

AUTHOR DETAILS

Name: Divya.S

Telephone: +919677153966

Email: sureshdivya55@gmail.com

Category: Current Students- Masters and above

Name of College: Ethiraj College for Women, Chennai

SELF-DECLARATION

I, hereby declare that the essay on the topic “Sustainability of Supply Chain of Essential Commodities” for EGROW foundation essay writing competition is original and of my sincere efforts and research.

Yours sincerely,

Divya.S

Chennai

Challenges posed by COVID-19: Sustainability of Supply Chain of Essential Commodities

- **Divya.S, Pursuing M. Com, Ethiraj College for Women**

“The disruptive powers of excessive national fecundity may have played a greater part in bursting the bonds of convention than either the power of ideas or the errors of autocracy”- John Maynard Keynes, British Economist. The world has crippled on its grip by a list of hooks that brought stand stillness in the 21st Century, the economic meltdown of East and South Asian counterparts in 1997, the crisis due to bubbles of technology in 2001 in United States, Terrorist attacks in United States in 2001, Financial Crisis and Great Depression in United States in 2008, European Debt Crisis in 2009, Tsunami in Japan in 2011, Russian financial Crisis in 2014 and now 2020 that invited Coronavirus spread with origin from Wuhan, China. The inter-connectedness that has tied relationships in trade notably between economies is interfered with a bizarre of crisis onset. Though, the outlook is pessimistic to any extraordinary shock, the world has evolved, penetrated and swum the conditions for centuries facing the disruptions and excelling in recovery. Hence, considering the social and economic imperatives, Quarantining, Lock-downs and Social Distancing are the immediate solution to break the chain of spread, save lives in former side and in the latter a precautionary measure for economy to face the worse with the ideology that economic recovery could be possible when the spread is contained.

The brainchild of Keith Oliver, British logistician, Supply Chain has winged across countries in global trade and commerce. The interdependence of countries for commodities have sprawled the channels of exchange and volume demanding optimization of process. As the world witnessed normal mechanism over decades with minor fluctuations, end of 2019 and early 2020 shook the international transactions and national level sustainability for countries once COVID-19 viral outbreak became a severe catastrophe and mishap. Fearing the spread of virus, and to save lives major economies and governments began imposing curfews, declaring lockdowns and enforcing the restrictions to avoid causalities. At such a juncture, economies fell vulnerable to the viral impact of widespread cases and death toll on steep rise, the fragility and systemic risk arose at the global level with recession on the global ocean. With the cascade from a small jerk, COVID-19, with origin from Wuhan city, China, cure and prevention research on thrust and yet no breakthrough, supply chain has been worst hit, despite this fact, nations have focused to protect and save lives since human capital is essential to drive them out of sinking state. Hence, the essential

commodity has become the ones that can sustain human Lives and Health for mankind to survive and recover from the crisis.

A Commodity is something valuable or useful in nature to be mundane. In economic terms, commodity is anything tangible that can be purchased, sold or exchanged for something of its similar value. To save lives, health care and pharmaceutical sector is on the peak demand which faced its supply glitches in patient occupancy in hospitals, medicine supply, testing amenities, masks and sanitizer scarcity to meet the equilibrium. Noted step that Chinese government took to increase the sustainability, was the construction of a hospital on a vast area in a short span of time exclusively for treatment of COVID-19 infected cases. Travel and Trade bans constrained people and commodities to not cross boundaries being the root cause of cut in supply chain making economies prioritize self-sufficiency and self-sustainability.

The essential commodity for a social being is food, clothing, shelter. Once the man becomes an economic being, money is an essential commodity to meet the physiological needs. When, businesses are shut, a large number of people in reliance of income from sales suffer in meeting their needs to access the fundamental elementary to live life. Though, compensation of governments is implemented to bear the loss, the reach to every income group is farfetched. Money as a necessity is hit amongst people as stock markets plunge, GDP drops due to fall in production, prices inflate and spiral of events affect currency supply and value. Disposable income is what makes an individual in the economy to buy when being affected impacts throngs of people's lives to afford for the requirements. But the lockdown is validated for lives to be saved which more important than money because money can be earned at any time even if it is lost but life cannot be retrieved once lost. To avoid any discrepancy, a unique fund is allocated encouraging donations to meet the crisis – COVID-19 fund in countries, banks are exempt from lockdown to ensure availability of funds for withdrawal from accounts. Yet, the income inequality raises the question whether money would be in the hands of everyone being the major challenge to cope with. Cash usage has drastically reduced to avoid contact of currency between people in developed economies, mode of payment drifting to digitization, a creative destruction, John Schumpeter concept temporarily to contain the COVID-19 cases.

When disruption of work for more than three fourth of the world population was the scenario once the viral spurt was declared pandemic by the World Health Organisation (WHO), the earning part for livelihood impaired when for economic man money is an essential commodity with which anything can be

bought for its value. Leaving myriad people indoors, export of people outside the frontiers was the major hit followed by goods. When powerful companies and the influential people reported the judicious supply chain management to be in precedence, healthcare and food, their ancillaries as the need for the hour. Sustainability of global and domestic supply chain contains the concept of processing considering profits, people and the planet. The pandemic had created consumerism due to panic buying shooting the demand for essentials, aftermath of mask and sanitizer scarcity.

The sustainability dimensions are triangulation of social and economic factors which supply chains have emphasized on achieving. COVID-19 pandemic has left its footprints on the triangulation, with effects of precaution and health conscientiousness amongst the supply chain workers to be stringent in social aspect and deliveries to, import from suppliers of other countries affecting jobs, profits financially on the economic side. Overseas sites for manufacturing, overseas suppliers, vendors, logistics is the grassroot reason for COVID-19 impediment to inter-dependence. Green supply chains are not exempt from impact, economies of scale and best practices in the ecosystem are dwindling as the need to hike inventories add to wastage and costs. The ripple of effect has reduced the amount of cargo shipments and people's transit leading to lockdown making economies closed until the situation is normal.

Food security has become a global concern more than regional one towards which policy makers have tilted the utmost attention to so that until the pandemic retreats, countries need to ensure food supply and sufficiency more so for the vulnerable poor and the infected to not suffer miserably. The worse situation plummets when food insecurity enters the protracted crisis of already affected countries that governments are working towards to avoid striking a balance between supply and demand of food. External dependence and assistance for food proliferates those countries into risk of drastic supply-demand parity maintenance. Spike of hunger, ill-afford and malnutrition could be the case for countries grappling with poverty and hunger when farmers, fisheries, dairies find it cumbersome to find potential demand to sell in the market. But, 2020 onset, fortunately has been blessed with comfortable food supply, but the month of May could find a setback if viral cases mounts with future consequences on food supply. The countries are on the critical dais to concentrate on food security for the vulnerable population, social protection and efficiency to cover trade-related costs and losses to never bring a lockdown to food supply, keeping the supply afloat with measures to explore technological and digital avenues to market, create food banks, creating market space for MSMEs in food sector, direct sale by farmers, fishermen, dairy farmers etc to

bolster the food safety net globally reports Food and Agriculture Organisation (FAO).

Medical supplies have become global incumbent to fight the viral spread across continents which shouldn't freeze demanding flexibility and intelligence to keep adaptability intact with the situation. A shock to the supply chain to bridge the gulf between production and consumption is pragmatic, deterred by natural disasters, vulnerabilities to which the global economy has fought towards and been resilient. The status quo is an instance of extraordinary shock that could impact the governmental and private medical supply in the globalised world. This massive shock is curbed gradually with attention to communication enrichment, transit visibility, flexibility, trusted networking and alliancing between parties in supply chain, public and private sector cooperation on risk management. Mismatch of demand and supply is at the brunt for developing economies that needs to be alleviated with governmental efforts to save lives and keep healthcare and pharmaceutical needs met for self-sufficiency is what experts in World Economic Forum opine of , for first ever unprecedented health crisis to protect lives forcing governmental measures from the normal functioning reported by World Trade Organisation (WTO).

Pandemic control is the priority and protocol that countries are strenuously deploying efforts towards. The aid to the control, is the publication of official information becoming a barter in economies to exchange for free. Data bases with real time data disclosures interactively and aesthetically developed by data scientists crucial for decision making mechanisms. Information via media sources of reliability has emerged as hot cakes, followed up commodity on cases updates, government announcements and situation across the globe. The dissemination of information is rapid with awareness needy towards self-hygiene and self-healthcare practices to be incorporated at household level. This commodity is triggering the behaviour of micro and macro forces that economies absorb. The suggestion from globally recognised organisations is to instil policies and forums to start planning for the aftermath of the pandemic from the time-to-time information exchange so that economies mitigate the damage and recoup.

Any commodity needs the exchange for its usefulness to be capitalized. Such exchange is curtailed, when trade as a benefactor for exchange is worst affected. Though the past events of similar kind had set aback the world from sinking in the set back with a come-back, rebounding vigorously and rapidly is the need with the need for speed to drive out from Great Depression. Socially inclusive recovery, reshaping decisions for sustainable global growth prospects can be

achieved foremostly on decisions laid on trade as fiscal and monetary parameters. It's the harmonious efforts of economies in large, bouncing back to stay afloat could be easier than countries working alone, especially trade aspect buoyancy. Service and merchandise trading volume is clearly hit where automotive and electronic trade due to complex supply chain is worst affected. Trade tensions had decelerated trade in 2019 end, 2020 pitched economic slowdown drawing the comparison to 2008-09 Great Depression scenario, Lehman Brothers bankruptcy. Succumbing people indoors, essential services and commodities are the part of the value chain. Travel and Hospitality services are terminated temporarily ruled out of essential category for the populace.

The epiphany of experts and economists show that previous pandemics say, SARS, Ebola, H1N1 had minimal effects on trade. The global glut of oil demand with Saudi- Russia crude price and output downswing war faced its implication amidst COVID-19 catastrophe. The OPEC+ deal complications, a cartel of oil producers has identified oil demand on price cuts to be a sign of market failure that might lead to over supply painting a bleak picture on travel restrictions. Oil industry is also not immune since workers have tested positive, quarantined, export bans and barriers are on the rise. As consumption drips, the production might lead to over-supply, inability to export to the dependent countries for short run. Oil has also emerged as non-essential commodity whilst its necessity felt across nations becoming a demand disruption cascading centre.

Governments with partial dependence with abilities to produce oil seem to promote oil production and distribution within the country from its native sources. Energy market is on the futile end due to national lockdowns that its effect is still not realised at full blown level, being COVID-19 a recent factor. The global deal is withdrawn revising the output and price of crude oil.

The hindrance identified to supply chain is the lack of coordination. After the COVID-19 streaks of effect what wouldn't die down in considerable years indefinitely is the willingness of people to work digitally, lower demand for paper work and remodelling the way businesses operate, need to continuous restructuring. The chain would become shorter questioning the existence of multiple middlemen to make it nimble and robust. The billion-dollar query is that are businesses ready to handle the disruption over the erstwhile metrics, the dichotomy arises that not all supply chain is susceptible to absorb the shock that people need to embrace working cross-functionally, evaluate sharing agreements with workforce. It is in the bucket list of supply chains to decentralize than to centralize, rethinking the whole network of ones that thought of both costs and disruption are said to prosper swimming the COVID-19 and upcoming era. The greatest sustainability challenge posed is the

warehousing policies to meet the demand and the density of population which is likely to re-engineer.

Business continuity planning and disruption policies are to be put on the plates of the parties being part of the chain. Decentralised network is one such strategy that can row businesses in the boats upstream and downstream, when one chain fails, other chain can come to rescue for stocking and transportation. Multi-functional job environment is another such technique that can equip segments of people in the verge of losing jobs when the dichotomy can create job opportunities for one segment and grab the same from the other segment. As long as money is an essential commodity, work is its source of earning. While organised retail especially online and technological companies hire people with demand for human capital to cater to COVID-19 implications, many restaurants and airlines sent workforce home with no demand and work in play. Labour sharing agreements thus would feature in the supply chain scene to accommodate the ones willing to work in a different domain in times of crisis. Low cost labour is foresighted by investment in technology since tech-savvy equipment is not prone to be infected by flu! Though Robotics cannot completely do away with people, infusion of technological advancements in supply chain especially with Artificial Intelligence (AI), Machine Learning and Automation assisted in collaboration with human efforts with continuous learning of the environment can tread the chain now onwards across countries.

Education, an essential commodity offered as a service by schools, colleges and universities has come to standstill leaving millions of students away from institutions due to lockdown experimentation to derail the spread. Though digital classrooms are co-ordinated, exams and tests are postponed in several countries. When this continues, the intake of international students could meet its fall until the outbreak flattens. Admissions globally this year would to try tap locally than from other nations to avoid the complication cobweb. With students left home, indoors and ones stranded and trapped elsewhere for the purpose of education, the supply of this essential service is bereft of sustainability. The demand for education would remain the same, with postponement, the universities might have to handle the admissions and graduation mechanisms simultaneously. It's also a challenge among the educationists to regain the attention and interest of students after long term of no proper curriculum. The institutions that have embraced technology and digitalisation would prosper in keeping students engaged in the chain. Education on caution note, is not an essential commodity at the present situation.

After the turmoil, from steep decline in Gross Domestic Product (GDP) over the decade of the global economy would surge an upliftment of galloping production but the decoupling of alliances and ties with other nations especially China could occur. The demand might sky-rocket with revision of essential commodities demanding sustainable shelf life of supply. The ingredients contributing to supply chain – raw material, production, packaging, transportation and distribution when proliferate omni-channel wise being centric to important nodes being Coronavirus infected countries, spiralled the threads of stoppage. China centric value chains were the first affected. Every commodity entrails a route to reach the destination from the point of origin, may be by road, rail, air, water or pipeline. Travel, transit and trade bars shuttling back and forth between countries has created the necessity to become self-sufficient with reduced dependency for essential commodities.

Chemicals manufacturing, the ones which were essential once upon a time has been stopped and export restrictions have been imposed in several countries which would impact soap, shampoo, paints market until the lockdown is lifted. This created its tremendous pitfall in sanitizer supply which fell short to meet the demand. Chemical industry once shut its operations in major economies, exports fell, with the grim soar of cases, multitude of people engaged in panic buying of sanitizers creating empty shelves when on peak demand. As the strong global winds blow in the chemical industry, the technical deployment to create COVID-19 necessary supplies have increased in manifolds, since the industry is the in the massive pivot essential to control the revolving pandemic. Connected logistics by rallying the supply chain and ramping production working on operational intelligence to meet the demand is on the mission. Looping government and healthcare in the network would enable the chemical industry to satisfy timely and urgent needs. The blend of data-responsive system with highly networked supply and demand information on real time basis is the key to rational and informed decisions of logistics to fill the gap between production and consumption need.

The screeching halt of movement across borders in nearly a hundred countries, duration of lockdown and restrictions and the fiscal responses to the crisis in terms of size and efficacy are the measuring rulers of the severity extent of economic impact. Developed economies would look forward to lessen imports from developing countries especially for essential commodities. Heightened impact is witnessed in nations that have high reliance on commodity imports, that when lockdowns impend such nations may face debt distress. A sharp increase in unemployment could increase sharply tilting the supply shock to demand steep increase shock with implications on supply chains. Hospitality,

Travel, services so forth are the predecessors to stumbling global employability efficiency in the outbreak of coronavirus that developed economies face the sharp prick as most of them are service driven economies. United Nations has promulgated the need for bold policies towards economic sustainability and financial stability via health centric investments for public and well-designed fiscal stimulus package curtailing unnecessary public expenditure when capital inflows reverse on commodity revenue yields.

As the views flow in the dark side, the bright side that sets the yesterday's supply chain giving rise to new supply chain today is the consideration of planning to face and stay robust in the midst of any disruption being a lesson of thought. The parties in the value chain have begun to realise that on events of lopsided nature recalibrating the functions, outsourcing and concentration of few geographies for supply isn't the essence and quintessence of cost-cutting and profitability. The situation is grim since many industries relied on supplies from the world's highly populated sub-continent, China which closed its economy first witnessing the outbreak. Resiliency is the key that's in the chain's limelight once the pandemic footfalls landed on the essential commodities, an unimaginable impact as intra-organisational decisions are externalities oriented which might not be immune to pandemics, lockdowns by governments. The multiplier factor is the scenario, with the example of essentials supply hit in healthcare that caused protuberance of safety to workers in the supply chain causing an adversity. The amplification of local to global disruption can be alleviated when ties are multi-national and multi-organisational, is another fruit of thought that reiterates to bounce bilateral failure when multi-lateral agreements are in force.

The most essential commodity of the hour is the healthcare and pharmaceutical supply that demands bi-directional supply chain across countries, since if one producer fails, the country can still be promised supply from the contemporary, its replica needed at the inter and intra levels of countries and continents. Producers are in the crucial ambit to revise the way of produce plunging into cross product manufacturing system that demand in the situation, for instance an arm of essential groceries supply extended by an E-commerce portal, manufacture of medical supply in the new branch to the conventional produce of electronics. A multi-faceted vision and timely adaptability is the requirement when prediction of any disruption is difficult but the mitigation is possible. Apprehensive customers are in the end whose acquisition and retention are important before and after any inherent and extra-ordinary fluctuations in the chain. The essential commodity value chain needs a strong network and alliance within and outside nations where reduction of lead time and effective recovery

planning in the enterprises for dragging supply close to the demand equilibrium. The feasibility of essential commodities supply is on the extensive focus in the infected economies which should not be hampered at any cost.

Though challenges fall in the baskets of supply chain components in the pursuit of seamless transit which is the only chain that is approved to facilitate actively, some crucial loopholes are priority balance of costs and benefits, execution to be pro-active and strategically fitting price to suite the situation. What's ought to happen, when the challenges complicate to a cobweb, first inflates the price which would worsen the case where affordability for essentials by the poor and the vulnerable would be questionable. Design thinking empathizing customers is the deployment that needs supply chain trail. Robust strategies that surround the chain towards optimum efforts are planning the assortment steadily, managing the revenue across paradigms of price and promotion, ensuring transport flexibility tapping multiple models and multi-carriers and routes. Further strengthening catalysts, incentives of economic supply provided in the market by the government for supply promotion capitalisation, supply postponement and diversification aggregating the demand, the trend to make and buy supplies. A strong supply base utilizing the Just-in-time approach to eliminate wastage from the environmental and economic perspective would make the value chain well-adaptable to accommodate any kind of eco-system.

Sharp drop in the import demand in the markets and industrial activity is the core arrows in the bow that sets the supply chain in unsustainable target to the chills of COVID-19 containment. Nevertheless, essential commodities are the only factor that is gearing the chain in force, the allowed and demanded to operate actively. Countries that are near have gone far-fetched in collaborative trade, the objective to which globalisation and liberalization was introduced becoming blamed factor for the global impact. Again, the crisis is temporary which had forced the public and private sector to shut the operations for definite period to save lives. This phase would pass and the after effect of pandemic is to be more greater in attention for global supply chain to lift itself to normal functioning more importantly, commodities of necessity that would revise over time amongst people, which should remain sustainable to contain the push and pull of demand and supply. Though, global economy is hit, it will pass the crisis and recover to which supply chain management at the global level would face the stiff competency challenges to cope with demand of essentials. Finance to instil supply of fundamentals have been driven by donations attracted through funds at national levels to investment channelized in the domain of supply chain. Sustainability has an element of quality to the quantity compounding

together to be ensured at all levels but the status quo has enumerated quantity as the emphasis laid upon.

“One of the only ways to get out of a tight box is to invent your way out.”- Jeff Bezos, CEO, Amazon. For every household to be fulfilled with the need, the customer end to be reached, it’s the efforts of many in the chain to supply commodities from the point of production. Thus, the bottom line is that people engaged in the front of supplies need to be appreciated and lauded especially for essentials tirelessly working even at the time of crisis for the motivation to reinvent process time-to-time whether the situation is tight or comfortable in the world of commodity fetishism and reification to validate the quote –“ A commodity has a value because it is a crystallization of social labour. The greatness of its value, or its relative value, depends upon the greater or less amount of that social substance contained in it; that is to say, on the relative mass of relative mass of labour necessary for its production.” – Karl Max, the silver lining in the grim.