Re-engineering the Supply Chain in Nepal

ASIA’S PATH FORWARD
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CONTEXT

Landlocked and Difficult Terrain: Nepal’s geography and topography has impeded efficient supply chain management. Nepal has historically been predominantly dependent on India for sea access, although since October 2018, China has emerged as an alternative – albeit at quadruple the distance. Combined with the difficult terrain of hills, mountains and mighty Himalayan rivers, this makes inland transportation a challenge. Natural disasters like floods and landslides continue to create challenges. Nepal is struggling to keep up with the growing interdependency between each of the components of the modern supply chain. Nepal also faces storage problems as it is still stuck in the ‘godown’ concept of storing goods, with no systematic segregation of items. There needs to be a shift towards increasing the visibility and availability of the stock of goods.¹ Since these steps have not been taken, significant issues have been arising in the supply chain.

Logistical Challenges: Logistics is one of the most important aspects of supply chain management. Nepal ranks 114th out of 160 countries in the World Bank's latest Global Logistics Performance Index (LPI) Report. Per the report;

“The logistics component has escalated in rankings due to progress witnessed in customs procedures, trade logistics quality, timeliness delivery, and tracking and tracing system. However, the lack of organized transportation routes, increasing traffic at ports, lack of full-fledged operation of check posts and excessive documentation process are still the main drivers behind the delay as these issues hinder the possibility of change and socio-economic growth of manufacturing industries.”²

Transportation Challenges: Transportation costs in Nepal are amongst the highest in South Asia due to strong cartels in the form of powerful transportation syndicates. The existence of numerous small operators in the surface transportation sector is apparent. The market for these operators is divided in terms of location and size, i.e. only the cartel members are allowed to use designated routes, despite the 1997 Consumer Protection Act which outlawed such cartels. There are twenty-four truck syndicates in Nepal who control the good carrier services and do not let any new trucks ferry goods in the country without their consent. Truck syndicates have led to the exorbitant rise of transportation cost in the


² Ibid [Error! Bookmark not defined.]
country, unreasonably increasing fares for carrying goods and protesting if the government fails to meet their demands. Consequently, the prices of all other goods in the economy have also increased as they require transportation services, the costs of which are passed to the consumer. Consumers have no other option than to go with monopoly prices from operators located in their own towns.\(^3\)

**Lessons from Earthquake:** The gaping holes in the supply chain were very evident after the April 2015 earthquake. Studies showed that reconstruction became a big concern because a gap started to emerge between the demand and supply of construction materials.

During this time, the major weaknesses in the supply chain management (SCM) strategy of Nepal noticed were threefold. First, there was a shortage of trained workforce and government engineer-inspectors, as well as knowledge regarding earthquake-resistant technology because it had never been considered as an integral part of the general engineering/supply chain education in Nepal.\(^4\) Second, a poor distribution system led to price increases. A large fraction of the supply of manufacturing goods in Nepal (like cement, TMT bars, etc.) is generally done to regional construction companies, followed by district and local suppliers such as the small hardware shops. However, due to the poor distribution system within the country, supply chain components like transportation and margin of regional suppliers raised fares haphazardly. Moreover, the inability of transport unions to accommodate all transporters also pushed transportation costs to NPR 125/km.\(^5\) Finally, the practice of not insuring goods while travelling through the supply chain posed a third challenge. For instance, around 46.2% transporters are not members of transport unions and the union has accommodated not all transporters. Thus, bad road conditions accounted for around 2% of transportation losses.\(^6\) No major interventions occurred post-earthquake to strengthen the supply chain.

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\(^3\) “Understanding the cartel economy”, Nepal Economic Forum, 10 January 2018.


\(^6\) Ibid [1]
CHALLENGES DURING THE PANDEMIC ADDS

Frail Supply Chain Put to Test: This already-fragile supply chain system was put to test during the pandemic especially as lockdown restricted the movement of vehicles. With large uncontrolled movement of people from India to Nepal across porous open border, the control by government over movement of people also had an impact on entry of cargo from India. Further, with interstate movement of cargo trucks in India restricted, it did impact the movement of vehicles from seaports in India to Nepal and also imports from India. Imports from India comprise of 60.9% of all Nepali imports, and comprises essentials like petroleum products (22.1%), agricultural produces (40%) and others.

With Nepal’s internal supply chain also disrupted, there were multiple problems at both the production and consumer end. There were no linkages between villages and the urban markets, as a result of which vegetables rotted in the fields. These vegetables could have been dried and stored to salvage part of the crop. Strategies for production, processing and storage are needed to prevent needless wastage.

E-commerce Grew During Lockdown, but Challenges Galore: The lockdown provided an opportunity for existing e-commerce companies to ramp up their operations and many other companies joined the fray. Essential deliveries that were allowed during lockdown provided opportunities for existing brick and mortar businesses to go online or use social media platforms to take orders and deliver. However, e-commerce businesses in Nepal face lack of proper linkages between e-retailers and producers, due to which the e-commerce businesses and entrepreneurs believe that they have not been able to promote locally produced goods. Hardly 10-15% of homemade goods are showcased on online marketplaces. Amun Thapa, founder of Sastodeal, a leading e-commerce company in Nepal stressed that they face

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challenges of getting to know such products and featuring them on their websites.\textsuperscript{10}

Amidst these challenges, the e-commerce business also face the problem of minimal or no provision of safety measures and equipment from the government, limiting the ability of delivery personnel to deliver products to consumers. Although the government had purchased PPE equipment, gloves, masks and other equipment, private businesses, particularly e-commerce businesses, were not provided with any. This presented the e-commerce businesses with new sets of challenges in the already complicated supply chain.\textsuperscript{11}

**Transport Challenges During Lockdown:** The e-commerce sector faced other problems with regard to transport facilities. Food delivery companies like Foodmario and Foodmandu stressed that due to the confusion regarding transportation of goods, their online food delivery business was negatively affected.\textsuperscript{12} There were many overlapping decisions without proper communication and more mishandling on the ground. Although the Ministry of Industry, Commerce and Supplies announced that online stores operating in compliance with government regulations can make home deliveries of essential products after ensuring that they are following safety protocols and their staff are outfitted with protective gear, an apparent lack of communication and coordination between the Ministry and the police created a lot of confusion. There were news reports which stated that “Every day, at least one of our on-duty vans is taken under custody by the police on the pretext of not having a required travel document.” Due to such interference, they are losing on orders that are already few.\textsuperscript{13}

For physical businesses such as that of the dairy industry, although the government authorized the industry to reopen, restrictions on transportation were not lifted. Due to vague decisions and absence of coordination, the dairy sector incurred losses totaling NPR 3 billion. There are large unsold stocks of powder milk and butter worth NPR 10 billion. Haphazard decisions made without preparation disrupted


\textsuperscript{13} Ibid [12]
the entire delivery chain of delivery boys, restaurant workers and consumers.\textsuperscript{14}

**Nepali Small Handicraft Businesses Suffered:** The export and import sector faced another set of challenges during the lockdown. Nepal’s export basket is limited, with estimated 71.5% of products being re-exports to India\textsuperscript{15} taking advantage of the special provisions of the India Nepal Trade Treaty, whereby value addition of more than 30% in Nepal will ensure duty free access to those products in India. Informal exports of fruits and vegetables from Nepal to India was also impacted. In case of the handicraft products, two major impacts were felt as per Anouk Tamrakar, founder of Timro Concept Store, a company that aggregates local handicraft and small producer products. First, the products that were being readied for the festive seasons in European and North American markets could not be produced due to the long delays. Second, as there were demands for hand made products during the lockdown such as sleepwear, masks and household essentials, there was shortage of raw materials and inputs, which impacted the small producers who were willing to innovate.

**PURSUING THE OPPORTUNITIES – WHAT CAN BE DONE**

The challenges that arose during the pandemic can be taken as an opportunity to address supply chain issues in Nepal and develop a multi-pronged strategy of incremental changes that will help bring about cost reductions, increased service efficiency, reduction in stockholding and improved product quality through better warehousing and logistics management.

To actualize these changes, encouraging steps have to be taken by the concerned authorities in order to create an enabling environment. Along the same lines, the Department of Commerce, Supply and Consumer Protection is drafting regulations to limit the layers of intermediaries from seven to three in order to shorten the supply chain for the welfare of consumers. According to the department’s report, there are currently six layers of middlemen in edible oil factories of Nepal, five in the jar and bottled water business, five in the medicine business, six in the cement industries and four in the steel


business.\textsuperscript{16} This is an obvious area in which the supply chain can be made more efficient.

**Re-imagining the Supply Chain Based on Global Trends:** Globally, although we have seen the trend of increasing transparency, traceability and accountability in the components of supply chain and investments in technology, digitizing the supply chain, measures such as closure of hotels, businesses and borders mean supply chain workers (from research scientists to engineers to cargo pilots) are constrained from operating effectively.

In the short term, businesses need the flexibility to adapt production to manufacture critical goods, supply chain finance to keep suppliers working, and legal adaptability such as digital signatures to minimize human contact. In the long term, there is a clear need for visibility into supply chain data, and ability to provide services digitally across borders, whether for telehealth or education. Trade decisions made now will help shape whether we have diverse, cost-effective, and accessible sources of supply in the future.\textsuperscript{17}

Continuous improvement needs to be measured. CEOs of 155 global brands, including Mars, Nestle and Unilever, set out their commitments to invest in recovery and resilience. Building more sustainable and resilient supply chains, as well as providing sustainability certifications can improve the supply chain’s economic and environmental performance.\textsuperscript{18} Nepal needs to explore how it accesses the repository of knowledge that is being built and the global practices being initiated. Institutions like CIPE can play a role to connect firms redefining global practices with Nepal. These can be in partnership with think tanks involved in policy discourse that have the ability to get the message across to the government.

**Holistic Strategy Required:** Similarly, Nepal needs to take the shift in strategy to push supply chain management from the perspective of pushing e-commerce. To do so, Nepal needs robust logistics, warehousing, and transportation systems across the country at granular levels. It will have to explore establishing cascading supply-chain centers: A cascading structure with supply-chain centers focused on demand, logistics, suppliers, manufacturing, and an overall sales execution coordination to manage mismatches that may arise in supply and demand due to fluctuations caused by changes in consumer


behavior. This will significantly decrease inventory liability as the likelihood of different centers getting shut down at the same time is very low. The pandemic and lockdown have made it important to create transparency across the supply chain and customer demand. It will be important to monitor supply-demand disruption risks by mapping supplier shortages; predict production capacity, logistics capacity, and availability of supply and identify ways to clear nonmoving inventories through new customers or secondary channels.

Nepal needs to benefit from the reimagining of supply chains across Asia. Asia-Pacific region is ahead inreviving their supply chain relative to their global counterparts. For products and tasks that are labor-intensive and add low value, businesses actively diversify their operations to other regional locations, such as Bangladesh, Cambodia and Pakistan with garment manufacturing, Vietnam with electronics, and increasingly Thailand and Indonesia with toys.19

The focus can begin with basic essential commodities like food grains, fruits, and vegetables. Disruption in the Nepali food supply chain originates from market syndicates; monopoly of logistics such as vehicles for transportation, warehousing facilities that lead to rotting of fruits and vegetables. These constraints allow the cartels to control the price and the supply. This is where grocery e-commerce businesses can penetrate the market by connecting farmer groups directly with small grocery businesses, cutting out the middlemen. There are global models like Amazon Fresh- a grocery delivery service designed by Amazon which helps customers shop for their groceries. These source their groceries from local grocery stores, which in turn get their products from local farmer groups. International agencies and organizations like CIPE can help private sector organizations in Nepal connect with global players who can reimagine the operational parts of the supply chain.

**Opening Doors for Global Firms:** In most of the developing countries where the supply chain has improved, it has been due to allowing global firms to enter the market space through investments and technology transfers. In Nepal, there are still FDI restrictions on some of sectors. For instance, internal courier service businesses are still banned from receiving FDI. These restrictions must be lifted.20 Venture capital must be available for startups that want to transform the sector. For instance, in India, Rivigo, a logistics and cargo services company, changed the speed of transportation for the

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e-commerce industry. It launched new systems such as Raas (Relay-as-a-service), offering the benefits of relay trucking to millions of fleet owners in India to address challenges of truck driver shortage. It also increased transparency in the largely unorganized logistics space. The Finance Minister acknowledged the importance of robust connectivity and important enablers for enhanced logistics. All of this resulted revenue growth of by 42% in FY 2019.21

In China, leading e-commerce companies such as JD and Tmall are developing their own proprietary cloud computing platforms for their city-front warehouse networks and inventory decentralization. They are also proactively investing in international networks such as in Thailand. In Bangkok, JD offers a ‘211’ time-definite service (same-day delivery for pickups before 11 am, next-day delivery by 2 pm for pickups after 11 am).22

On the other hand, in Rwanda, in difficult terrain and areas of access problems, drones have been put into service. San Francisco-based company Zipline a high-tech startup, drone manufacturer, logistics service provider and public healthcare system consultant, has been using drones to deliver medical supplies to health clinics in Rwanda.23 The trend with which these companies in different parts of the world are unfolding their supply chain components have increased investor optimism and confidence in this space. Several companies across the world are testing models to create a more transparent platform-based system to add value in their supply chain. Nepal needs to learn and apply the positives to inch closer to transform its supply chain market.


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