Abstract

The dawn fourth Industrial revolution has brought a huge change in the world. Everything has become digitalised. Its impact is seen in every sector. With increase in the globalisation, even the logistics industry is witnessing massive changes. Logistics industry also plays an important role in the country’s economy. The changes which are introduced in the logistics industry is based on the customers expectation, changes in technology, changes which are brought in by the government policies, environmental changes, changes which has to be made to face the competitors, etc. In order to face these changes many business models are being introduced. The business model is becoming the buzz word in the current scenario. It benefits both the companies and the customers. Therefore, this paper is to understand the changes which are coming up in the future of logistics industry in emerging business models.

Keyword: logistics industry, business model, technology, digitalisation, customers.

Introduction

The evolution of the trade in the global marketplace has increased the necessity to transfer goods and services from one place to another. These transfer of good and services were made easier with the help of logistics marketing or physical distribution. In the concept of four P’s (Product, Price, Promotion and Place) marketing mix, place includes all the activities for making the product available to the end users. Logistics plays a vital role. Logistics or physical distribution is the process of managing, storing and moving of resources from the point of origin to the point of consumption in order to meet the demand. Logistics was used earlier in the military. They call it has military logistics, which was used to transfer both military equipment and the soldiers to the right place at a right time. There are different modes of transportation in logistics industry such as road, railway, marine, and air transportation. Now the need for logistics has increased in every sector. According to Jones Lang LaSalle (2015) an investment management company in a report on Indian logistics –taking giant leap forward says that some of the demand drivers in logistics are consumption led demand, manufacturing led demand, agriculture based demand and EXIM based demand. Logistics has an impact on both company’s profit and customer satisfaction. It involves following business functions such as transportation, warehousing, material handling, inventory management, demand planning, etc. Physical distribution is said to be very important because the goods are designed and produced, but if they do not reach the customer at the right time then the business fails. Traditionally, trade takes place with a distribution of network in terms of retailers, dealers, wholesalers, etc. and there was also interpersonal communication between customers and retailers. But with the innovations and digitalisations have also changed the logistics industries. Everything has become automated and it also reduces the time involved in the transfer of goods. In recent times, in order to sustain in this competitive business world, every business has to handle with new technological advancements, changing customers’ expectations, entry of new firms, etc. And similar to other industry even logistics industry has become more data centric. In words of Marr, B. (2017) data is a fuel that will power tremendous insights to enhance the transportation system. Companies have to come up with new business models. These business models are the plans to identify the sources of revenue in order to sustain and generate profit. With the increase in the importance in the logistic industries, there are also logistic based business models. Thus, this paper is an attempt to understand the future of logistics industry in the emerging business models.
Impact of technology in logistics

The technological advancements have reframed the entire organisation from producing till the
distribution of the goods and services. Everything has become automated. Digital technology has also
reshaped the logistics industry. In recent times robotics and artificial intelligence has changed logistics
industry globally. These digitalisation or technological advancements almostreplaced machines in the
place of humans and makes work simpler. Some of the technological advancements changing the
logistics industry are as follows:

- **Robotics** – nowadays we find robots almost in every sector. Robots in the logistics industry
  help in warehousing, packaging, container loading and uploading, etc. These robots reduce the
  humans’ intervention in the workforce.

- **Drones** – The unmanned aerial vehicles (UAVs) or drones was first used by Amazon.
  According to Logistics Bureau (2018) drones in distribution centres offers potentials to
  increase the flexibility and speed of automated handling equipment with scalability of manual
  warehouse workforce. This also reduces the risk of accidents while delivering the products and
  just like physical distribution, even drones deliver the package to the exact location of the
  customers using smart phone data.

- **Automated vehicles** – also called as self-driven vehicles. Heutger, M., and Kückelhaus, M.
  (2014) says that these vehicles provide wide range of benefits such as improved road safety,
  fuel efficiency, and reduces environmental impact. It works based on the sensor and digital
  mapping.

- **Internet of things** – it helps to monitor or track the businesses and consumers over the internet.
  It helps to manage the stock in warehouse, detect the risks involved and better utilizes the asset.
  It is most efficient resource planning.

- **Big data** - with the increase in the technology most of the companies are becoming more data
  centric. These data gives the accuracy and also helps to forecast the demand

- **Blockchain** - it is a distributed database to maintain the records called blocks. This increases the
  transparency and reduces the fraud. There is no paper based documentation, thus it reduces the
  error and has greater security.

- **Artificial Intelligence** – it is also called as machine intelligence. This reduces the time and
  effort in identifying the needs in terms of demand, tackling unforeseen circumstances, and in
  future with the data of the consumers AI will be able to identify the needs of the customers and
delivery the products even before they order them. It is used to reduce or eliminate the human
  intervention and also helps to increase the speed and quality of work at a lower cost.

Though there are many technological developments evolving in the logistics industry, the
question of uncertainty arises and also whether they could be socially accepted. There are more
advantages in terms of making the work quicker, simpler and environmental friendly. There is also
negative impact in terms of ethical issues, lack of safety, risk in data security, high financial
investment, insufficient talent, etc. But in the current scenario technological changes is inevitable. In
countries like India, adaption of these technologies requires more time and understanding for instance,
many feels that the driverless vehicles may sound scary and unethical. These new technological
advancements change the industry’s current business model or the traditional model. In words of
Tipping, A., and Kauschke, P. (2016) logistics companies has to be more focused on the digital fitness,
cost efficiency, asset productivity, and innovation if they want to meet changing expectation.
Therefore, it is important to adapt and be more secured with these changes.

Logistics replaces middlemen

Middlemen are also called as intermediaries. They act as intermediary between the producer
and the consumers. Middlemen include wholesalers, retailers, suppliers and brokers. But in recent
times with the development of technology and e-commerce industry has reduced the necessity of
middlemen. The cost involved in these middlemen and the distribution cost are now replaced on the
use of new technologies. The recent study on the Death of the Middlemen (2017) says that the
development of internet facility and mobile apps was notto cut down the middlemen but instead
making the products available to the customers without wholesaler and retail store this ultimately makes the products less expensive for the end-users. With the development of technology in the logistics industry there is a direct selling of products to the customer at a quick span of time.

**Role of consumers in logistics**

Consumers are the king they decide the success or the failure of a business. All the goods and services are produced and supplied in order to fulfil the needs of the consumers and be successful. With the change in the life style of the consumers, the expectations of the consumers also changes. The increase in the developments indigitalisation and internet facilities, has led to the penetration e-commerce. In recent times most of the consumers go online shopping, were they get everything at a click of a button. They can also track their products and even pay through online. Consumers prefer free shipping charges or free delivery charges and expects to get their products delivered quickly. This leads to a great challenge for the logistics industry in distribution of goods and services at the right time without any damages. In recent report by Shenoy, J (2018), 120 million of Indian consumers are expected to shop online due to the fast increase in data consumption and improvements in logistics. Imran Qadir and Amjad Ali (2017) say that companies having efficient logistics process and quality customer service experience a higher performance both financially and competitively. Meidutė-Kavaliauskienė, I et al. (2014) identified that consumers satisfaction depends on the quality of logistics service this ultimately benefits the service provider’s competitive advantage, consumer loyalty, and reduces the number of competitors. Therefore, logistics industry has to adapt itself in meeting customer expectations.

**Impact of logistics on environment**

With the increase in the awareness of environmental safety, even the logistics industry has to be conscious of the environment. Seroka-Stolka, O. (2014) says that customers with high environmental awareness may require products delivered with clean vehicle or minimise the emission, thus in order to satisfy the customers and sustain in the market, companies or the suppliers prefer green logistics. It was found that truck has a major impact on global warming due to the emission of carbon di oxide. According to the European Union, road freight transport is essential for the development of trade and commerce they also said that heavy-duty vehicles account for more emission of carbon di oxide. Many businesses are coming up with new ideas like green logistics. According to Saroha, R. (2014) customers expect environmental friendly goods and services. Green transportation system helps in reducing pollution, promotes social harmony, and also saves transportation costs. Nowadays the concept of reduce, reuse, and recycle has introduced even in the warehouse. Most of the packages are done with bio plastics and biodegradable materials these are called has green packaging. And they also reduced paper consumption. Therefore, there should be proper polices framed by the government, suppliers, logistic industry to provide the consumers with the goods and services without harming the environment.

**Impact of logistics on start-ups**

Many companies are entering into logistics industry in recent times due to the availability of products in online. This ultimately increases the demand for logistics for movement of goods from one place to another. The increase in the e-commerce business induces the young entrepreneurs to start their own logistics firm. For a start-up to be unique, these industries use new business models with new technological improvements replacing the traditional methods. The upcoming entrepreneurs’ uses new technologies like Artificial Intelligence, GPS facilities, big data and they even replaced labours with machines. These changes were made keeping in mind the expectations of the consumers.

**Government initiatives towards logistics industry**

According to the World Bank’s International LPI (Logistics Performance Index) for 2018 India ranked 44th based on their logistic performance. In order to develop the logistic industry, The Government of India in Union Budget 2018 has announced a greater opportunity for logistics start-ups.
which uses digital and innovation technologies. With the implementation of GST from 2017 it has also left a positive impact on the logistic industry. GST has reduced the delay in transmission of goods in order to have smooth flow of goods. It has removed the multiplicity of taxes levied by the state and central government for smooth interstate transportation. And also they brought in new technology such as ERP accounting system and inventory management system for a systematic recording. There are also other initiatives such as Logistics Sector Skill Council (LSC) set up by the Ministry of skill development and entrepreneurship (MSDE) through National Skill Development Corporation of India (NSDCI) and this was promoted by the Confederation of Indian Industries Institute of Logistics in order to develop the skill of the employees. Most of the India’s transportation takes place via road transport, in order to develop, the government has also introduced recently Bharatmala project for development of highway this will have a positive impact on the country’s Logistics Performance Index.

The transformation: Essential for new business models in logistics

Every business strives hard to be successful. In this era of automation, every organisation has to adapt with these changes. According to the World Economic Forum in collaboration with Accenture (2018) in the report on Operating models for future of consumption says that, this fourth industrial revolution has three driving forces such as disruptive technology, proliferating new business models and empowered consumers are accelerating industry change. Countries like Germany, Sweden, and Belgium are at the top in the International LPI result. The Indian logistics industries can also be pulled up when it starts introducing new business models. According to Riedl J, et al. (2016) to achieve profitability, transportation and logistics segments need to adapt their traditional business models to the changing market environment by rigorous efficiency and differentiating offerings. Therefore, in the new business model in the field of logistics has to consider few important aspects in order to be successful such as new technologies, customers desire, environmental friendly, make use of government initiatives towards the industry, and the employees has to develop their skills in order to sustain changes in this competitive environment.

Conclusion

The Indian logistic industry is undergoing tremendous changes due to the development in the technologies, changes in consumers’ behaviour, changes in government policies, etc. The logistics industries benefits India’s manufacturing sector and e-commerce in accomplishing their goals and earn profit. The change which is being or which would come up in the logistics industry will definitely have an impact on the traditional logistics model. New technologies always come with new challenges. Especially changes which are brought in by the technology in terms of Artificial Intelligence, Autonomous Vehicles, Big Data, Internet of Things, etc have a major impact on both the organisations and the customers. Therefore, Indian logistics has to achieve lot more in order to compete with the global market and increase their rank in the Logistics Performance Index. Government of India is also taking many initiatives in order to develop the logistics industry.

References


