



BA Business Management

Management Economics

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Question 1

(a) Effects on Supply and Manufacturing

Businesses have had to deal with a supply chain structure that is getting more complicated due to the high level of volatility in their operating environment. Companies can create and maintain an edge over others with the help of innovative, customisable product offers and shorter product life cycles. It causes complex manufacturing and procurement processes upstream in the supply chain, which affects downstream and breeds uncertainty. It also results in difficult demand forecasting. Businesses are more vulnerable to supply chain interruptions caused by uncertainty because they can impair the manufacturing and delivery of goods and jeopardize the proper flow of knowledge and raw materials (Ellickson, 2013).

Beyond its impact on request, the pandemic also generated problems in the supply chain. Global supply networks that depend on China as a manufacturing hub were also affected. Supply shocks are caused by a halt or decrease in production necessary to protect worker safety. It alludes to the need for more raw resources and intermediate goods needed for specific operations. As a significant manufacturer of high-value goods and components, a major supplier of industrial goods and raw materials, and a sought-after market for consumer goods, China is becoming an increasingly vital player in international commerce.

Effects on Logistics

Transportation plays a critical role in business operations in today's globalized world, where businesses operate worldwide and exchange goods and services rapidly. The effective management of the logistics process is becoming an essential component of success, meaning that logistics is an important task undertaken in advance of

achieving goals. The Council of Supply Chain Management Professionals claims that logistics is the act of organizing, executing, and supervising the safe and efficient flow of raw materials, semi-finished items, and finished goods needed to satisfy consumer demands (Hoang et al, 2020).

China quickly saw the first signs of the COVID-19 pandemic's consequences on logistics. The long-haul transportation sector, which moves over eighty per cent of the nation's goods, may be affected by the Chinese logistical shutdown. Between the end of January and the end of February 2020, long-haul trucking volume fell below fifteen per cent of 2019 levels. At the end of February, it had rebounded to fifty per cent, and by the end of March, it had reached 92 per cent of the total. The quick recovery was facilitated by the federal government's attitude toward truckers and the capacity to contain the infection quickly. For instance, by eliminating quarantine regulations and waiving national highway charges for cars carrying essential goods (Aigner-Walder, 2015).

Effects on Demand and Bullwhip effect

Businesses have invested significant money in improving their consumption forecasting capacities in the past few years by implementing artificial intelligence tools and maximizing the use of cutting-edge ERP systems. The COVID-19 pandemic caused a demand shock that has never been seen before by disrupting regular activities. From a localized, China-centric supply shock that affected global supply networks in January, the epidemic's impact has changed to a dramatic consumption spike that hurt investment and consumption in Europe, China, Latin America, and the United State.

For instance, suppose that customer demand for party supplies drops by 50% throughout a pandemic. Stores will order even less, and the same logic will continue along the supply chain. Orders downstream of a manufacturer can fall to zero for an extended period while downstream retailers and distributors gradually sell off what is now a large amount of surplus stock. The supply chain has a bullwhip effect in response to changes in client demand, which is particularly difficult for companies early in the chain.

(b). The consequences of the global epidemic's effect on the supply chain are especially pertinent in today's setting since they have resulted in a reconsideration of the operations, but most importantly, of the framework of the supply chain itself. Recent improvements that are intended to persist and become enduring have been encouraged to address the weaknesses that caused the worldwide supply chain blockage. Thus, risk can be defined as the likelihood that goods will not be delivered on time, in good excellence, or sufficient quantity, leading to unfulfilled orders. To continue operating under predictable circumstances, businesses must create a strategy focused specifically on avoiding supply network fragility, such as being aware of disruptions to supply chain events and recognizing the chance to learn from them and emulate their predecessors. It enhances the supply chain by improving the organization's capacity to respond effectively and control unplanned and intangible events: resilience. It allows the organization to recover from unexpected disruption situations quickly. And rebound from disruptive events within a suitable timeframe and cost, yet preserve a positive steady-state functioning afterwards. To successfully carry out risk mitigation techniques, a collaboration and sharing of data system must be implemented across the chain, allowing for swift decision-making (Smith et al, 2021).

To render a supply chain more resilient, the company must consider its internal strengths and partner providers when selecting them. Regarding partner selection, the geographic extension of the supply chain results in a more extensive and complex network of enterprises. Such an integrated network is vulnerable to interruption events, which can quickly spill over to other enterprises, extending the risk throughout the chain. Furthermore, the chain effect may have far-reaching consequences because it is uncertain whether each supply chain is autonomous when considered separately. Actors who play suppliers in one supply chain may also act as manufacturers in another.

An Intertwined Supply Network (ISN) is a collection of interlinked supply chains in which enterprises act as consumers and providers. A comprehensive perspective of network structure and features can help discover essential linkages. It is evident that the more direct links a firm has, the more significant the role it plays within the network, and. As a result, the more significant the adverse impacts on performance that need to be directly operated. The enterprise's resilience affects how much risk spreads within the system, which has a significant effect on the supply chain network's overall resilience (Gander, 2018). The degree of the supply chain interruption event and the network's architecture will thus determine how resilient the supply chain network is. Consequently, a company's resilience dictates how well it can control the chain's distribution of risk.

Flexible is a prerequisite for supply chain resilience and can be interpreted in three ways:

- Adaptability in the acquisition process
- Flexibility in production

- Adaptability in distribution and logistics

Thus, the goal of attaining degrees of adaptability for every aspect is to lower risks:

- Risks associated with supply
- Production-related risk
- Delivery risks

Question 2

(a) Food prices have suffered due to inflation, but so have energy costs. Because of growing fuel prices and a decline in Russian supply, European firms are compelled to switch to alternate energy sources like coal.; according to a German Chambers of Industry and Commerce survey, sixteen per cent of these companies plan to stop operations or ultimately reduce manufacturing (Jia, 2021).

The largest economy in Europe, Germany's economy mainly relies on exports. The effects on global manufacturing supply networks could be profound if an economic downturn is predicted.

However, rising energy prices significantly negatively impact businesses even in nations that rely less on Russian fuel. Pakistan has lowered its energy use by shortening its workweek. The food supply chains have been affected by reduced fertilizer production in Norway.

United States automakers are concerned about their output, while United Kingdom retailers are lowering their sales projections. Due to a scarcity of electricity, electronics and auto assembly firms in southwest China have already begun to close. Each of these disturbances will impact global supply networks.

Mineral fuel shipments decreased nearly as much as car exports. In 2020, there was an average monthly decrease in car exports at 36% YoY. The Coronavirus pandemic posed an unexpected threat to the worldwide automotive sector. The virus spread to Europe and other regions after the complete lockdown in China, the largest automobile market in the world, during the first quarter. It led to a halt in manufacturing and the breakdown of supply lines. Following these supply shocks, the automakers experienced shocks to demand in the form of significant job losses and consumer income insecurity. Nonetheless, by the end of 2020, United Kingdom auto exports had swiftly returned to the trend level; altogether, the interruption was comparable to that experienced by German automakers. According to some industry analysts, the downfall of the traditional vehicle markets is expected to continue, who contend that the pandemic just sped up the automotive industry's shift towards electrical and digital innovations (Elleby et al, 2020).

The need for cheaper solutions will become more pressing as energy costs rise. Affordable options include LNG from Qatar and the Gulf of Mexico, United States-made liquid natural gas from hydraulic fracturing, and energy from solar power plants and offshore wind farms.

Increased fuel costs could result in increased freight movement costs, industry queues and interruptions, and long- and short-term effects on supply chains and company agility. Supply chains must provide logistical setups with greater flexibility to absorb local and global disruptions and generate new opportunities through potential near- and long-term sourcing options. For the company's and its suppliers' advantage, the resilience action must be responsive and flexible enough to be turned on and off as needed. By modelling your supply chain requirements and focusing on the key elements, you can swiftly adjust your business strategies and operations as required.

It is still impossible to forecast how the Eastern European disputes, supply chain disruptions, and restrictions will affect pricing, goods, and economies at this stage. However, maintaining control over your supply chain and having complete transparency is now more crucial than ever due to the persistent worldwide interruptions. Developing a mid-term plan and anticipating potential problems early on will help you map out your supply chain, enable faster reaction times, and enable data-driven decision-making.

Digital innovation may be crucial for many businesses to address the sharp rise in gasoline prices, leading to solutions that have the potential to transform industries completely. As enterprises are compelled to break their routines, corporate growth may increase with inflation and gasoline expenses.

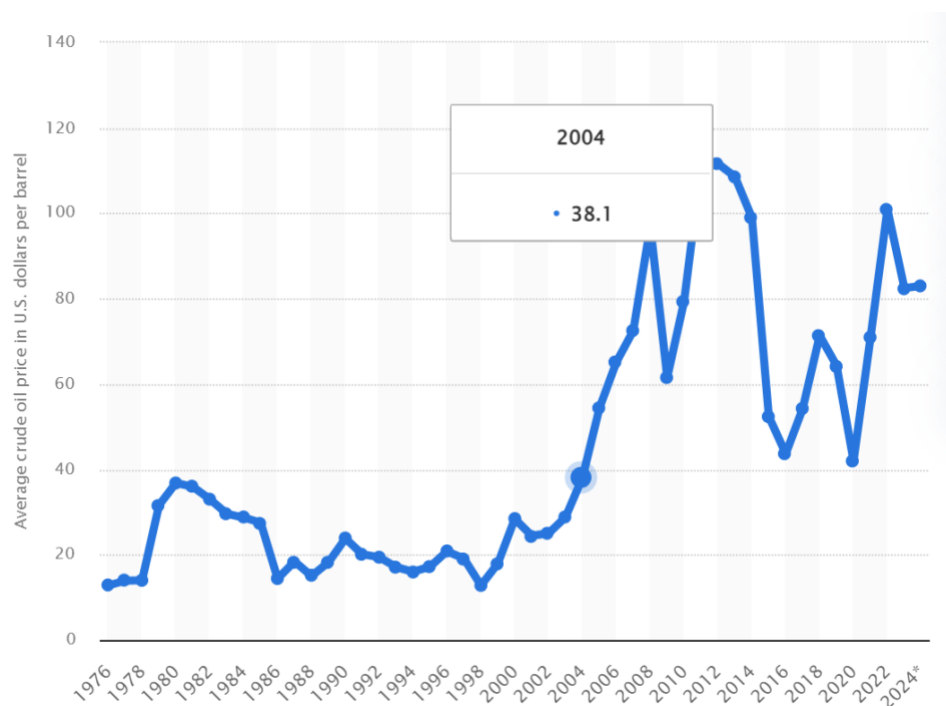
(b) Difference between elasticity and inelasticity of demand

The elasticity of demand is an indicator that allows for the measurement of how demand fluctuates for a good or service in response to variations in its selling price. It lets you monitor and forecast customer behaviour if prices increase or decrease. Determining whether demand will be elastic or inelastic is made feasible by this variable, which is crucial information when determining prices for your online store. We clarify the distinctions between the two kinds of demand so you may maximize sales for your business (Kaplan et al, 2011).

Elastic demand: It happens when shifts in pricing have an impact on demand. This conduct is characteristic of the most cost-conscious buyers. If the selling price of a good increases or decreases more than they consider reasonable, they will quit purchasing it. Elastic goods cater to this kind of demand and typically have cheaper alternatives available on the market (Bohi, 2013).

Inelasticity of demand: Demand is said to be inelastic or inelasticity of demand when it stays the same regardless of price fluctuations. Generally speaking, inelastic products are staples that need comparable alternatives that are as well-liked by customers. This category typically includes food items, medical supplies, or classic examples like gasoline or nicotine (Lévy-Garboua and Montmarquette, 2011).

As observed, the availability of substitute products on the market significantly impacts the elasticity or inelasticity of demand. When there are alternatives, consumers are less inclined to tolerate price increases. Because of this, it's critical to understand how your target customers behave and your rivals' costs and product offerings. It will prevent a possible decline in demand and assist you in making smarter choices about changing your pricing strategy.



From 1976 until 2024, the average annual price of Brent crude oil (Yigit, 2024)

In 2024, the average yearly price of Brent crude oil was 83 in the United States per barrel. Preliminary data from March supports this. It is more than twenty dollars less

than the average annual cost for 2022 when energy supply shortages and concerns over the fallout from the conflict between Ukraine and Russia caused expenses to soar. Brent is the paramount benchmark price for crude oil from the Atlantic basin on a global scale (Bernstein and Griffinm 2006).

(c) the laws of supply and demand

The equilibrium price is the amount at which supply and demand coincide. Suppliers produce enough goods or services at that price point to meet demand, and anyone who wants to buy the product can. Of course, managing supply and demand is more difficult in reality. Throughout time, the equilibrium price may change as supply and demand change. The equilibrium price is the amount at which supply and demand coincide. Suppliers produce enough goods or services at that price point to meet demand, and anyone who wants to buy the product can. Of course, managing supply and demand is more difficult in reality. Throughout time, the equilibrium price may change as supply and demand change (Asif and Muneer, 2007).

The law of supply and demand predicts four methods for describing how adjustments to either supply or demand would impact pricing:

Prices fall when supply increases and demand remains constant.

More supply without matching increases in demand frequently leads to a surplus. It could be due to several things, such as efficiency spikes. Suppliers typically lower their prices to generate demand and sell excess inventory, especially when an expiration date is approaching.

Prices fall when demand decreases and supply remains constant.

If customers want fewer units of a good or service, there might still be an excess even without a change in supply—the same result—lower prices (Guerrieri et al, 2022).

Prices rise when supply decreases and demand remains constant.

A decrease in supply leads to shortages. Customers usually have to pay extra to get the goods and services they want in these situations. Numerous factors, such as issues with the supply chain, might lead to supply restrictions. If the problem is transient, prices usually go back to normal once the supply has been repaired.

Prices rise when demand increases and supply remains constant.

When an item is more in demand than it can be produced, or when consumer demand rises faster than supply can meet the need, a shortage may occur. Generally speaking, prices stabilize when supply eventually meets demand (Cachon and Terwiesch, 2008).

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