



GALGOTIAS
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Research Project Report
on
Recovery Strategies
for
Logistics and Supply Chain Management
After the Effect Of
COVID -19
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DECLARATION

I, **Aaryan** ,the student of Galgotias University from BBA Logistics and Supply Chain Management(Semester 6th) hereby declare that the work entitled “**Recovery Strategies for Logistics and Supply Chain Management After the Effect of COVID -19**” is my original work, which I have completed for the academic year of 2020-21.The information submitted in this project is original and true to the best of my knowledge.

AARYAN

ACKNOWLEDGEMENT

This is to acknowledge and immensely thank to the people who have helped me in my Project Report.

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03/24/2020

CERTIFICATE

This is to certify that Research Project Report on “**Recovery Strategies for Logistics and Supply Chain Management After the Effect of COVID -19**” has been successfully completed by **AARYAN** under the supervision and guidance from mentor **Prof. Ashok Kumar**.

This Research project report is submitted towards the partial fulfilment and as a requirement of 3 years of graduation course (2018-21) of Bachelor’s degree in Business Administration (**BBA- Logistics & Supply Chain Management**)

Prof. Ashok Kumar

(Signature)

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INTRODUCTION

Because of the ongoing pandemic of viral disease, known as the COVID-19 flare-up, the supply chains have been affected most fundamentally. Makers of specific things have encountered several difficulties in achieving generous increment sought after the things has diminished in light of flexibly disappointment. To beat these difficulties, this paper proposes a few methodologies to improve administration level during an uncommon pandemic episode, for example, COVID-19,

The Covid ailment (COVID-19) flare-up, which was first announced in Wuhan, China, in December 2019, has influenced 215 nations and domains with more than 9.5 million cases and in excess of 485 thousand passing starting at 25 June 2020. This flare-up has just influenced practically all areas and a large portion of the nations over the globe; hence, the World Health Organization (WHO) has declared it as a pandemic on 11 March 2020. A pandemic is a novel instance of Supply chain disturbances that do have serious as well as dependable effects on the tasks of a gracefully chain. Any pestilence flare-ups, which can be contained topographically, are commonly seen as interruptions that have high vulnerability, long haul presence, and far reaching influence. As of late, firms have been encountering more quantities of pandemic flare-ups. For instance, the WHO detailed 1438 plagues somewhere in the range of 2011 and 2018 with gigantic effects, for example, death toll and financial stoppage. On account of a pandemic, organizations

in different areas experience various sorts of difficulties. For instance, while numerous organizations in various areas, for example, designs and games, are closing down their activities around the world.

What should be done?

In the current scene, we see that a total momentary reaction implies handling six arrangements of issues that require snappy activity over the end-to-end flexibly chain. These activities ought to be found a way to help the labour force what's more, conform to the most recent arrangement necessities:

- 1.** Make straightforwardness and create transparency on multitier supply chains, setting up a rundown of basic parts, deciding the root of sources and supply, and recognizing elective sources.
- 2.** Gauge accessible stock along the value chain—including spare parts and after sales stock—for use as an extension to keep creation running and empower conveyance to clients.
- 3.** Evaluate reasonable last client's demand and what makes them in (or, where conceivable, contain) lack of purchasing.
- 4.** Upgrade creation and dispersion limit to guarantee representative security, for example, by providing Personal Protective Equipment (PPE) and drawing in with correspondence groups to share disease hazard levels and work-from-home choices. These sources will empower pioneers to get current and extended limit levels in both labour force and materials.
- 5.** Distinguish and secure logistics limit, assessing it and quickening, where conceivable, furthermore, being adaptable on transportation mode, at the point when required.

6. Oversee money and net working capital by running stress tests to comprehend where supply chain issues will begin to cause a money related effect.

1. Make straightforwardness and create Transparency

Making a straightforward perspective on a multi-tier supply chain starts with deciding the basic segments for your activities. Working with tasks and creation groups to survey your bills of materials (BOMs) and list parts will recognize the ones that are sourced from high-hazard regions and need prepared substitutes. A danger list for each BOM product, in light of uniqueness and area of providers, will help recognize those parts at most noteworthy risk. When the basic segments have been distinguished, organizations would then be able to evaluate the danger of interference from level two and ahead providers. This phase of arranging ought to incorporate posing direct inquiries of level one associations about who and where their providers are and making data sharing arrangements to decide any disturbance being confronted in level two and past associations. Producers ought to draw in with the entirety of their providers, over all levels, to shape a progression of joint arrangements to screen lead times and stock levels as an early-notice framework for interference and build up a recuperation plan for basic providers by product.

In circumstances in which level one providers don't have perceivability into their own gracefully chains or are not pending with information on them, organizations can structure a speculation on this danger by locating from a scope of data sources, including office introduction by industry and parts class, shipment effects, and fare levels

across nations and areas. Business-information suppliers have information bases that can be bought and used to play out this triangulation. Progressed investigation draws network planning that can be utilized to separate valuable data from these information bases quickly and feature the most basic lower-level providers.

Joining these theories with the information of where segments are generally sourced will make a provider hazard evaluation, which can shape conversations with level one providers. This can be enhanced with the depicted outside-in investigation, utilizing different information sources, to distinguish conceivable level two and ahead providers in influenced areas. For hazards that could stop or essentially increase cost of activities, organizations can recognize elective providers, where conceivable, as far as capabilities of outsiders seriously influenced locals. Organizations will need to perceive that distinctions in other strategy (for instance, changing in travel was under limitations and government direction on separating necessities) can majorly affect the requirement for (and accessibility of) different choices. In the event that elective providers are inaccessible, organizations can work intimately with influenced level one associations to address the hazard cooperatively. Understanding the particular presentation over the multitier gracefully chain ought to take into account a quicker restart after the emergency.

2.Control Production or accessible stock and manage distribution

Most organizations would be amazed by how a lot stock sits in their worth chains and ought to gauge its amount, including save parts and remanufactured stock, is accessible. Furthermore, after-deals stock seeks to be utilized as an extension to keep creation running, this activity has to be finished during the flexibly chain-straightforwardness practice beforehand depicted. Assessing all stock along the worth chain helps organization to increase its business. Explicit classifications to consider incorporate the accompanying:

- completed products held in stockrooms and impeded stock held for deals, quality control, furthermore, testing.
- save parts stock that could be repurposed for new-item creation, remembering the compromise of lessening existing client care as opposed to keeping up new-item deals.
- leaves behind lower-grade evaluations or quality issues, which ought to be evaluated to decide whether the adjust exertion would be advocated to comprehend quality issues or whether remanufacture with utilized stock could address flexibly issues.
- parts on the way need to be assessed to perceive what steps can be taken to quicken their appearance-especially those in customs.

— flexibly as of now with clients or sellers ought to be considered to check whether stock could be repurchased or straightforwardness could be made for cross-conveyance.

3. Survey last client's demand (Final customer demand)

An emergency may increase or decrease the interest for specific items, making the assessment of practical last client's request more earnestly and more significant. Organizations should address whether request signals they are getting from their prompt clients, both in short and medium term, are practical and reflect basic vulnerabilities in the conjecture. The request arranging group, utilizing its industry experience to access explanatory instruments which may have the option to discover a dependable interest sign to decide fundamental flexibility—the aftereffect of which have to be examined and should be noted in the coordinated Sales and operations planning (S&OP) measure.

Furthermore, direct-to-shopper correspondence channels, market experiences, and inward and outside information bases can give important data in evaluating the present status of interest among your clients. At the point when information sources are restricted, open correspondence with direct clients can fill in probably a few holes. With these elements in mind, estimating request requires a working cycle to explore uncertain and ever-advancing conditions effectively. To plan for such occasions viably, associations should take the following activities:

- Develop an interesting methodology, which incorporates characterizing the granularity and time skyline for the estimate to make hazard educated choices in the S&OP cycle.

- Use progressed factual estimating instruments to produce a reasonable indicator for base interest.
- Integrate market knowledge into item explicit interest estimating models.
- Ensure dynamic observing of estimates all together to respond rapidly to errors. With many end clients participating in deficiency purchasing to guarantee that they can guarantee a higher part of whatever is hard to find, organizations can sensibly address whether the interest signals they are accepting from their prompt clients, both short and medium term, are sensible and reflect basic vulnerabilities in the conjecture. Making orders more modest and that's just the beginning regular and adding adaptability to contract terms can improve results both for providers and their clients by smoothing the pinnacles and valleys that raise cost and waste. A working cycle that organizes clients by key significance, edge, and income will likewise help in shielding the coherence of business connections.

4.Upgrade the available inventory limit

Outfitted with an interest gauge, the S&OP cycle have to upgrade in creation and conveyance limit. Situation examination can be used to test distinctive limit and creative situations to comprehend their monetary and operational ramifications. Advancing creation starts with guaranteed worker security. This incorporates sourcing and drawing in with emergency correspondence groups to discuss with workers about disease hazard concerns and alternatives for far off and home working.

The subsequent stage is to lead situation intending to venture the budgetary and operational ramifications of a delayed closure, surveying based on accessible limit (counting stock as of now in the framework). To anticipate how to utilize accessible limit, the S&OP cycle to decide which items offer the most noteworthy vital worth, thinking about the significance of wellbeing, human security and the income potential, during the future recuperation. The investigation will draw on a cross-utilitarian group that incorporates showcasing and deals, tasks, and system staff, including people who can tailor refreshed macro-economic figures to the normal sway on the business. Where conceivable, an advanced, start to finish S&OP stage can all the more likely match creation and gracefully chain arranging with the anticipated interest in an assortment of conditions.

5. Search and secure logistics limit

In a period of emergency, getting current and future logistics limit by mode and their related compromises will considerably be more fundamental than expected, as organizing logistics needs in required limit. Therefore, even as organizations hope to increase creation and make up time in their worth chains, they ought to prebook logistics ability to limit presentation to potential cost increments. Teaming up with accomplices can be a successful system to gain need and increment limit on additional great terms.

To improve possibility arranging under quickly advancing conditions, constant perceivability will depend not just on following the on-time status of cargo on the way yet additionally on observing more extensive changes, for example, air terminal clog and fringe closings. Keeping up a simple way to deal with logistics will be basic in quickly adjusting to any situational or ecological changes.

6.Oversee money and net working capital

As the emergency follows all the way through, obliged flexibly chains, slow deals, and diminished edges will join to include significantly more weight income and liquidity.

Organizations have a propensity of anticipating good faith; presently they will require a solid portion of authenticity with the goal that they can free up money.

Organizations will require all accessible inward estimating capacities to push test their capital prerequisites on week by week and month to month bases. As the fund work deals with accounts payable and receivable, flexibly chain pioneers can be zero while opening up money secured different parts of the worth chain. Diminishing completed merchandise stock, with insightful, eager targets upheld by solid administration, can contribute generous reserve funds.

Moreover, improved logistics, for example, through more astute armada the board, can permit organizations to concede noteworthy capital expenses at no effect on client care. Weight testing every provider's buy request and limiting or wiping out buys of trivial supplies can yield quick money implantations. Flexibly chain pioneers ought to examine the main drivers of providers' unimportant buys, moderating them through adherence to utilization-based stock and assembling models and through dealings of provider agreements to look for more good terms.

Research Paper 1 – “A production recovery plan in manufacturing supply chains for a high-demand item during COVID-19”

Research Paper 2 – “Research at the Intersection of Entrepreneurship, Supply Chain Management, and Strategic Management: Opportunities Highlighted by COVID-19”

Research Paper 3 – “A transformative supply chain response to COVID-19”

A production recovery plan in manufacturing supply chains for a high-demand item during COVID-19

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Conclusions

COVID-19 is an exceptional and extraordinary event that impacts the supply chain globally. The challenges for the manufacturers of high-demand and the essential product has twofold:

- (1) the demand of the product increases substantially and suddenly,
- (2) the supply of the raw material decreases without notice.

These dual disruptions make the production planning complex, and without proper action, the business could be unable to ramp up the production and could lose the demand. This research tackles both of these disruptions and develops a recovery model to revise the production plan, for a certain time in the future – known as the recovery window, to maximize the total profit. In this mathematical recovery model, we consider an increase in production capacity and emergency sourcing and collaboration as recovery strategies. Our research finds that there are significant improvements in

the total profit if manufacturers can implement both recovery strategies simultaneously. This research supplements the inadequate studies on developing mathematical models and strategies for production recovery, considering the impact of an epidemic or pandemic situation. As COVID-19 is a new experience for supply chain decision-makers, they would face numerous challenges to decide on recovery planning. The model, developed in this paper, could be a base paper for decision-makers to make a recovery decision. Moreover, this paper provides a mathematical model and numerical results, which could be useful to understand the impact of the COVID-19 and formulate recovery strategies. The developed recovery model, in this research, is only applicable for revising the production plan. While this study substantially contributes to the literature on the production recovery plan for high-demand commercial products during a major outbreak such as an epidemic or a pandemic, in the future, the concept can be further extended to develop a recovery plan in a complex and global supply chain network considering the impact of a global pandemic like COVID-19. This extension will help to formulate the strategies to revise the supply, manufacturing and distribution plans simultaneously in the supply chain. In this paper, we use hypothetical data to analyze the recovery plan. Future studies may consider collecting real data from specific supply chains, such as supply chains of food and medicine products, to develop and analyze the recovery model. Such an extension could potentially allow the researchers to consider product-specific parameters in the model

formulation. Furthermore, a future study could investigate the recovery models for low-demand items such as garments or athletic products during a pandemic as the current model only considers the high-demand items. Besides, full empirical studies, such as in-depth case studies or a large-scale survey, can be conducted to provide an in-depth understanding of how the proposed strategies help recover or to validate the proposed strategies and their impact on the profit.

Research at the Intersection of Entrepreneurship, Supply Chain Management, and Strategic Management: Opportunities Highlighted by COVID-19

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Concluding Thoughts

Looking to the future, we anticipate that each of the fields—entrepreneurship, supply chain management, and strategic management—will prize research projects that account for relevant concepts from the other two. From a managerial perspective, research findings that leverage concepts from more than one field provide better guidance than those grounded in just one. Scholars can enhance their chances of adding significant value for both audiences by ensuring that their inquiry at the intersections of the fields is actionable (i.e., the ideas can be implemented as opposed to being esoteric), insightful (i.e., the ideas are novel as opposed to mundane), and measurable (i.e., the ideas' scholarly and managerial effects can be empirically assessed as opposed to merely hoping for impact) (Craighead, Ketchen, & Darby, 2019). Strength along all of these dimensions is particularly important when firms face existential threats, such as the COVID-19 pandemic, and scholars aspire to identify what responses are most likely to work.

A transformative supply chain response to COVID-19

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Conclusion

First, individuals have been the focus in highlighting service-related issues for various sectors due to the COVID-19 supply chain disruption. Each of these groups constitutes an element within the ecosystem. But ecosystems are characterised by the interactions between suppliers and consumer's actions themselves. It has been important to first establish the changing service landscape within the food supply chain ecosystem, whether they be organisations, government or non-government agencies or consumers. But equally important will be consideration of the interactions between ecosystem's participants. Equally importance will be given to the consumers who interact with various providers, whether they be organisational employees, volunteers or more faceless interactions with organisations/agencies. The COVID-19 pandemic has highlighted the importance of how perceptions of value can change rapidly.

Second, COVID-19 has not only revealed the fragility of the supply chain but also its latent capacity and resiliency to

adapt and protect consumers and employee's health and safety when confronted with a disruption. While supply chain researchers will need to address issues of traditional concern, such as capacity management within the system, efficiencies of production and distribution, store and delivery operational productivity and service quality, the focus on health and safety outcomes for employees and customers emphasises the opportunity for the supply chain ecosystem to also be considered part of the transformative service movement. The focus on health and safety as a well-being outcome has received sudden and significant attention by companies, policymakers and consumers alike. It must be recognised that health and safety represent only one well-being outcome of the food supply chain ecosystem. A transformative agenda suggests that not only do scholars, organisations and policymakers need to consider individual-level outcomes but also outcomes at organisational, community and societal levels. Such discussions are beyond the scope of this initial foray into transformative supply chain ecosystems but will enrich the literature, and practice by considering the outcomes of health and safety at broader levels of analysis. Particularly with a COVID-19 type of disruptive force, how can the food supply chain ecosystem's efforts to protect individual-level health and safety create outcomes at broader community and society levels? What are organisational, community or societal perceptions of value when considering the food system's role in community-level protection from a viral disease, for example? Beyond the health and safety outcome, what other well-being outcomes should food

supply chain ecosystem participants address in their own business activities or in interactions with each other? These remain important directions for future research that have been beyond the scope of the current research study.

My Opinion on the Above Research Papers.

The above research papers have their own perspective and assumptions with different methodologies and techniques but ultimately indicating the common situation problems such as disruption of logistics and supply chain management due to COVID-19 pandemic.

In first research paper, two main causes occur which are that during lockdown the demand for some products increases suddenly and the supply of raw materials to the retailers decreases drastically and it became a big challenge that how to cope up with this hurdle. This research paper has listed some measures by the implementation of which help in solving this problem.

In second research paper, it states the interconnection among entrepreneurship, supply chain management and strategic management. By keeping in mind the future aspects it anticipates the sudden uncertainties such as COVID-19 pandemic and also suggests the solutions for the issues for the several businesses whether related to entrepreneurship or logistics sector. According to my extent this research reflects and highlighted the main portion of working system.

In third research paper, it not only reveals the fragility of the food supply chain ecosystem but also its inherent potential to adapt to meet social needs and protect and enhance the well-being of individuals and ultimately society. This response is probably most true for Western, educated, industrialised, rich and democratic (WEIRD) societies.

My findings from the entire researches and readings.

During this pandemic everything is stuck at one point, hence every step has to be taken very carefully while measuring all the after effects of it as well.

Logistics and supply chain industry has to opt some of the best techniques and innovations to cope up with this pandemic.

If logistic industry wants to come back in action again then they have to work smartly and hard as well by keeping in mind all securities measures and guidelines to kept away from the effect of this ailment COVID-19.

Though every sector and industry or every business from the corners of the world is affected by this pandemic, but still the role of logistics industry is crucial and cannot be neglected hence any other industry works or postpone their working system. But logistics industry cannot leave its job. Hence, it requires 24 hours service to make the transportation effective.

My final perspective towards the issue of disruption of the Logistics & supply chain management in COVID-19 and some of my unique strategies and planning in relation to this problem.

The disruption in Logistics and Supply chain management industry massively impacts the flow and working through out the world due to ongoing pandemic. To overcome this, it surely takes some time but to remain stop with the work won't help out in any way. Following are some sort of suggestions and techniques which are unique and innovative and can help the logistics and supply chain sector to work better in this hard time and even after this.

1 – Work from home services. - Ditching the commute helps you support your mental and physical health. The time savings can allow you to focus on priorities outside of work, like getting extra sleep in the morning, spending more time with family, getting in a workout, or eating a healthy.

2 – Delivery through drones. - The human delivery system can face many problems during parcel delivery such as confusing traffic, lazy driver etc. By using the drone, the humans can only focus on the order fulfilment and customer care while the drones deliver the product.

3 – Virtual meetings and group discussions. - Online meetings are more cost effective compared to physical meeting. It allows connection from anywhere in the world.

Virtual meetings allow sharing of a broad variety of information in real time with all participants. Increased opportunities. Increased productivity and efficiency.

4 – Bulk orders, policies and discounts. - Bulk buying reduces the cost per unit and can reduce how much you pay in the long run on supplies and products. Another solid advantage is the fact that you never run out of items. Producers save costs by eliminating the packaging process and simplifying logistics to reach the consumer. This can lead to a reduction in the final cost of the product, depending on the producer. It can also mean for the small farmer to be able to sell his product, something that he could not achieve if he had to face the cost of packaging.

5 – Extra clean & sanitised working places and warehouses - Hygiene is the practice of keeping oneself and one's surroundings clean in order to prevent infection and disease and remain healthy and fit. Sanitation is arrangements to protect the public health specially the provision of clean drinking water and proper disposal of sewage.

6 – Robotic solutions. - Retailers are increasingly adopting technology to combat supply chain disruptions caused by the pandemic. In its latest earnings report, Target notes accelerated investments in robotic solutions to rapidly replenish in-demand products and monitor pricing on the sales floor. Grocers Albertsons and Stop & Shop are testing the use of robotics to process customer orders at their warehouses.

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