



CROWD LOGISTICS AND RETAILING: A REVIEW

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ABSTRACT

PURPOSE- This study aims to probe the systematic literature about crowd logistics and suggests an agenda for future research. The aim is to investigate what crowd logistics is, its types, and how retailers can use it to perform logistics functions.

DESIGN/ METHODOLOGY/ APPROACH- To help build a deep understanding of the crowd logistics that led to the transformation of logistics, we have conducted a systematic and extensive literature review to address the various benefits and challenges while using crowd logistics and what are the various types of the crowd logistics.

FINDINGS- Crowd logistics is an innovation in the field of logistics that can help retailers to compete in the market. It helps them to reduce the cost that the company can use to lower the price at which they sell to the consumers. Crowd logistics helps not only online retailers instead brick and mortar retailers but also benefit from it as they can now advertise the crowd's need for delivering the goods, and those who meet the requirements can connect with the company. However, this option is not there earlier because of higher shipping costs or because they do not have delivery services.

RESEARCH LIMITATIONS/ IMPLICATION- The literature review could have been more extensive as it is limited to publications in the last eight years. The usage of the crowd for logistics is restrictively reported based on the papers reviewed. The application list is thus not exhaustive.

Keywords:-Crowd logistics, Crowd-sourcing, Crowd shipping, Last-mile delivery, Retail

1. INTRODUCTION

In response to rising consumer demand and broader opportunities for diversity against rivals, many companies have gained a competitive edge through logistics (Mladenow et al., 2016). Mobile internet technology leads to new opportunities to streamline last-minute delivery (Arslan et al., 2019). Crowd logistics is just like the concept of crowdfunding or crowdsourcing. Crowd means a large number of people, and logistics implies managing the flow of material from the point of production to the end of consumption. Thus, crowd logistics means logistics by the masses (Mehmann et al., 2015; Mladenow et al., 2015). Crowd logistics means collaboration between individuals and firms to use logistics services best. It can be done through mobile applications. Firms, through websites or mobile applications (Bahn et al., 2015), try to interact with the end-users to involve them in logistics functions. It helps build a good relationship between them (Carbone et al., 2017). The most common way of inviting the crowd is through conducting

contests, giving prizes, and then getting the solution to a specific problem (Boudreau & Lakhani, 2013). In other words, crowd logistics is the alliance between the firm and individuals in sharing their garages and idle spaces and getting rent in return for performing various logistics functions by the firm to facilitate better services. In crowd logistics, the crowd either demands or provides the services (Mehmann et al., 2015). In crowd logistics, companies use the crowd's resources to deliver the goods faster and at lower prices, like taking garages or basements of the individual on rent (Carbone et al., 2017). Crowd logistics' fundamental goal is maximizing benefits for the enterprise and its stakeholders (Mehmann et al., 2015). It helps consumers create logistics value (Bahn et al., 2015). There are various advantages as well as disadvantages of using crowd logistics. Managers resist using the crowd as they are not sure about the problems an individual can handle (Boudreau & Lakhani, 2013). However, the advantage of using the crowd is that sometimes the company can get well-experienced, specialized, and talented individuals (Boudreau & Lakhani, 2013). The crowd helps the firm increase its competencies, which helps it solve its problems. Participation is voluntary in crowd logistics, but the company must use real-time information to use the benefits effectively (Sampaio et al., 2019). So the company can reap its benefits out of it. Certain motivational factors encourage the public to participate in crowd logistics. It can be intrinsic or extrinsic motivation (Mladenow et al., 2015). Intrinsic motivation means the urge to perform the activity comes from within, whereas extrinsic motivation refers to the motivation that comes from outside. There can be monetary or non-monetary rewards that encourage the public to participate. Non-monetary rewards can be self-satisfaction, doing the task for enjoyment, and some people may want some variation in their daily routine (Mladenow et al., 2015). An effective compensation scheme is critical for attracting participants if the crowd is motivated by cash incentives or economic benefits (Odongo, 2018). Crowd logistics is based on location, so companies use crowds for logistics on location-based services. In this, information is displayed on the company's website about the current situation and needs of the company location-wise (Mladenow et al., 2015). The interested public nearby can contact the company to conduct the logistic function. Hence, crowd logistics is dependent on location-based services.

2. RATIONALE OF THE STUDY

Effective logistics is at the heart of any industry, especially for online retailers. Logistics accounts for a large proportion of the cost of operations of the firm (Jacobs et al., 2014). Since logistics consists of many activities, any improvement in performing these activities may help the firm reduce its expenditure, thereby leading to cost savings. In today's dynamic environment, gaining a competitive advantage solely through management strategies, quality improvements, or cost reduction becomes extremely difficult. However, rising delivery speed allows retailers to compete more effectively in the market and stay ahead of their competitors (Marwah & Saxena, 2019). Every customer nowadays expects his product to arrive as soon as possible, preferably on or before the deadline (Jain et al., 2017). Retailers have difficulty keeping their customers if their deliveries are consistently below their standards, i.e., not delivered on time. This would give the business a negative image in the eyes of the consumers, so the pace at which the goods are delivered draws the consumer to a specific e-tailer website. The faster a product is shipped, the more likely a customer will return to that site to make another purchase (Marwah & Saxena, 2019). This can be accomplished by understanding logistics technologies. Logistics has seen tremendous developments in the last few years. One such development is crowd logistics. Crowd logistics allows to company to use the services of the general public in various ways. One such way is to seek their property on rent at lower prices to use it as a warehouse. Another service entails enlisting the public's help in supplying goods to consumers in exchange for a fee. Involving the general public in business benefits the corporation, the consumers, and the economy, as it decreases company costs and raises general public returns. The crowd helps the company enhance its capabilities, which in turn helps the company solve its problems. Participation in crowd logistics is voluntary, but the company must effectively use real-time information to utilize the benefits (Sampaio et al., 2019). So the company can procure the benefits out of it.

Since logistics is an integral part of every offline or online business, the opportunities deriving from these developments need to be addressed. Thus, the effect of crowd logistics on retailers needs to be examined. Consequently, the topic of review becomes essential. The study tries to answer the following research questions:-

- What is crowd logistics, and what are the various elements of crowd logistics?
- What are the different types of crowd logistics?
- How does crowd logistics affect the retail industry?

3. RESEARCH METHODOLOGY

To help build a deep understanding of the crowd logistics that led to the transformation of the logistics function, we have conducted a systematic and extensive literature review to address the issues related to crowd logistics. The study is based on secondary sources, and no primary data is collected. We searched various papers to understand crowd logistics over the last eight years. Then we collect data on the advantages and challenges a retailer faces using crowd logistics. We found 40 papers about crowd logistics, but only 20 articles, one thesis, and one book were found to be essential and related. Several journal papers discussed the different elements of crowd logistics and the various forms of crowd logistics based on the services offered by crowds. The study looked at recent papers published in peer-reviewed journals and some theses. We chose the papers based on the period from 2013 to 2020 to get a broad overview of crowd logistics.

4. REVIEW OF LITERATURE

In this section, we reviewed the work of various authors for eight years. This study aims to look into the existing crowd logistics literature. It goes over the ideological work of putting together a literary analysis. The ultimate aim is to develop a broad understanding of crowd logistics, identify possible gaps in expertise, and forecast future research directions.

4.1 CROWD LOGISTICS

Crowd logistics means outsourcing various logistics activities to a third party, i.e., the crowd (Free et al., 2017). It means transferring the load of performing logistics services by the company to the crowd. It helps maximize logistics efficiency (Rai et al., 2017). It matches parcel delivery work and temporary drivers (Arslan et al., 2019). It enables the next generation of logistics, i.e., the enhancement of current logistics services (Mehmann et al., 2015). It means outsourcing the logistics function to the crowd using technology. It provides economic benefits to both parties (Rai et al., 2017). It helps anyone to exchange goods and services with others (Paloheimo et al., 2016). A citizen traveling from one place to another becomes a crowd-shipping exporter when she agrees to carry some goods for others on her journey (Marcucci et al., 2017). Crowd logistics relates to the physical internet, i.e., applying internet data transfer techniques for transporting physical objects to the ultimate customers (Rai et al., 2017). It helps enhance the way goods are transported and stored, leading to efficiency in logistics.

In crowd logistics, the excess capacity of the public is used to carry out the logistics' delivery function, resulting in social, economic, and environmental benefits (Rai et al., 2017). Involving the public in the business provides an advantage not only to the business but the customers as well as the economy because it helps reduce the company's cost and increase the general public's income. Successful delivery requires a proper handover chain between the pair of workers. Participants must meet for every order, i.e., synchronized in time and space (Sadilek et al., 2013). The crowd involved in the logistics function uses public or personal transport to execute the delivery function (Rai et al., 2017; Le & Ukkusuri, 2019). The crowd chooses the parcel they want to deliver according to the location or time, i.e., places nearby or the delivery time involved. However, the company should look for ways to attract the crowd to provide services. One such way is giving something in return for their services in monetary forms like fees or non-monetary forms like gifts. The fees should be decided rationally so that more customers would be willing to execute the delivery function, but the total amount paid should be economical to the company (Dayarian & Savelsbergh, 2020). The fees should be attractive enough for the customers and a cost-saver for the company.

Crowd logistics can be used for classic and information logistics to benefit the company and the individual. Classic logistics is the traditional logistics that involves the flow of goods and services from producer to consumer. Information logistics is the flow and storage of information throughout the supply chain partners (Mladenow et al., 2015).

4.2 ELEMENTS OF CROWD LOGISTICS

The author conducted a systematic literature review to develop a comprehensive understanding of crowd logistics and described seven critical aspects of its success. The following are some of them:-

1. **Technological Infrastructure-** It includes the platform for conducting the logistics service online that can be mobile or web browser. It connects the product, information, and finance (Rai et al., 2017). It acts as a medium of communication (Mehmann et al., 2015) between the crowd and the company. The company usually executes the process of hiring the crowd for logistics through a web platform (Mladenow et al., 2016). However, it can also develop a personalized app to connect with the crowd for the execution of various functions (Arslan et al., 2019; Odongo, 2018). It helps harmonize the demand and supply of transport services. Anyone interested in performing the service can contact the company through a mobile app or apply on their website.
2. **Free Capacity-** This means utilizing the excess capacity for executing the delivery function (Rai et al., 2017; Rai et al., 2018). It aims to use excess capacity on existing trips to make deliveries (Arslan et al., 2019). The carrier will take the parcel-specific trip they have undertaken—it emphasizes time instead of volume (Rai et al., 2017). The crowd can help the firms deliver goods in their free time.
3. **Network-** It includes a network of the crowd. It involves an extensive network of people performing various logistics functions (Djelassi & Decoopman, 2013). The company employs neighbors that provide small-scale warehouse services by collecting parcels and delivering them to the customers (Rai et al., 2017). There are three types of couriers in the network: passenger, non-professional, and, finally, professional couriers. Passengers who want to take on a delivery mission to cut costs or increase the profitability of their travel. Non-professional couriers want to work part-time on specific tasks—finally, professionals who derive additional benefits from delivering facilities to deliver the products. (Odongo, 2018).
4. **Undefined Character-** The presence of an unseen crowd suggests a significant source of tension. Even though the platform records and tracks the audience, quality, and service control are difficult and cannot be guaranteed. (Rai et al., 2017). The unexpected behavior of the crowd cannot be predicted (Mladenow et al., 2016); hence there is always a risk in dealing with unknown people, and some issues like privacy issues, management of the crowd, and safety issues would always be there.
5. **No Formal Hiring-** The audience, not the company's staff, is in charge of logistics (Mehmann et al., 2015). The crowd always remains external to the firm (Rai et al., 2017) and does not form part of the internal members of the company. There is no official relationship between the owner, and the crowd (Sampaio et al., 2019), i.e., the crowd will not be treated as an employee. So they do not get the benefits given to a particular company employee. There is no employer-employee relationship between the crowd and the company (Odongo, 2018). There is no formal process for hiring the crowd; those interested and meeting the company's requirements can perform their delivery function. This helps in reducing the burden and responsibilities of the employer.
6. **Micro-Payment-** The crowd receives fees for providing services to the company. The fees are based on the type of services the crowd provides related to delivery (Rai et al., 2017). They are paid either on an hourly basis or depending upon the distance they cover (Odongo, 2018), i.e., paid on a kilometer basis; it is necessary to create offers that take into account the different circumstances and locations that the crowd can consider. A competition-based crowd-funding system can trigger motivational forces that will ultimately be crucial to potential crowd congestion as to whether they should contribute to the task of growing the crowd (Mladenow et al., 2016). If the crowd delivers the product faster, they will get paid accordingly. Similarly, other factors include large-scale access and cost-effectiveness.
7. **Voluntary-** The services a person undertakes for the firm are voluntary. The crowd themselves select the logistics services they want to execute (Rai et al., 2017; Sampaio et al., 2019). The crowd's involvement is voluntary, i.e., people self-select the logistics services they want to accomplish. Since there is no standard agreement, users can stop using the platforms at any time (Odongo, 2018).

4.3 TYPES OF CROWD LOGISTICS

There are various types of crowd logistics:-

- a) **Storage services** – This crowd logistics involves sharing the individual's property with the firm (Carbone et al., 2017). The property of the crowd can be used as a warehouse for storing the company's goods, which makes the delivery process faster. It helps the firms open up their distribution centers in the nearby places of their customers. According to Carbone et al. (2017), it helps make the storage of products much more affordable and accessible.
- b) **Local delivery services** - In this, the firm makes use of the transport of the individual, like bicycles, vans, cars, scooters, etc., to make fast and timely delivery to the customer (Carbone et al., 2017). In this, the firm places a request for delivery service, ultimately fulfilled by the crowd registered in platforms like mobile applications. Both parties use a platform like the mobile application to fulfill counter needs. The platform allocates the delivery service to the individual depending on time, place, availability, and destination. This is called crowdsourced delivery (Sampaio et al., 2019). The two types of services rendered are door-to-door and store-to-door delivery services. Door-to-door services mean picking up and delivering the goods from the place of origin to the place of destination (Sampaio et al., 2019). The driver picks up the parcel from the sender and delivers it to the customer's address. The second is store-to-door delivery, focusing on the business-to-customer (B2C) market (Sampaio et al., 2019). The firm opens up stores at various locations, and the driver picks up orders from in-house stores and delivers them to customers. E-tailers use this to provide same-day delivery to their prime customers.
- c) **Freight shipping services** - This logistics is primarily suitable for large-sized or non-standard items. In this, the connection between the owners of marine transport and the users of these is established to deliver the goods offshore. Its success depends on how smoothly the drivers pick up the packages and deliver them to their destination (Carbone et al., 2017).
- d) **Freight forwarding services** - This type of logistics is prevalent in today's world. Potential users of the services put an advertisement to notify the crowd about their express shipping needs, and whosoever is interested can collaborate with them. It helps users get cheaper and cheaper foreign products (Carbone et al., 2017). These are used to deliver goods outside the country through railways, airways, etc., i.e., and are used for importing and exporting goods.
- e) **Cargo-hitching** - There is an integration of freight and public transport to ensure the proficient movement of goods. It involves using the spare capacity of public transport, which remains idle, like the metro, trains, and buses (Sampaio et al., 2019). Therefore, the resources available in the market that are not utilized to their total capacity can effectively be utilized by the firm to deliver goods. So, the companies invite the crowd, and they can utilize public transport like bus or metro to deliver products.

5. CROWD LOGISTICS IN RETAILING

Retailers can benefit by using different delivery options and seeing which is more economical for them (Le & Ukkusuri, 2019). Delivering the product on the day of ordering is now more prominent (Dayarian & Savelsbergh, 2020) as it helps meet customer expectations. There are various options open for retailers regarding the delivery of goods. Earlier, retailers used the services of commercial carriers to deliver the product or provided the facility of store pick-up to the customers (Devvari et al., 2017). Retailers can either use their drivers or outsource this delivery function to outsiders whenever more orders are placed. So, what retailers are doing they are using the services of the people from the customers' side to deliver the goods while executing their journey. It saves costs and will make customers happy as they get their product before the estimated date. However, due to the increased

competition, retailers always have to look to new and innovative ways to deal with customers. As customers are now using more of the Internet for various things, firms also have to include the concept of digital in their business. Due to increased internet usage, the buying pattern has changed from offline to online, and so has the selling pattern. These increasingly competitive companies are under the right pressure to deliver products to customers on time. Many retailers offer consumers the option of taking the last mile delivery or store pick (Odongo, 2018). Last-mile delivery is an integral part of the logistics and supply chain (Gdowska et al., 2018), as the goods are manufactured to sell and deliver to the end customer. This affects the relationship between the buyer and the retailer. Therefore the company needs to be ahead of its competitors (Odongo, 2018). This can be done by managing the logistics process to deliver the products to the consumer at a minimal cost.

Crowdsourcing helps not only online retailers but brick and mortar retailers also benefit from it as they can now advertise the need of the crowd for delivering the goods (Odongo, 2018), which is not there earlier because of higher shipping costs or they do not have delivery services. Retailers can use the services of the customers who visit their offline stores to deliver the goods to the customers who order online (Dayarian & Savelsbergh, 2020). Whenever a customer visits the offline store for shopping and is willing to deliver the goods for a fee in return, the retailers try to grasp their services to save time and money to deliver the order online. However, this requires matching the customer's journey and route where the product will be delivered. Now, the last-mile delivery market uses crowd-logistics and traditional logistics shippers (Le & Ukkusuri, 2019) to deliver the goods and gain a competitive advantage over others. There are various advantages and disadvantages to both the company and the crowd (Boudreau & Lakhani, 2013).

5.1 BENEFITS OF CROWD LOGISTICS

There are various advantages of using crowd for performing the function of last-mile delivery:-

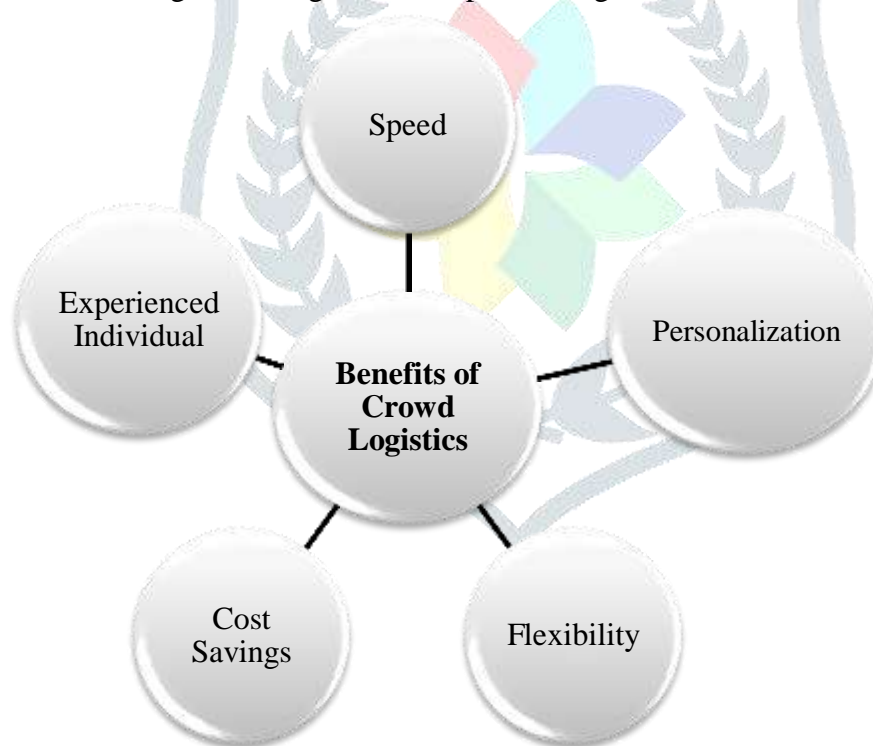


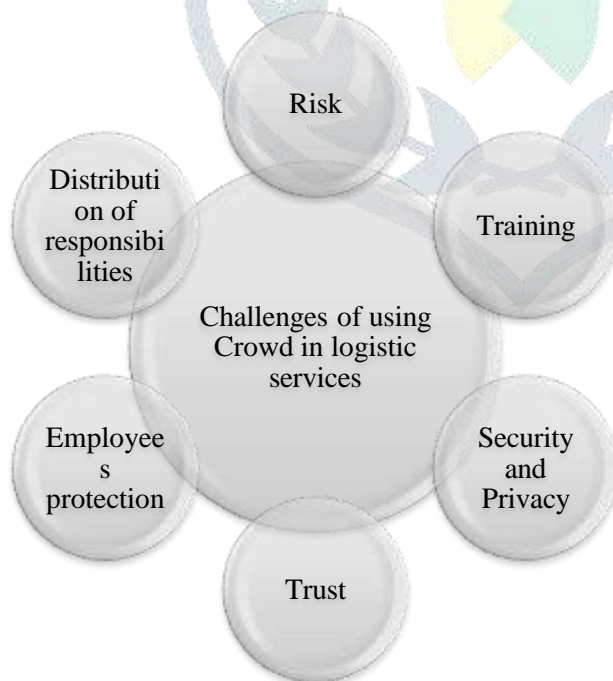
Figure 1:- Benefits of crowd logistics

- 1. SPEED-** The distribution of goods becomes increasingly essential, resulting in shorter distribution cycles and the formation of complex logistics networks. Same-day delivery is a revolutionary service that businesses use to outperform their rivals (Odongo, 2018; Rai et al., 2018). Quick delivery with minimal cost is a big challenge for retailers (Chen & Pan, 2016) that can be overcome by involving the public in their logistics function. To meet consumer needs, retailers are searching for ways to deliver products quickly to consumers' doorsteps. Deliveries in urban areas can be significantly accelerated if crowds are used to transport goods.

2. **PERSONALIZATION**- Since in crowd logistics, each delivery parcel is managed by individuals, there is a high level of personalization (Odongo, 2018). It helps firms to deal with unexpected situations. The parties can quickly contact and adjust the delivery date or time according to their needs. It will help in building a bond between the carriers and the customers.
3. **FLEXIBILITY**- People can work according to their convenience anytime and anywhere they want. It makes the delivery process flexible (Odongo, 2018; Rai et al., 2018) as the people can make the delivery to the customers by adjusting the time and date mutually. Using the services of customers who visit the store for delivery purposes provides great flexibility (Dayarian & Savelsbergh, 2020) related to time, as in-store customers can deliver the goods while returning from store to home.
4. **COST SAVINGS**- Significant cost savings can be realized when there are plenty of people with the flexibility to make deliveries. Unlike traditional logistics companies, crowd logistics do not require warehouses, fuel costs, and property-heavy infrastructure for working drivers (Rai et al., 2018). It requires a website or a mobile application to hire a crowd to perform the activities. There would be significant cost savings by using the crowd as it will cost less to use the services of the crowd as compared to collaborating with the carrier companies.
5. **EXPERIENCED INDIVIDUAL**- The advantage of using the crowd is that sometimes the company can get well-experienced, specialized, and talented individuals (Boudreau & Lakhani, 2013). The experienced individuals will handle the product properly, reducing the risk of getting damaged while delivering the goods. This will increase the chances of getting good feedback from the customers. This will also reduce handling and training costs. Since the individual is experienced enough, he does not require much training. Hence, the company's cost of training will get saved.

5.2 CHALLENGES OF USING CROWD IN LOGISTIC SERVICES

Despite the increasing interest in crowd logistics, some studies uncover obstacles that must be overcome before this idea can be fully realized. These challenges are as follows:-



- a) **RISK**- Depending only on unknown people for delivering the products involves higher risk. Trusting the crowd to perform part or full logistics services involves strategic planning that will significantly affect the business (Odongo, 2018) and its reputation. The behavior of the executors of the logistics function is unpredictable; as a

result, there is a risk of theft or damage of goods (Tadić et al., 2022). If the crowd cannot deliver the goods on time or the delivered goods are damaged, it harms the firm's goodwill.

- b) **TRAINING-** The delivery process requires training before accepting any order. The training cost of handling the delivery process sometimes becomes so high for retailers that it might increase logistics costs (Odongo, 2018). Since they are not full-time employees of the company, they do not know about the company's policies; hence, training them sometimes becomes essential.
- c) **SECURITY AND PRIVACY-** Safety is one of the significant challenges when opting for crowd logistics (Le & Ukkusuri, 2019). Hiring outsiders also poses a risk to the privacy of retailers and customers. People may not want to disclose their shopping options and home addresses to strangers who work as couriers. Crowd workers want to be anonymous (Devari et al., 2017), making it difficult for customers to trust couriers. Users share personal details with strangers, such as their names, phone numbers, emails, home addresses, and shopping habits. This can be risky as the information gets leaked and used unwantedly by unknown people (Odongo, 2018).
- d) **TRUST-** The inability to trust crowd workers significantly impacts an organization's operational performance, service quality, and synergy effectiveness (Bin et al., 2021). Building trust is a crucial barrier to effectively using crowd logistics delivery as a tool. The crowdsourcer must have the confidence of the senders that the package will reach the receiver unharmed and that he does not transport any counterfeit goods (Gläser et al., 2021). So, companies always doubt whether to trust crowd delivers or not.
- e) **EMPLOYEES PROTECTION-** The crowd always remains external to the firm (Rai et al., 2017) and does not form part of the internal members of the company. There is no official relationship between the owner and the crowd (Sampaio et al., 2019), i.e., the crowd will not be treated as an employee, so they do not get the benefits given to a particular employee of the company. They are hired as independent workers who do not benefit from sick leaves or retirement plans (Odongo, 2018). Even though the crowd provides flexible hours of delivery, this issue is related to their security always being there.
- f) **DISTRIBUTION OF RESPONSIBILITIES-** It is tough to determine who is responsible for the damage to goods during delivery (Tadić et al., 2022) and whom to hold accountable, either the crowd or the shipper. Even though there is shipment insurance, it may not cover certain things or provide for the actual damage. Shipment insurance is not an adequate solution (Tadić et al., 2022). This will create problems for the retailers as sometimes they have to bear the losses

6. CONCLUSION/FINDINGS

The level of competition has risen as e-commerce has grown in popularity. Retailers strive to provide the best possible service to their customers and use various strategies to do so. Today, retailers are concentrating on making logistics networks more affordable so that consumers can obtain their goods on time. The speed at which a customer's ordered product is shipped determines their level of satisfaction. As a result, retailers are attempting to do this in various ways. One such strategy is to enlist the support of consumers to conduct last-mile distribution, i.e., people from the general public. This is known as crowd logistics. Retailers use the Internet to communicate with the public. Anybody interested in and matches the retailer's demand can contact him via a mobile app or browser. We discovered numerous benefits that a retailer receives through crowd logistics while reading various research papers, including speedy distribution, personalization, and versatility in shipping goods. Last but not least is cost savings. Every retailer aspires to deliver products to customers in a more reliable and successful manner. They began using the crowd to sell their product to please their customers at a low cost. The parties can easily communicate and change the delivery date or time to suit their needs and preferences. Crowd logistics aid the firm in dealing with unexpected situations as individuals deliver every parcel from the customer side. It helps in dealing with the customers efficiently as they know their expectations. However, there are various difficulties or challenges a retailer faces while using the services of the crowd. First and foremost are security and privacy. There is always a doubt in the mind of retailers that their information might get leaked or customers' information regarding their shopping needs, the address might get leaked. The safety issues can be resolved by asking unknown people to show their identity proofs and phone numbers (Marcucci et al., 2017). Privacy concerns can be leveraged by hiring friends and associates (Devari et al., 2017) on whom companies have a certain sort of trust so a higher level of accountability and reliability can be maintained. Using friends as the carrier may reduce a

certain level of the burden from retailers, but it depends on whether friends and persons with some bonding will agree to deliver goods. The second concern is the risk associated with dealing with unknown people. It is difficult to trust the people we are not in contact with and are unknown to the company. Though there are certain disadvantages of using crowds, the benefits, specifically cost-saving, provide retailers a reason to go for crowd logistics as an innovation in traditional logistics.

Following a study of the literature, we can conclude that crowd logistics is a logistical advancement that can assist retailers in competing in the industry. It assists them in lowering their prices, which the company will also use to lower the price at which they sell to customers. Crowd logistics benefits not only online retailers but also brick-and-mortar retailers. They can now clearly advertise their need for a crowd to deliver merchandise, and those who meet the criteria can communicate with the business. However, this alternative was unavailable previously due to higher shipping costs or the lack of distribution facilities.

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