, the supply of the raw material decreases without notice. These dual disruptions make the production planning complex and could lose the demand.

All spheres of the global supply chain have been affected by Covid-19 including distribution and packaging as well as sourcing of raw materials (Aldaco, et al., 2020). Covid-19 pandemic forces the manufacturing industries to use advanced technologies and this is a challenge faced by the industry. E-commerce platforms are becoming the main mean of surviving Covid-19 (Preiss, 2020) and contactless delivery is becoming the norm requiring digital technologies (Weersink, Massow, & McDougall, 2020). Various digital technologies need to be reinforced within the industry in order to gain benefits such as supply chain optimization and faster time to market (Galanakis, 2020). Manufacturers need to adopt alternative collaborative solutions in order to contact suppliers and customers (Telukdarie, Munsamy, & Mohlala, 2020). Manufacturing industries with complex supply chains face difficulties in identifying critical strategies to deal with this kind of crisis.

The number of human resource management strategies such as work four days per week, half-day working, works split among employees, authorizing additional unpaid leave when employees requested, maintaining social distancing and flexible work environment has been explored by most of the business to control the labour cost and to normalize their operations (Robinson & Kengatharan, 2020). After the lockdown, the major challenge companies face is to get employees back at work. Workers show resistance to go out for work when businesses concern to reopen their operations (Goswami, 2020). With the implementation of social distancing measures, companies are demanded to encourage remote working using various platforms such as Zoom and Microsoft Teams (Telukdarie, Munsamy, & Mohlala, 2020).

This pandemic situation forces organizations to work with a limited workforce and this would lead to a reduction in the productivity of the manufacturing process. Therefore, necessary safety measures, regular health monitoring practices and social distancing need to be adopted by organizations to improve the human side of the manufacturing process (Kumar, Luthra, Mangla, & Kazancoglu, 2020). A significant number of employees is required on the production factory floor for a manufacturing company. But due to prevailing regulations, the majority of the employees will have to work remotely. In such circumstances, employees should be equipped with the necessary facilities to work efficiently and remotely (Dar, Gladysz, & Buczacki, 2021).

Incorporation of advanced technology into the organizational processes is seen commonly within well-established manufacturing firms. Consumers are now digitally savvy with smartphones and seek more information before making a purchase (Telukdarie, Munsamy, & Mohlala, 2020). Therefore, manufacturers should use various digital techniques to share product information. Barcodes with RFID tags, genetic markers and hyperspectral imaging used in conjunction with mobile phones are some such techniques that could be used in communicating product information (World Economic Forum, 2018). Organizations should rethink their organizational structures and processes during the post-Covid-19 period (Malik & Javed, 2021). They should shift their production and supply chain systems to a more sustainable way. Manufacturers of non-essential products and services have been threatened by the Covid-19 pandemic. Most of the countries around the world went for total lockdowns and thereby the consumers mainly focused on essential products and services. A decline was seen in the demand for non-essential products and services (Kumar, Luthra, Mangla, & Kazancoglu, 2020).

Methodology

This research was conducted under the qualitative research approach which is guided by the paradigm of interpretivism. The researcher is able to observe and gather data from the field and give judgment and meanings after a thorough analysis of the data thus collected.

Creswell (2003) stated that qualitative researchers try to develop a complex picture of the problem or issue under study. This involves reporting multiple perspectives, identifying the many factors involved in a situation, and generally sketching the larger picture that emerges. Therefore, the qualitative research approach is most suitable when exploring the different challenges faced by food manufacturers. Since this was conducted as an exploratory study, the findings are subjective depending on the researcher's interpretations arrived at by using inductive reasoning. The in-depth interview method is used as the primary data collection method in this research study (Albashaheh, Alhroob, Irbihat, & Javed, 2018; Alhroob et al., 2017; Husain et al., 2021; Javed, 2017; Javed & Husain, 2021; Javed & Khan, 2017; Javed & Malik, 2021; Khan, Baseer, & Javed, 2017). According to Saunders et al. (2003), interviewees may use words or ideas in a particular way, and the opportunity to probe these meanings will add significance and depth to the data obtained by the researcher. It may also lead the discussion into areas where challenges faced by food manufacturers that other researchers had not previously considered but which are significant for our understanding. Moreover, the use of interviews helps to gather valid and reliable data that are relevant to the research objective of the present study.

The interview guide focuses mainly on what are the challenges faced by food manufacturing firms when continuing their operations during the Covid-19 pandemic. Five companies were selected based on the purposive sampling technique and pseudonyms were utilized for companies' names. Purposive sampling enables the use of judgment to select cases that will best enable to answer the research question(s) and to meet research objectives. This form of sample is often used when researchers wish to select cases that are particularly informative (Husain et al., 2021; Javed & Malik, 2021; Saunders et al., 2003). In the present study, purposive sampling enables the selection of the most relevant food manufacturing businesses that have survived and revived from these unprecedented challenges in order to serve the purpose of the research.

Due to the prevailing crisis and regional lockdown, the purposive sampling technique aided to obtain the required data and information time and cost-effectively. Business development specialists and business strategy specialists of the selected companies participated in the interviews to satisfy the quest for this knowledge.

The researcher obtained direct consent from all the participants before participating in the interview and they also had the opportunity to raise questions if they need any clarifications. The researcher promises the protection of privacy and the confidentiality of the information provided by the participants and fully informs them about the research, its objectives, expected duration and procedures. The basic objective in data analysis is getting a feel for the data (Sekaran, 2003). In qualitative research, thematic analysis is used in data analysis. Mason (2002) identifies the relevant theory relating to research questions and analyses those data according to that analysis called thematic analysis. Under the thematic analysis, the researcher identified the research problems and understood the relevant themes for the study to create an output. In the present study, thematic analysis was used to analyze the gathered qualitative data in order to arrive at a comprehensive understanding of the research objectives. All the interviews that were being conducted have been transcribed separately and have been given codes to make it easier for the analysis. These codes have been further analyzed so that themes are identified in accordance with similar codes. The researcher has identified four themes namely, challenges pertaining to operation management, supply chain management, marketing and relationship management, human resource management.

Findings and Discussion

The responses of the participants offer valuable insights into understandings the challenges faced by Sri Lankan food manufacturing firms during the Covid-19 pandemic. The significance of the data gathering is that they help the researcher to uncover areas that the previous researchers were not able to explore. According to the data gathered the researcher has identified challenges posted by Covid-19 pertaining to four core business processes namely, operation management, supply chain management, marketing and relationship management, human

Resource management. The rest of the chapter is focused on providing an in-depth analysis of these identified themes.

Operation Management: Operations management is concerned with the management of organisational activities where the raw materials and labour are converted into goods and/or deliver the services required by its customers (Martinez et al., 2007). Manufacturing firms in Sri Lanka have confronted various challenges due to economic and social disruption caused by the Covid-19 pandemic and the following is discussed some challenges experienced by them in relation to operations. In most manufacturing businesses, the main challenge faced in the manufacturing process has been the handle of increasing production costs due to the problems associated with the procurement of raw materials.

Because of having supply chain disruptions, the firms have to make decisions regarding production in situations where supplies reduce. One manager of Company A expressed that they have to curtail some of their products lines due to the shortage of raw materials and given the priority for the firm profitability, Cash Cows which provide a high margin of profit, in such circumstances. The production manager emphasized that *"Those days if the raw material supply got decreased, we first ran the most profitable product line."* Redesigning the procurement process is another action adopted by Company A, because of the challenges caused by the pandemic situation. This company had to redesign the procurement plan by discussing with the marketing department and other departments what orders need to be completed on an urgent basis. when any manufacturer fails to meet the demand and curtailed some of their products lines due to a shortage of raw materials, it increased their unmet demand as well as the cost of this unmet demand. Hence, the cost of this unmet demand is very high if food manufacture hasn't any effective recovery plan in this crisis situation.

In this pandemic situation also, some businesses had to reconsider their extensive collaboration network. Company B has re-evaluated the outsourcing decisions and decided to bring the processing activity back in-house considering the risk involved in running the business from the others' resources during the pandemic.

A sample quote is,

"We have outsourced the coconut kernel processing activity in the production process. We can operate under full capacity, decrease the cost and increase the profit margin if we outsourced this process."

Moreover, it shows that manufacturing firms had to rely on their own fixed assets, as they continuously invest in them even in the pandemic situation by horizontally integrating their business processes without relying on the third parties which are vulnerable by covid-19.

It is assumed that there would be able to see significant ongoing innovations throughout the society with many innovations which will have a long-term societal impact (Zimmerling & Chen, 2021). Research and development are a process intended in introducing new products and services. Even in Covid-19 pandemic times, some manufacturing firms continue their research and development process in order to quickly bounce back against the pandemic. Company A also continuously invested their research and development process with the hope of introducing five new products. Even though they had five new products to be released out, they only introduced a vegan coconut milk powder during the pandemic situation. Because consumers have shifted their focus towards healthy products during COVID-19 (Kumar & Abdin 2021).

"Consumers tend to think more about their health well-being (family health, healthier meals, healthier minds, and healthier bodies) because of the Covid-19 pandemic. They think that having better health will support quick recovery from Covid-19. Therefore, the demand increased for healthier options such as yoghurt, fresh fruits and vegetables."

Sheth (2020) examines the impact of the COVID-19 pandemic on consumer behaviour and the study concludes that changing demographics, technology and public policy are major forces in developing new habits, as well as giving up old habits. Moreover, a study conducted by Kumar and Abdin (2021) concluded that the consumption habits of consumers went a sea change and they were spending largely on essentials only. Gupta et al. (2020) highlighted that this pandemic is likely to make people more cautious towards their health and changed their preferences as well.

While the pandemic has changed consumer habits, Company A had to retrench their new products range into one product and only introduced a healthy product item by identifying the demand trend. Even though their remaining three products were confirmed for commercial production, they were forced to postpone the commercial production process due to low demand for non-essential items. Furthermore, the majority of the other respondents interviewed agreed that the demand for their non-essential products was significantly dropped in because of the pandemic.

The workplaces are undergoing rapid digital transformation and full automation to cope with crises and are expected to continue in more digital transformations in the future (Goswami, 2020). As such Company E has automated one of its production processes so as to overcome the challenges caused by the pandemic. The major reason for that is the company had to face a challenge to get back employees to work and social distancing caused to reduce productivity. Previous literature in this area of research reports that social distance practices and guidelines left the employees less productive and curtailed the level of production (Robinson and Kengatharan, 2020). A sample quote is,

"One automation took place in the canning process. It required a larger man workforce. We automated this process because we had an issue with the labour supply those days.

Manufacturing firms can focus on online simplifications and line extensions in their product lines in this kind of crisis. Company C has to trim their unclean seafood line to a manageable size and extended the clean seafood product line identifying the decreasing demand in the market for the unclean seafood line. Because Company C provides their seafood for customers who are in apartments and during the Covid-19 period, they demand clean seafood as they had a problem in waste management those days. Owing to the reduction in demand for unclean seafood, they realised that they could not make reasonable revenues and said they were at terrible risk. Replacement of inputs has been implemented as a method of sustaining the manufacturing process by company D as a threat occurred for them in obtaining packing materials.

They faced an issue in packing materials relating to the import of materials such as plastic and polythene. Almost 80 per cent of their packing materials were coming from China. They had to face an immense challenge to find an alternative as they were required to supply customer orders because they had already accepted those orders. Therefore, they have shifted to bio-degradable packaging materials to continue their manufacturing process. However, the manager interviewed sadly disclosed that *"surely, if the pandemic stays continues, again we may have to face a huge struggle to get packing materials needed for our production."*

Reliance on tech platforms became more acute to cope with this unprecedented crisis and it has accelerated digital transformation which previously encountered resistance (Anderson et al., 2020). As suggested by researchers, manufacturing firms also had to experience digital transformations in their business structures. Companies A and D has established work from the home facility for their employees who are not directly involved in the manufacturing process and has integrated advanced communication and collaboration platforms such as Teams, Zoom and Cloud computing to their workplaces to continue their operations. However, one manager expressed that adapting proactively to the new communication and collaboration platforms, they were able to keep workforce productivity, however, caused an additional financial burden in the time they are facing unprecedented financial difficulties. According to Aftab, Naveed, Hanif, (2021) most medium-scale businesses have not allowed telework opportunities, this is mainly because of the unprecedented financial difficulties, lack of resources and nature of business. Another informant dismally said, as a consequence of the Covid-19 outbreak, they don't have much cash in hand to cover all their bills and fixed cost, they faced considerable cash loss. Moreover, a study conducted by Gupta et al. (2020) concluded that 64% of the business owners claimed that they had to face liquidity problems after the COVID-19 pandemic. Because they had to make recurring payments like rent instalments irrespective of whether they receive revenue or not.

"We faced cash loss during the time due to island-wide travel bans and lockdowns enforced by governments, we partially resume operation so while the lockdown persists. Otherwise, we have zero revenue but there's a fixed cost that exists"

Supply Chain Management: As to manufacturing industries, many challenges were recorded in supply chain management including the shortage of raw materials. Manufacturers believe that the supply chain is the spine bone of their business. Because supply chain management is a critical process in a manufacturing firm that involves the flow of goods and services from raw materials to the final product and eventual delivery to the end-user. This Covid-19 pandemic has suddenly created new challenges to this process and supply chain managers had to address this under extreme uncertainty. Disruptions in the supply chain and reduced supply of raw materials create a rough time for all manufacturing firms. (Handfield et al., 2020). Company E faced unprecedented demand for its necessary food items during early March in the face of Covid-19.

"We increased our production by using our full capacity and increasing the working hours and allow employees to do overtime as well. But, soon after capacity is increased, we had to face huge shortages of required key raw materials.."

During the pandemic, there were sudden demand spikes and a decrease in raw material supply caused a dual disruption for manufactures who produce high-demand items (Ivanov & Dolgui, 2020). In a similar vein, one manager of company A said ". *There was a good demand for frozen food items... but Supply channels had been disrupted in receiving raw materials."*

For that reason, to keep up the supply chain continuously and protect the permanent suppliers from the Covid-19 pandemic, Company B has freely provided Covid-19 Hygiene Kits, even though it caused additional expense and excess burden to the firm.

"Although we were facing challenges, to keep up the supply chain continuously and protect suppliers from new types of virus, they were freely provided with necessary masks, sanitizers and glouse. Also because they are required even after the pandemic to continue the business."

Moreover, Company E has taken more challenging actions such as reducing the creditor's payment period for some suppliers and move to quick creditor settlement to ensure the stability of the supply chains in crisis. Thereby, they believe that suppliers can mitigate their financial difficulties and supply raw materials for them continuously. Distribution is another vital component in supply chain management and most firms have faced issues in delivering final products to the customers during Covid-19. Manufacturing firms have previously also survived and stabilized their business in turbulent times by shift from a product-centric to a service-centric business model and logic (Kwak & Kim, 2016). Managers interviewed expressed that *"There was new order for products... We manufactured products but the problem those days was taking them to customers."* Despite the financial and other difficulties, Company C and D have identified a way to overcome this challenge and they have focused more on direct delivery services shifting from a previous solid product-centric business model.

Marketing and Relationship

Management: Marketing is about customer management. Customer management is about making customers buy as well as making sure that they are satisfied with their purchases and that the likelihood is sufficiently high that they are kept and eventually grown into loyal customers (Pels & Grönroos, 2009). The market business performed before has changed to a great extent.

Therefore, almost all the manufacturing firms started to redesign their marketing plans more wisely to cope with challenges faced during the COVID-19 pandemic as noted in the interviewed manager:

"During Covid-19, people only buy essential goods and services. In that circumstance, the company cannot increase market share or volume by marketing."

Therefore, they were not in a position to increase their market share or volume by marketing non-essential goods in this pandemic situation. Accordingly, a study conducted by Kumar and Abdin, (2021) confirmed that as far as the change in consumption is concerned, the focus of consumers has shifted towards essential products and concluded that consumption habits of consumers went a sea change and they were spending largely on essentials only.

Hence, *the* marketing strategy has been redesigned and leveraged by company A so as to match with the current market demands by decreasing the marketing cost (*reducing the number of advertisements on non-essential goods*) devote for less demanding goods like non-essential items during the Covid-19 outbreak.

The majority of the informant agreed that retaining the consumer and customer base was another challenge faced by them during the Covid-19 pandemic. Most notably, the manager of Company A expressed that their Company has changed the credit management policies and procedures to retain their existing customer base in this challenging time. Granting extended repayment terms is the toughest strategy adopted by them in the current situation so as to develop their sales by providing flexibility to the customers. Because customer retention is very important for companies in crisis situations to safeguard the customer retention rate, purchase frequency and average order value.

"Company has to retain the customer and the consumer, therefore the company had to change the credit strategy... Reseller tries to buy essential goods more these days. But we also need to sell non-essential goods. Therefore, had to make a hard choice to increase the credit period given for non-essentials. The credit period kept the same for essentials. The credit period of 30 days had to increase up to 60 days. If not the reseller or customer discontinues the purchase from us. They think it is useless to buy and stock non-essentials. Credit strategy also comes under marketing strategy. After the pandemic, we cannot lose customers.

Marketers have started to promote their products and services virtually by adapting themselves to the new business environment. Internet and social media became more popular for virtual promotion, because of travel restrictions and consumers were spending more time on the internet and social media (Yeganeh, 2021). As a result that manufacturing firms also should require to alter their conventional marketing and customer relationship practices to mitigate the challenges posed by the Covid-19 pandemic. One manager of Company C expressed that during the initial stage of the Covid-19 pandemic, customers were allowed to place orders via phone calls.

However, they have identified that only the essentials are ordered by customers via phone and customers don't have any awareness about the entire product range offered by the company, when ordering via phone. This company really struggled to sell complementary products, to keep up the consumers' awareness about the full product range and also to reach their customers when some business operators were thinking of engaging their customers virtually and driving online sales. One said, *"otherwise, we would become the second or the last choice for online customers."* Hence, Company C has to find a reasonable solution to keep in touch with their customers with the advent of the Coronavirus to survive their business.

Human Resource Management: Human resources management remained a challenging topic for manufacturing firms with the advent of the Covid-19 pandemic and finding labor has become one of the significant challenges for every business. Manufacturing firms had to establish new work methods and rotation techniques for employees due to Covid-19 prevention policies and travel restrictions introduced by the government. The majority of the managers interviewed agreed that it was more challenging for them to maintain social distancing and getting their traditional workplaces/ factories ready for COVID-19. Nevertheless, all the manufacturing firms had considered the social distancing among the employees when continuing production.

For that, all factory workers had been divided into separate teams and coordination was done through team calls and phone calls. All the unnecessary movements were restricted and even the lunchroom was split, and movements were restricted in there also. It was observed that most manufacturing firms face challenges in maintaining social distancing in their factories. Moreover, social and physical distancing restrictions as well as new work methods like work from home subsequently led to the shutdown of industrial production and caused a rough time for all manufacturing firms (Marhoobi, 2021).

Many manufacturers faced financial difficulties when paying salaries while curtailing their productions. Manager of the Company C expressed that *"employees who are not directly involved in manufacturing process stayed at home*

For several weeks and we were struggling to pay for them". One manager of Company D said very disappointingly, we had to initiate 30% per cent salary cut for executive employees and we had to reduce the salaries of non-executive employees by 15%. The majority of the interviewed managers mentioned that if the pandemic continues, they might have to go for greater salary reduction or job cuts. After the lockdown, the major challenge companies face is to get employees back at work. Workers show resistance to go out for work when businesses concern to reopen their operations (Goswami, 2020). One manager clearly uttered that "Our employees, they travel on public transport, trains or a bus. it's a huge risk."

Hence, Company A had to facilitate the employees who report to work in order to ensure continuous production within factories. Therefore, employees were given various facilities and companies to change their human resource managing policies from time to time so as to adapt to changing situations and to control rising labour costs.

"Firstly, we gave transport for employees to avoid public transport during the Covid-19. We had to bear a huge cost for that. Then the management decided to provide lodging facilities to employees. To keep them all in one place to offer them employment."

Some of the manufacturing businesses have utilized their non-manufacturing staff to prevent the spread of Covid-19 in factories, quoted *"the non-manufacturing staff in areas like cafeteria, were used in special cleaning services in order to minimize the spread of Coronavirus."*

Conclusion and Implications

The COVID-19 pandemic hit the world suddenly and caused an immense impact on the global economy and business. Identifying challenges and formulating the right strategies and policies to support the business is indeed crucial in the time of crisis, because these identified challenges may be critical for the success or failure of manufacturing business. Therefore, the food manufacturing business must evolve and adapt to these challenges by finding new ways of doing existing things. By doing so, in the short term, food manufacturing firms can be recovered faster and in the longer term, they could become more resilient when facing a future crisis. Hence, this knowledge extension will help to formulate the strategies to mitigate future challenges pertaining

To core business processes such as operation management, supply chain management, marketing and relationship management and human resource management. Some Covid-19 prevention and mitigation policies implemented by governments such as travel bans, regional lockdowns and social distancing brought on high economic and human costs for manufacturing business. During the unexpected COVID-19 chaos manufacturing firms had to face countless challenges including, continuous increase in production cost due to the problems associated with the procurement of raw materials, cash flow reductions, delays happened in the recovery process, instability of supply chains, re-evaluation outsourcing decisions, changes in customer needs and developing new habits, adaption to temporarily collaborations, protect supply chain partners etc. Moreover, almost all the manufacturing firms have to redesign their marketing plans more wisely to stabilize the business during the COVID-19 pandemic. By analyzing the consumption pattern of the customer, these firms have altered advertisements cost devote for less demanding goods, revised their existing marketing plans to new product developments. People management practices have been drastically changed with the Covid-19 pandemic and finding labour has become one of the significant challenges to manufacturing firms. Therefore, manufacturing firms have strategically amended their established human resource management policies to adapt to changing situations and to control labour costs. All in all, management of the manufacturing firms has ensured that the workplace is a minimal threat of spreading the virus by establishing health and safety measures.

These research findings are significant for managing and surviving such a global crisis. To survive and revive the business during the COVID-19 pandemic, management has to look at challenges and opportunities in the environment and have to begin to implement new business strategies and actions. Thusly, these findings can be utilized for other industries to gain awareness about the challenges faced by manufacturing firms in the Covid-19 world. Moreover, this paper provides a deeper understanding of the challenges faced by manufacturing firms, which could be useful to formulate recovery strategies to cope with unprecedented future crises.

This information also assists all other businesses to become more resilient in long term, more than just to the immediate survival of their business during the epidemic or a pandemic, in the future.

Most of the previous literature was not identified challenges faced by food manufacturing firms during the COVID-19 pandemic. Hence, this study will substantially contribute to the literature relating to challenges faced by food manufacturing firms in Sri Lanka with the unprecedented COVID-19 crisis. Due to the prevailing crisis, the present study has limited its' scope to the limited number of manufacturing companies and identifies only four core business processes, including operation management, supply chain management, marketing and relationship management and human resource management. Future studies may conduct on other core business processes using more firms and future research could thus examine other industries like hospitality, textiles & clothing, telecommunications, banking to get a more diverse insight into these challenges. Furthermore, a future study could investigate the effect of the entrepreneurial skills of top managers when coping with these challenges.

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