

“DEVELOPING A FRAMEWORK FOR SUPPLY CHAIN MANAGEMENT DISRUPTIONS IN INDIA”

Research Paper

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“Abstract”

Taking into perspective, the Indian economy, the decision-makers, and stakeholders involved in the global supply chain such as ports, warehouses, retailers, and organizations needed to be aware of constant changes because of disruptions.

This research seeks to analyze the business perspective for the strategic direction and strategic profile of a company. According to Brenes and Camacho (2016), companies will make their supply chain more resilient in strategies of growth, regional expansion, and global competition, without weakening their competitiveness by identifying new tools for transformational managerial decisions in curbing supply-chain disruptions logistics of companies (Amankwah-Amoah, et al, 2021).

The research used qualitative description to analyze data on managerial decision processes, especially on customer satisfaction and its impact on supply chain disruptions in Indian organizations. The targeted population of this study was represented by thirty-five senior managers and directors in leadership positions from the global Indian conglomerate Tata Group, with experience in the automobile and consumer products industry.

The data collected seeks to answer which post-pandemic actions are needed to maintain holistic supply-chain and how will organizations' strategies assist in overcoming supply-chain disruptions. Also, the study seeks to mitigate the gap on supply chain disruptions after the post-pandemic in the global village. Hence, the research demonstrates that holistic managerial decisions taken on a transformational framework of structured criteria and assessment methods can help small and medium-sized organizations to use levers of business excellence and innovation to improve in a world of competitiveness and performance.

The implication of the research is to help firms worldwide to rediscover their potential and capacity to achieve innovation and business excellence by using performance levers.

Keywords: Business Excellence, Supply-chain, Disruptions, Strategy, Stakeholders, Innovation.

1. Introduction

The world nowadays has experienced the awkward situation never expected to happen during this era, such as the COVID 19, a backward approach to the supply of goods and services, a pandemic affecting the supply chain (Sheibe and Blackhurst, 2017). When a disruption occurs in a firm, its effects are often felt throughout the supply chain. As supply chains expand globally and companies pursue velocity and efficiency, the probability of disruptions propagation chain grows across all economies, and India is no exception to the global shocks of disruptions.

A report by United Nations Population Division (UNPD, 2019) agreed that the world was not ready to face such an awkward experience. This research can conclude that all these events have created uncertainty in the global supply chain.

Gans (2016), defines disruption as aligned with a failure of an organization, “and it occurs when the firm’s keep doing the same choices that once bring them success, but now cost them to fail”. These decisions portray avenues to handle those disruptions in every way of our daily lives, such as delays in goods, difficulties in transportation, cargoes, and flights, access to travel, among others.

It is possible that the traditional ways in how to manage the supply chain such as the collection of raw materials, supplying them to the manufacturer, packing, shipping, and delivery, will not remain the same. The potential global pandemic and business risks culminating currently have brought to reality how to be prepared for unpredictable disruptions events, just like the recent incident of the M.V. EVERGIVEN transporting Cargo at the Suez Canal (Lawrence, 2021).

The organizations, end-users, retailers, wholesalers, and different sectors have understood how fragile the supply chain is, and in any event, they must be prepared and ready to keep moving forward with their activities. Without the supply chain working, there is no food or goods to arrive safely at any location at any time.

Supply Chain disruptions concerns have become an important threat to focus on short-term and longer-term strategy for all the stakeholders around the world, and especially for the organization strategic planning to rethink.

It has been important to study how India is facing the supply chain disruptions, in the context of how the organizations, stakeholders, and end-users can transform and adjust their managerial decisions to create value, from the perspective of ESG’s strategies (Environmental, Social, Corporate Governance) and risk management (Kotsantonis et al., 2016).

This ESG’s strategies are very important especially in a country of almost 1.4 billion people, based on Worldometer elaboration of the latest United Nations data, in where every good conveys to be an important link in the whole ecosystem of trade activities.

Even though supply chain disruptions have a severe impact across world trading, the good news is that can be mitigated by a number of managerial decisions planned by strategic makers in the organization using a holistic and transformative framework with a structured assessment and criteria method. (Mithas, 2015) The study analyzed and evaluated managerial strategies that can mitigate the supply chain disruptions facing the global economy especially the Indian economy that can help holistically, small and medium organizations to lever their managerial decisions and improve their competitiveness in a globalized world.

1.1 Problem Statement

Taking into perspective, the Indian economy, the decision-makers, and stakeholders involved in the global supply chain such as ports, warehouses, retailers, and organizations needed to be aware of constant changes because of disruptions.

India is providing a framework for global trade since this century, widening its scope for economic cooperation, and becoming a global force in the world, based on strengthening relations for economic

interaction in fields of Economic Value Added (EVA) for the supply chain such as energy, technology, innovation, pharma goods, commodities, just like the engagement they have with the African continent (Biswas, 2016).

The emergence of the Covid-19 created a loop whole and disruptions in the global supply-chain production and had a great consequence on production process in the India market. Many businesses supply great deal as many organizations did not have the expertise to overcome the challenge of the post-pandemic. Although, many companies shut down, there was also an emergence of new markets, and it is necessary to identify strategies organizations can use to mitigate the supply-chain production especially in the India markets.

With the emerge of new organizations, entrepreneurs, and companies unable to get value creation, (Amankwah-Amoah, et al, 2021), it is necessary to find effective tools for transformational managerial decisions and holistic routes to deal with the overall situations of the companies, logistics, customers satisfaction, and this data can provide benefits and generating information for small and midsize organizations.

This research brings valuable information and holistic alternatives for the development and economic growth of small and medium size companies with supply trade activities that are presently having failures and losses in their daily operations.

1.2 Objectives

The study's overall objective was to analyze what strategies organizations used to succeed in supply chain production during the pandemic and what type of analysis they have made to adjust their corporate decisions. The target recipients were stakeholders in India, involved in the global supply chain, such as ports, warehouses, retailers, and organizations that needed to be aware of constant changes because of disruptions. The implications are for decision-makers and shareholders pursuing their value generation and looking to incorporate new meaningful changing strategies of planning and implementation, to create a virtuous cycle of improvement and assessment (Mithas, 2015), to optimize their operation flows, and earnings before interest, taxes, depreciation, and amortization (EBITDA).

1.3 Preliminary Literature Review Objectives

Agrawal and Gupta, (2020), mentioned how the lockdown in India affected the manufacturing activities, distribution of raw materials, and major effects in the supply chains that for certain companies, might be impossible to recover, and they will end in stopping their operations or even closing. It is impossible to successfully manage an operation if you cannot measure it and monitor it (Zuñiga, 2020). If the firms does not understand how important it is to communicate effectively, with a good attitude of collaboration and commitment, then will be difficult to reach the capabilities needed for the firms to pursue operational excellence to improve their financial performance.

But, for others, all these changes and transformations may result in progress and growing ever experienced in the last few years. The results in production and distribution networks might impact the performance and periods to avoid disruption tails. Hence, there is a need to review the policies that must be developed for the transition from the recovery to the disruption-free operations mode, which will end up in normality of the peaks or valleys faced by the organizations put it to avoid disruption tails (Ivanov, 2018).

India has been providing a good framework for global trade in the present century, based on strengthening relations for economic interactions as per our previous mentioned, bringing value to the supply chains (Jain, 2020). The projections of growth for GDP in India could stay at 9.5% (IMF,

2021), for the benefit of the country that has encountered a lot of difficulties in this pandemic situation.

The study highlighted the importance of critiquing and updating research frameworks and applying them to industrial sectors that are vital to many countries. Isabelle et al., (2020) incite researchers to use the five forces of Michael Porter and beyond, as a way to enhance their decision-making processes to be more effective in their respective business environments, thorough analyses and monitoring of forces, that can be particularly crucial in a post-COVID-19 world, owing to greater social and economic uncertainties and with the expectation of going up adoption of technological innovations by several key industries to help ensure survival and prosperity. There are many theories in supply chain management, but I will refer specifically to 2 of them. One is sustainable supply chain environmental and social considerations, same as ESG's mentioned before, to the traditional focus on economic factors (Allen, et al, 2021). SSCM seeks a contrast with traditional supply chain management (SCM) and brings to attention different concepts between SSCM and SCM. It also includes long-term thinking, by incorporating the product lifecycle to SSCM. The other theory is Circular Economy (CE), introduced to investigate the sustainability of organizations and their respective supply chains (Geissdoerfer et al., 2017). CE literature streams have focused on defining linear economy problems instead of managing circular economy processes. These processes have been studied under different circumstances such as industry-level, supply-chain level, organizational level, or product level (Allen, et al., 2021). The globalization level of CE has been also proposed recently, by scholars. (Geng, et al., 2019). So, having excellent theories and frameworks for making strategic business choices can help businesses and decision-makers to gain clarity in their decisions and help reduce conflicts and uncertainty in business performance (Annan, 2021).

1.4 Methodology

The research was based on qualitative descriptive analysis for the industries of automotive and consumable goods, that companies in India produces and trades in India. We perform interviews with the managerial team, to understand their actual strategic profile and purposes, based on the research questions proposed. The data analysis will be guided by the proposed research to dive into what changes or strategies automotive industries are implementing during global unstable economic activities.

The study will drive decision-makers and shareholders to pursue their value generation and becoming part of important aspects like new products and services can be provided to optimize the operation flows on final figures, which can be rated by adequate valuers in the public markets. Also, the study analyzed how they compete, based on structure, policies, investments, and culture with people.

1.5 Population and Sample Selection

The population of this study was represented by top management senior managers and directors in leadership positions from the global Indian conglomerate Tata Group. The subjects assessed on the interviews were: core values and competencies, customers resilience, perspective on competitor's performance and benchmarking, efficiency, and effective ways of growth measurement and Environmental, Social and Corporate Governance (ESG's) strategies. Sample sizes in case studies are typically small, potentially, 35 people interviewed to generate data on supply chain disruptions in automobile industries (Schoch, 2020). The selection of samples and cases to use is clear, due to the uniqueness of the company or organization, with Tata Motors and TCPL support from their top management, recommending 35 candidates for the interviews and questionnaires, and the collection of all the data according to the framework of information needed to support and incorporate in this

research. This 35 people interviewed are top executives and decision-makers, with experience in the automobile and consumer products industry, as they are in constant search looking for strategies to mitigate the supply-chain disruptions in their institutions and improving economic growth of the country.

1.6 Procedure

This study intends to diagnose various pieces of information related to the Malcolm Baldrige and Deming criteria for business excellence (Weerasinghe and Thisera, 2016), by making observations (previous data research), interviews, and analysis based on areas of management described by these methods.

It is a method used to improve overall organizational performance and can play an active role in improving performance continuously by using measurement and providing feedback on the performance of the organization (Fauzi, 2021).

Malcolm Baldrige and Deming has several criteria used in the framework of an integrated approach in areas of management and business such as: leadership, strategy, customers, workforce, operations, and results. The data collected from the interviews intends to follow the criteria of the Baldrige and Deming Program as the way to analyze and make final reports as a result of this study. The qualitative data collected primarily was analyzed and processed in the following way:

1. Having the questionnaire in hand and shared to the interested party, the data was organized and prepared. All notes were gathered, along with transcripts, and other materials such as documents and books notes from several titles used to understand the group of companies culture.
2. The data was reviewed and explored from several different resources collected such as public company's statements, reading titles and books about the group of companies, and public organizations yearly reports.
3. Codes were created using thematic analysis matching the deming theory criteria.
4. The Thematic themes allow to identify the respondent's views on supply-chain disruptions, so they can be valuable statements to be considered.

1.7 Results and Implications

The Deming cycle consists of a quality improvement model that covers 4 areas: Plan, Do, Check and Act. (PDCA). This criterion is focus in 14 points to achieve total quality management, as follows: create purpose for improvement, adopt the new philosophy, cease dependence on inspection to achieve quality, work with one supplier to reduce cost, continuous improvement, on-the-job training, leadership, drive out fear, break down silos, no slogans, no quotas, or numerical goals, remove annual ratings, self-improvement programs, involve all workers in the transformation.

The results of this study, based on the Deming criteria were clearly focus on improvement in quality, with decrease in the costs because of less rework, fewer delays, and mistakes, with better use of the materials, time, and facilities of the company. When the organizations, logically understand the impacts can be present in the supply chain managements, and clearly see how the company can mitigate such disruptions, it might be the difference between progress or failure, as in the present times, every gap identified as a threat or competitive advantage to be used, can result in positive or negative numbers that can add or take value from the companies, shareholders, and stakeholders.

This chain makes the productivity improves, reach more market share with high and better quality and low prices. At the end will help the organization to stay in business and create more jobs.

1. Create purpose for improvement towards any service or product with the specific and objective aim to become more competitive, generate jobs and remain in business. This purpose will drive you to pursue the essence of constancy which is customer orientation. If

the company can meet the needs and expectations of the clients, at a decent price that they are willing to pay, then, the purpose will be met. In this stage the top management level must define very clearly the strategy to be followed and understood in all levels, along with the policies and core values of the organization. If the management keeps consistency of the purpose, and they clearly set the course, then the results will be remaining in business tomorrow.

2. Adopt the new philosophy, in which the quality and productivity are a relationship that needs to be a true relationship, because if this relationship is followed, then the result will be less rework. There are very specific benefits for the organization in the improvement of processes. First, it will help operations to pursue greater uniformity of products. Secondly, it will reduce the waste of manpower, raw materials, supply-chain timings and performance, mistakes, and rework, and finally will increase the product/service output with reduced costs. In the cultural change and strategic talent impact point of view, the results improve the morale of the people, by having a happier staff on the job, because the company will be centered on a good employees' environment, with clear values for the organization.
3. Cease dependence on inspection to achieve quality by stopping them on a mass way, in trying to manage the outcomes of products by detecting any defects that will lead to loss of profits and more rework. With the good implementation of these new processes, the results are driven in defect prevention, by using a process feedback and customer feedback, both together, on a way of interactive synergy to finally get the action of understanding any variations in the working lines.
4. Work with one supplier to minimize cost by moving towards a single supplier through a long-term relationship of trust and loyalty, will result in bringing innovation, on a win-win cooperation basis, that will help both companies to reduce variations and become more profitable. With the achievement of a long-term production, will result in benefits of quality measures and less defects, with a better understanding of all the processes involved in the creation of a certain product. At the end, the customer-centric criteria, will lead to have a satisfied client.
5. Continuous improvement is focused on the Deming Cycle "Plan, Do, Check and Act. When you plan and search for issues to improve quality and productivity in all the company's operation activities, it results in decreasing of costs. A top management compromised with their organization, will always go after improving their operations, training and supervision for the team, good maintenance, provide necessary resources for all company's and employee's needs, etc. The best results are more notable if you avoid routine activities, which is the enemy of continuous improvement.
6. On-the-job training has the best results for an organization, because specific and new skills are required to keep up in product design, special techniques, customer's needs, ways of use of machinery, and working methods. The team will rely on the organization for more commitment, confidence, and trust, because the company is investing in them, by leading them in training to obtain the necessary skills that the organization needs, and finally can be a way of new opportunities for success and scale their positions.
7. The aim of Leadership purpose is to guide the team to perform a better job. A good leader will help his team to improve when needed and be always assuring all the necessary conditions for his staff to complete their duties on a timely basis, by achieving the company goals. If the staff fails, then the leader fails. This is a win-win, or loose-loose correlation. It is a teamwork in which the orchestra sounds perfect, not one instrument, or one division of the company achieving their goals. The best results are given, when the company is capable to integrate all their corporate structure to make all the team to follow the same path/strategy,

in where the winners will be all together, so the shareholders, top management and staff are linked and generate together the best results. The 3 main key-drivers for better results are collaboration, communication, and commitment.

8. Drive out of fears, so that all the team can work efficient and effective for the organization. Fear is considered an issue for improvement. When fear is present, we get the wrong figures. If is not present a good atmosphere of mutual respect, understanding and awareness within the organization, non-system or improvement management tools will work. Deming always says that this point is one of the most important, because it affects 9 of the other points. So, best results are focus on encourage effective in two-ways of communication, in other words, to drive out the fear so all the team may work more productive and effective for the organization.
9. Break down silos means that all the divisions must work together. Do not allow walls to raise up between departments, because these subdivisions will end up in different views and strategies that might be different than the ones established by the top management. In some cases, the strategy is not communicated on an effective way, rather every Division has their own strategy. This is fatal for the company, and can cause serious damages, that might end in loose of profits. Deming states that “if one company area is being told that their objectives are to maximize his division profits, then the result will be for the company failure”. So, company losses during the actual times, in where severe disruptions might impact different areas of the organization, will needed to be carefully looked at this silo’s breakages, to reduce the gap of possible failures as a result of these situations.
10. Eliminate slogans and targets for the team that incorporate zero defects and levels of productivity. This kind of exhortations can create unpleasant an adversarial feeling within the work force, resulting in low productivity and quality. Deming explains that some banners that rather shows on the job, what the management is doing every month to improve for example the quality of the materials, or better training for the team, better maintenance for the equipment’s to improve quality and productivity, might be a different story: this will increase the morale in the team.
11. Eliminate quotas and work standards that contains numerical goals for the team and the people in management. Deming is not telling us to manage without numbers, because we all know that companies and persons needs goals, targets, and aims. The difference here is that the team needs training, education, systems, and methods to be able to achieve the company goals properly. A Company needs budgets and forecast for the better planning and allocation of resources, but they must also not be arbitrary numerical goals, instead incorporate all the company division’s to take suitable decisions that will drive positive and achievable results.
12. Remove annual ratings, because people are unable to contribute to their jobs if they must concentrate all their efforts on getting a good rating that supports their bonuses or annual performance. This kind of aims becomes in getting a good rating to please the bosses, rather than really benefits the whole organization and company strategy. It is important to have a good compensation system for the employees, so the best results are in implementing it according to the organizations structure and goals, that might guarantee the long term stay for the team, by having them happy in their respective duties with achievable targets as per their competences and responsibilities, with always room for improvement and scale their positions.
13. Incorporate a self-improvement program of education for the organization. These initiatives encourage and indeed keep the team engage with the company, as they feel important and care. An organization needs people that are always improving in education, so it might help

them advance their careers in competitive positions in the company. An organization always must take actions to demonstrate to its employees that education and training is an important pillar of growing, and pays-off well, for everyone that takes the challenge.

14. Involve all workers in the transformation. It is not enough for only the top management commit themselves for quality and productivity. The transformation is everyone's job and responsibility. The better results are granted, when the C-Suites clearly defines the strategy to follow and take actions to accomplish the transformation. Support isn't enough, it requires action. If we commit everyone to adopt the new philosophy of work with excellence in productivity and quality, then the results will help the company to survive in the future and be healthy in the long-term.

The Malcolm Baldrige Criteria have empowered organizations, from different sectors, sizes, and industries to reach their goals, improve number results and become more competitive. It is a framework that any organization can use to improve their overall performance, while the criteria has significantly interest on helping organizations to succeed by addressing current marketplace and economic opportunities and challenges. The results of this study were very powerful in areas such as strategy, by giving an alignment to the people and having a clear purpose of the organization to achieve exceptional results. In financial performance, the concentration of relevant information was focus in maximizing the shareholder value by having a healthier cash flow, profitability, and company value. Results based in customer value were to inspire the loyalty and exceed the expectations and satisfactions of their customers. Finally referring to organizational effectiveness it was outlined the importance of maximize operational efficiency, creating high demand on their products, and having good partnerships that add value to their organizations. Lastly, team engagement was impressive to see their concentration in elevating colleague's performances, but also having an effective recruitment quality process, so all the team can be aligned in pursuing the organization's goals and objectives.

1.8 Conclusion

India's challenges are many, and particularly organizations that are fighting to remain alive. Our theories are based on a strategic alignment model that includes six areas. First the selection of a framework of excellence such as Baldrige or Deming, that will suggest the organization to focus on effective management of business performance, to create excellence and improve their competitiveness. Second is the selection of the best strategy that best suits your company operation. Third is having a team trained and ready to overarch and achieve the company goals and objectives. Fourth, is a good structure of support with the necessary resources for development, assessment, and training with the selection of a good business integration of alternatives according to the company business model. Five, is having in place a strong process such as ISO, Six Sigma, or any other capability mature model, depending on the specific business needs. Finally, a strong culture based, centered on the customers and good employees' environment, with clear values for the organization. It's not easy to sustain a business in the world as it is today. Many challenges are encountered, and only the decision-makers capable of taking better transformational decisions will get better results. Having this framework model is useful to lever business excellence and innovation, helpful for organizations around the world to rediscover their potential and make the transformation possible. When we talk about innovation and competitiveness, can quote Elon Musk, "Innovation often doesn't come through one breakthrough idea, but through a relentless focus on continuous improvement".

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