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CROWD LOGISTICS: SHARING ECONOMY IN SUPPLY CHAIN MANAGEMENT

Abstract: The purpose of this paper is to define crowd logistics, a relatively recent phenomenon in the sharing economy. Despite their increasing popularity, such projects have not been the topic of much research, with only a few pieces addressing the problems. The mission of crowd logistics is to connect market participants who have unique logistical capabilities with those who report logistical needs. This is done to prevent unproductive resource usage and to activate underutilized capabilities. An experimental strategy was used to study solutions used in practice, which was based on a survey of 77 active crowd logistics efforts. These projects are categorized into groups in this article, and the key differences between crowd logistics and regular business logistics are highlighted.

Furthermore, efforts are made to ascertain future development directions, as well as the potential influence of crowd logistics on traditional firms.

This research is based on an examination of secondary sources, including articles, consulting firm reports, and case studies published in branch publications, company websites, and provided by the firms themselves as part of webinars.

Keywords: sharing economy; gig economy; crowd logistics; urban logistics.

Introduction

One of the countless economic effects of the digital revolution is the rise of crowdsourcing projects, such as GoFundMe, Zrzutka.pl, Wikipedia, and others. Activities that were formerly performed largely by specialized organizations are now increasingly being performed by a “crowd” of individuals¹. The majority of research in this area focuses on two types of community practice: crowdfunding^{2,3}, which aims to use crowd financial resources to fund projects, and social innovations^{4,5}, which aim to use crowd intellectual resources to develop innovative solutions of various types. However, it should

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¹ **Howe, J.** The Rise of Crowdsourcing. *Wired*, 2006, <http://www.wired.com/wired/archive/14.06/crowds.html>.

² **Ordanini, A., Miceli, L., Pizzetti, M., & Parasuraman, A.** Crowd-Funding: Transforming Customers into Investors Through Innovative Service Platforms. *Journal of Service Management*, 22(4), 2011, pp. 443–470, <https://doi.org/10.1108/09564231111155079>.

³ **Belleflamme, P., Lambert, T., & Schwienbacher, A.** Crowdfunding: Tapping the Right Crowd. *Journal of Business Venturing*, 29(5), 2014, pp. 585–609, <https://dx.doi.org/10.2139/ssrn.1578175>.

⁴ **Collm, A., & Schedler, K.** Managing Crowd Innovation in Public Administration. *International Public Management Review*, 13(2), 2012, pp. 1–18.

⁵ **Boudreau, K. J., & Lakhani, K. R.** Using the Crowd as an Innovation Partner. *Harvard Business Review*, 91(4), 2013, pp. 60–69.

be noted that, in addition to financial and intellectual resources, the community has untapped logistical resources that can be used to provide logistical services. Many startups are increasingly taking advantage of this opportunity (e.g. the American Deli which provides goods delivery services by natural persons, or the French Co-Stockage that enables the lease of unused space from private persons). Services of this type are also available in Poland, as evidenced by the Polish branch of the Spanish start-up Glovo and the Finnish company Wolt. In addition, Uber, following its dramatic breakthrough into the passenger transportation services industry, is now entering the logistics industries to offer new food delivery services (Uber Eats) and same-day internet shopping delivery (Uber Rush).

Crowdsourcing in Logistics

The term *crowdsourcing* is a neologism composed of the words ‘crowd’ and ‘outsourcing,’ and its essence is based on the assumption that natural persons have resources (financial, intellectual, material, etc.) that can be activated in order to conduct traditional business activities through IT platforms (websites and mobile applications).

Originally, a *crowdsourcer* was characterized as a business that delegated a task to natural persons⁶. Later definitions⁷ extended this idea to entities voluntarily performing activities, bringing it closer to the peer-to-peer for-profit model⁸, i.e. the sharing economy / gig economy. Individuals fulfill the roles of supplier or producer in the sharing economy, which incorporates new kinds of dispersed production and consumption employing novel technology. The sharing economy is essentially separated into four categories: recirculation of commodities, enhanced usage of assets, exchange of services (e.g. time banks), and sharing of productive assets (such as cooperatives)⁹. The first group comprises online trading platforms like Allegro and OLX. The second category comprises car sharing services, such as short-term vehicle rental (PANEK CarSharing) or residential space sharing (Couchsurfing, Airbnb). The third type is the exchange of services, such as through the Oferia.pl site. The final category is the sharing of coworking spaces and electronic educational platforms like SkillShare.

Logistical crowdsourcing, often known as crowd logistics, is a component of the crowdsourcing and sharing economy concepts. The definition of this notion, proposed by Prof. V. Carbone’s team from the ESCP Europe Paris Campus, separates three basic features. The first is that crowd logistics is more reliant on amateurs than professionals. The second is that resources dispersed throughout the population are only partially explored and utilized (sometimes even not used at all). This trait provides for a clear distinction between crowd logistics and traditional logistics, which rely on dedicated infrastructure (warehouses, vehicles, etc.). Finally, crowd logistics is only conceivable because of the advancement of digital technology, such as internet platforms and mobile applications. It does not rely on typical corporate information technology systems like enterprise resource planning (ERP) or electronic data interchange (EDI)¹⁰.

Despite its expanding popularity, crowd logistics has received little scholarly attention, with only a few studies mentioning the phenomenon: While developing mobile crowdsourcing algorithms, Chen et al.¹¹ discuss the creation of the urban crowd logistics paradigm in which “a cooperating group of people is engaged to fulfill diverse last mile activities.” When evaluating components of location-based

⁶ Schenk, E., & Guittard, C. Towards a Characterization of Crowdsourcing Practices. *Journal of Innovation Economics & Management*, 7, 2011, pp. 93–107, <https://doi.org/10.3917/jie.007.0093>.

⁷ Estellés-Arolas, E., & González-Ladrón-de-Guevara, F. Towards an Integrated Crowdsourcing Definition. *Journal of Information Science*, 38(2), 2012, pp. 189–200, <https://doi.org/10.1177%2F0165551512437638>.

⁸ Schor, J. Debating the Sharing Economy. Great Transition Initiatives, 2014, <http://www.greattransition.org/publication/debating-the-sharing-economy>.

⁹ Schor, J. Debating the Sharing Economy. Great Transition Initiatives, 2014, <http://www.greattransition.org/publication/debating-the-sharing-economy>.

¹⁰ Carbone, V., Rouquet, A., & Roussat, C. Understanding Crowd Logistics. *CSCMP’s Supply Chain Quarterly*, 2018, <https://www.supplychainquarterly.com/articles/20180301-understanding-crowd-logistics>.

¹¹ Chen, C., Cheng, S. F., Gunawan, A., Misra, A., Dasgupta, K., & Chander, D. TRACCS: Trajectory-Aware Coordinated Urban Crowd-Sourcing. Second AAAI Conference on Human Computation and Crowdsourcing (HCOMP-14), 2014.

economic systems, Mladenow et al.¹² highlight that “in logistics, services can be done by individuals and utilize crowdsourcing notions in a variety of ways.” Finally, while discussing German examples of crowd logistics, Mehmman et al.¹³ describe it as “outsourcing of logistical services carried out by multiple organizations, where coordination is given by technology infrastructure.”

Crowd logistics addresses a developing and dynamic reality in several European nations, particularly France¹⁴, and has recently gained traction in Poland¹⁵.

Fig. 1 depicts the percentage share of active crowd logistics efforts in 2020, taking into account their origin. This illustrates the present global scenario in the field of crowd logistics development. This concept is particularly prevalent in Europe and North America due to the countries on these continents having the most advanced information technology. Nonetheless, these initiatives are becoming increasingly common in other regions of the world, bringing substantial changes to the activities of businesses and the implementation of logistics systems.

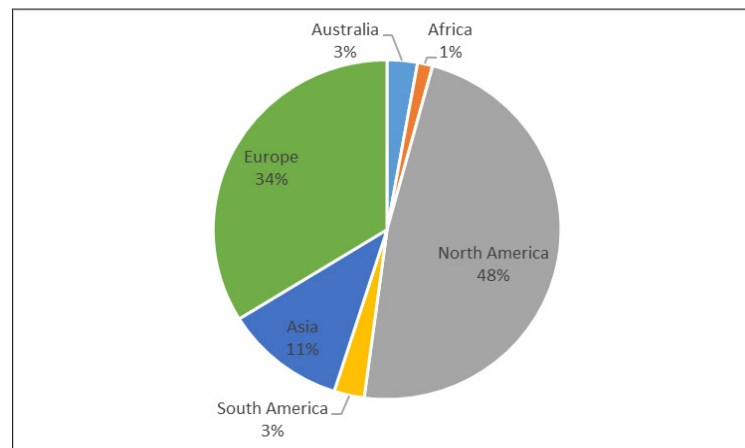


Fig. 1. World crowd logistics initiatives.

Source: own study based on <https://www.ventureradar.com/keyword/crowd%20logistics>

Crowd Logistics Classifications

Various criteria for crowd logistics division can be found in the literature. Some authors limit this sort of logistics to the transportation of items through the “crowd,” while others include the sharing of storage facilities. Due to the nature of the services supplied, a division was established (see Table 1) for the purposes of this article in an attempt to organize the most prevalent crowd logistics division criteria.

¹² Mladenow, A., Bauer, C., & Strauss, C. Crowdsourcing in Logistics: Concepts and Applications Using the Social Crowd. ICPS – International Conference Proceedings Series, 2015, pp. 244–251. Indrawan-Santiago, M., Steinbauer, M., Khalil, I., and Anderst-Kotsis, G. (eds.).

¹³ Mehmman, J., Frehe, V., & Teuteberg, F. Crowd Logistics – A Literature Review and Maturity Model. In: Kersten, W., Blecker, T., and Ringle, C. M. (eds.). Innovations and Strategies for Logistics and Supply Chains. *Proceedings of the Hamburg International Conference on Logistics (HCL)*, 2015, pp. 117–145.

¹⁴ Baroin, D., Huet, J.-M., & Rouquet, A. La crowd logistics ou l’économie collaborative face au défi du dernier kilomètre. *Harvard Business Review France*, 2019, <https://www.hbrfrance.fr/chroniques-experts/2019/02/24259-la-crowd-logistics-ou-leconomie-collaborative-face-au-defi-du-dernier-kilometre>.

¹⁵ Rzeźny-Cieplińska, J. Crowd Logistics – Concept and Application Possibilities in Polish Cities. *Studia Ekonomiczne*, 383, 2019, pp. 20–30.

Table 1. Types of crowd logistics services

	Shared storage	Local delivery	Shared shipping	
			domestic	international
Type of goods	<ul style="list-style-type: none"> • furniture • bulky products 	<ul style="list-style-type: none"> • food • perishable goods • small packages 	<ul style="list-style-type: none"> • shipments of various sizes 	<ul style="list-style-type: none"> • valuables • light products • regional products
Shared physical resources	<ul style="list-style-type: none"> • garages • cellars • places • other unused rooms 	<ul style="list-style-type: none"> • bicycles • motorcycles • cars • public transport 	<ul style="list-style-type: none"> • cars • buses • trains 	<ul style="list-style-type: none"> • planes • ships • cars
Abilities required from the service provider (activities performed)	<ul style="list-style-type: none"> • manipulation • storage 	<ul style="list-style-type: none"> • receipt of goods • driving vehicles • delivery of goods 	<ul style="list-style-type: none"> • loading of goods • driving vehicles • delivery of goods 	<ul style="list-style-type: none"> • handling formalities • packing of goods • delivery of goods
Support expected from the operator of the electronic platform	<ul style="list-style-type: none"> • software for calculating warehouse spaces • insurance • contracting 	<ul style="list-style-type: none"> • GPS monitoring • route planning software • price negotiations • verification of suppliers' entitlements 	<ul style="list-style-type: none"> • GPS monitoring • price negotiations • verification of suppliers' entitlements 	<ul style="list-style-type: none"> • GPS monitoring • handling customs processes

Source: own elaboration based on Yang, Y., and Yuan, Q.16

This classification comprises crowd logistics types based on the following service groups:

1. **Local delivery service** – a service that necessitates access to certain transportation and logistical resources in order to deliver to the appropriate location at the required time. Private passenger vehicles, vans, scooters, bicycles, public transportation, and other modes of transportation are examples of such resources. Depending on the size of the gift and the distance to the destination, delivery can alternatively be conducted on foot. Such services are extremely important in metropolises where a huge number of people move every day, allowing for the quick and inexpensive delivery of numerous consumer goods, small packages, and restaurant food.

Individual suppliers deploy their logistic resources by collecting items (or purchasing them on the customer's behalf), transporting them, and delivering them to a predefined place. These efforts make use of digital technologies (mobile apps or websites) that allow customers to place orders. These services may also be provided by distribution companies (restaurants, shopping malls, merchants, and so on), who then hire individuals to deliver straight to the customer. Payment terminals are frequently integrated into the internet platforms used. Since the success of this service is dependent on network coverage, these initiatives are particularly developed in urban regions where the size of daily travel allows for fast and economical delivery services. Dedicated digital platforms offer a dynamic planning and routing system to optimize order assignment to suppliers and equip them with geolocation technology for identification and tracking. Consumers can directly contact suppliers to personalize their existing service. When it comes to supply security, corporations ask consumers to produce identification documents, as well as permissions held by the deliverers, if appropriate. Among the numerous companies functioning in this field, the American Uber Eats and the Spanish Glovo are the most prevalent in Poland.

¹⁶ Yang, Y., & Yuan, Q. Crowdsourced Freight Delivery: The Value Created via Logistics Platform. Working Paper, 2018. School of Business, Economics & Law, University of Gothenburg.

2. **Crowdshipping** – a service that provides national or continental-scale product transportation in two ways: first, by ordering goods from abroad at a lower price than in the country of residency, or second, by ordering commodities that are not available on the domestic market. The same is true for local delivery services. Natural individuals use the modes of transportation to which they have access, such as passenger vehicles, vans, pickup trucks, and so on. The consumer employs these services to ensure the delivery of parcels, particularly large-size shipments, which would be difficult or expensive to dispatch via traditional means (post or courier). The client searches for a person travelling from the nation of origin of the product to the country of his/her home using a specialized internet platform. The driver takes advantage of the available space in his/her car and obtains additional compensation, whereas the individual seeking services receives the package at a lower cost. Digital platforms assemble a network of drivers capable of picking up, transporting, and delivering the items entrusted to individual or corporate consumers. The fleet includes medium- and long-distance drivers, as well as delivery drivers with additional capacity. The platform requires the provision of identity and transportation papers (permits, insurance, and so on), as well as the capacity to look for a supplier and conduct service transactions. It also allows you to track the shipment in real time. The size of the network and the ability to negotiate the price and shipping insurance, and to choose between numerous service packages, all play a role in the project's success (type of vehicle, etc.). In Poland, ego-type services are not widely used; nevertheless, start-ups like TravelPost and Friendshippr have attempted to enter the market with limited success. However, there are companies in other EU nations that are actively working in this industry, such as the French Cocolis.fr platform which has over 140,000 users. In terms of international parcel transport, it primarily concerns the transport of locally inaccessible things (food, fashion, etc.) by people travelling by plane. The success of these projects is dependent on their ability to assemble a sufficient number of individuals to enable international transportation of the products entrusted to them. The platforms, for their part, allow you to contact and manage business transactions while notifying you about the appropriate international legislation, namely restrictions and bans linked to air travel and customs requirements. Jwebi.com, which has roughly 40,000 users, is one of the most well-known organizations in this field. However, it appears that this type of crowd logistics is the least developed, maybe because of the security concerns associated with international shipment.
3. **Crowd storage (shared storage)** is achieved by natural humans renting unused warehouse space (basements, attics, garages, squares, etc.). The transaction is carried out through an online portal where customers describe their storage requirements and find available warehouse space. These types of services are especially appealing in metropolitan locations where it may be difficult to locate free or low-cost warehouse space. The most difficult task for the individual giving access to storage space is ensuring the safety of the stored goods, while also making access to the stored things easy for the owners. In addition to assistance in locating a location and securing transactions, organizations dealing in shared storage can offer additional services, such as calculating the required space and volume, pricing discussions, products insurance, or legal assistance in contracting. The French company Costockage.fr, which has over 3,000 locations and a dedicated internet platform, is an example of a company that provides such a diverse range of services. Currently, the greatest difficulty may be the local delivery service.

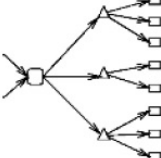

Consumers in cities are growing more demanding, expecting this type of delivery to be swift, personalized, and economical.

Traditional Logistics vs. Crowd Logistics

Most crowd logistics efforts do not directly compete with logistics companies that operate under the business-to-business (B2B) paradigm. Even if crowd logistics can sometimes replace corporate carriers (such as DHL, UPS, etc.), the magnitude of this activity is difficult to measure. The resources on which the given services are based are readily available, particularly in an urban setting. In fact, some companies operating in this area, such as Deliv, Postmates, and Instacart, have already established themselves as market leaders, generating earnings in hundreds of millions of dollars.

The primary areas allowing for the distinction between this sort of activity and logistics in the traditional, business approach were discovered through an analysis of the literature on crowd logistics. The findings of this study are reported in Table 2 with an emphasis on the dominating (but not exclusive) factors for both types of logistics. Based on the findings of the study, the following conceptual definition of crowd logistics is proposed: “The operation of crowd logistics is mediated by online platforms and mobile applications that connect natural persons and commercial entities with specific logistic resources with other natural persons and economic entities reporting logistic needs. Logistics services are provided on an ad hoc basis with the goal of making the greatest use of scattered, inactive resources and logistic capacities.”

Table 2. Comparison between business logistics and crowd logistics

		Traditional logistics	Crowd logistics
Supply resources (assets)		The company’s resources are either owned or rented, resulting in reasonably consistent performance.	The peer-to-peer network has no assets. Rather, a “crowd” of freelancers provides access to their resources.
Supply Chain Network			
		Static supply chain network	Flexible supply chain network
		Configuration of “one / several suppliers to many recipients”: – limited number of participants – limited number of transfer points – limited number of entry points	“Multiple Vendor to Multiple Customer” configuration: – unlimited number of participants – unlimited number of transfer points – unlimited number of pickup / delivery points
		Security relies on authenticated entities (staff and facilities)	Sharing results in the possibility of being closer to the end customer
		It leads to rigid, costly supply chains	The potential for flexible and resilient supply chains
Operational level	Procedures	Standardized	Ad hoc
	IT support	Specialized logistics software	Internet platforms and mobile applications
	Performance evaluation	Quantitative	Qualitative
Tactical level	Organization	Centralized	Scattered
	Qualifications of participants	Professionals	Amateurs
Strategic level	Participants in logistic processes	Enterprises	Natural persons
	Motivations to get involved	Economic	Multidimensional (financial, ecological, social, etc.)
	Operating range	Wide	Narrow (local market)
	Cooperation model	Consolidation	Symbiosis

Source: own study based on Carbone V. et al.¹⁷

¹⁷ Carbone, V., Rouquet, A., & Roussat, C. Understanding Crowd Logistics. *CSCMP’s Supply Chain Quarterly*, 2018, <https://www.supplychainquarterly.com/articles/20180301-understanding-crowd-logistics>.

On a strategic level, crowd logistics requires the formation of links between participants in logistical processes, allowing for the performance / outsourcing of logistical operations. They provide clear economic benefits to participants (on the consumer side, for example, speedy delivery at a low price, and on the contractor side, the chance of additional profits) and, of course, to the connecting platform in the form of commissions, fees, or advertising revenues. However, in most situations, these efforts focus on non-economic factors, such as the multifaceted motives of the initiative's members. Some platforms emphasize environmental benefits (emission reductions) or social relationships (joint purchase). Crowd logistics is concerned with small-scale operations (local activities).

Crowd logistics organization has its own set of characteristics. First and foremost, the flows are accomplished between participants via an application that allows for mutual evaluation, or based on the bidding system, or on the platform's assignment of contractors. The platforms serve as market intermediaries, easing flow distribution, providing descriptions, locations, and assessments of supply and demand, and connecting clients with local couriers. Most crowd logistics efforts provide basic logistical services, mostly transportation or warehousing, and rely on individuals whose competency and quality assessment are not accredited (in principle, any interested person can participate in such initiatives). Most platforms, however, require drivers to have a driver's licence, insurance, and car registration certificates, and they advise drivers to link their registration on the site to a Facebook account in order to develop a community of trust or e-reputation profiles. As "independent contractors," natural persons carry out logistical tasks.

Crowd logistics is primarily reliant on general, non-specific resources at the operational level. It employs a variety of modes of transportation and storage locations. These assets, which may be owned or rented (vehicles, storage spaces) or just used (public transportation), are not meant for professional logistical services. Crowd logistics IT systems are typically smartphone apps and dedicated internet platforms. A qualitative evaluation of the effectiveness of logistical services is based on input from participants: point-based or comment-based scoring systems meant to improve the service and to develop a reputation for crowd logistics. Such rating systems can assist in overcoming the frequently believed concerns of the crowd's lack of trustworthiness or professional competence, assuring suitable positioning for trustworthy users, and identifying persons who should be banned from the community.

Crowd Logistics' Possible Influence on Traditional Businesses

Crowd logistics and the new brokerage methods linked with it may have a severe impact on traditional capital-based economies¹⁸. According to Pricewaterhouse Coopers forecasts¹⁹, the sharing economy may produce more than 50% of total sales in various sectors of the economy by 2025. According to research²⁰, network coordinators, defined as entities building a network of partners in which participants engage and co-create value, outperform traditional corporations in terms of success, as assessed by a complex annual growth rate or margin. In the US hospitality industry, sales of Airbnb services surged by up to 300 percent in some locations in one year, while hotel revenues plummeted by 15 percent.²¹

A local delivery service appears to be the crowd logistics service that will be most important in the future. As a result, the negative impact of crowd logistics on traditional enterprises is likely to be evident among logistics service providers that specialize in "last mile" delivery and among retailers. Consumers have increased their expectations for local deliveries in terms of delivery time frames (e.g. less than one hour) and innovation (contact with the courier via smartphone, secure locker systems, etc.). These two conditions are clearly met by the local delivery service. Customers must pick up products from specified sites in several regions due to a shortage of last-stage delivery providers, which decreases

¹⁸ **Erving, E. E.** The Sharing Economy: Exploring the Intersection of Collaborative Consumption and Capitalism. Scripps Senior Theses, Paper 409, 2014, http://scholarship.claremont.edu/scripps_theses/409

¹⁹ **Hawksworth, J., & Vaughan, R.** The Sharing Economy. Sizing the Revenue Opportunity, Issues/Megatrends/Collision, 2015, <http://www.pwc.co.uk/issues/megatrends/collisions/sharingeconomy/the-sharing-economy-sizing-the-revenue-opportunity>.

²⁰ **Libert, B., Wind, Y., & Beck, M.** What Airbnb, Uber, and Alibaba Have in Common. *Harvard Business Review*, 2014.

²¹ **Zervas, G., Proserpio, D., & Byers, J. W.** The Rise of the Sharing Economy: Estimating the Impact of Airbnb on the Hotel Industry. *Journal of Marketing Research*, 54, 2017, pp. 687–705.

consumer satisfaction²². A local delivery service can also be provided as part of crowd logistics as an appropriate option, particularly in places with a restricted distribution network.

Handling these tasks on a large scale necessitates the employment of significant resources²³. Hence, in the case of crowd logistics, a large number of individual suppliers must be mobilized. Potential supplier distrust is addressed in the same way as in other sharing economy businesses (e.g. BlaBlaCar or Airbnb) with the use of online reputation assessment systems²⁴.

Crowdsourced storage services may also be an appealing choice because of their benefits (proximity, price, flexibility of offers, etc.). However, it appears to be a very small market. The physical dormant resources that can be utilized are most limited in metropolitan areas where there may be the highest demand for this type of service.

Another niche sector that may be appealing to the limited market for transporting items of unique sizes is shared shipping. The “crowd’s” ability to take over such activities (particularly in international transportation) might be severely limited due to risk and questions of responsibility and safety. Potential carriers are also at risk, such as conveying harmful or unlawful materials. Another impediment could be the necessity to develop a network of high-density service providers in order to assure optimal service reliability.

Crowd logistics efforts are newcomers to the logistical services market and may provide a level of risk that traditional logistical service providers should be aware of. Traditional logistical organizations are not very innovative and are frequently out of touch with industry trends and new technologies²⁵. The risk associated with local delivery appears to be particularly high in the case of municipal agencies that provide basic logistical services, primarily transportation and warehousing²⁶. These initiatives can also be viewed as new connections in larger supply chains, and they can have an impact on the relationships between actors²⁷. Local delivery service can assist you with a variety of challenges, including low client density in specific geographic areas, safe collection and returns, and same-day delivery. Crowd logistics hybridization with traditional logistics can take numerous shapes and involve a variety of entities. Some entrepreneurs (such as Stuart) provide e-commerce businesses with integrated information systems that allow them to take advantage of local crowd delivery. Other attempts (such as Deliv) propose a same-day delivery service to worldwide retail chains, allowing businesses to retain delivery control while the “crowd” acts as the carrier.²⁸

Prospects for Growth

A fundamental question surrounding the long-term viability of crowd logistics firms is whether these activities can be sustained.

The reality for startups in European countries is incredibly harsh: it is projected that nearly 90% of newly founded companies would fail within five years.²⁹

²² **Botsman, R.** Collaborative Logistics: Ripe for Disruption, 2014, <http://www.collaborativeconsumption.com/2014/10/08/collaborativelogistics-ripe-for-disruption/>.

²³ **Schenk, E., & Guittard, C.** Towards a Characterization of Crowdsourcing Practices. *Journal of Innovation Economics & Management*, 1(7), 2011, pp. 93–107, <https://doi.org/10.3917/jie.007.0093>.

²⁴ **Owyang, J., & Samuel, A.** The New Rules of the Collaborative Economy. *Crowd Companies & Vision Critical*, 2015, <https://www.visioncritical.com/resources/new-rulescollaborative-economy>.

²⁵ **Bellingkrodt, S., & Wallenburg, C. M.** The Role of External Relationships for LSP Innovativeness: A Contingency Approach. *Journal of Business Logistics*, 34(3), 2013, pp. 209–21, <https://doi.org/10.1111/jbl.12020>.

²⁶ **Persson, G., & Virum, H.** Growth Strategies for Logistics Service Providers: A Case Study. *The International Journal of Logistics Management*, 12(1), 2001, pp. 53–64, <https://doi.org/10.1108/09574090110806226>.

²⁷ **Cox, A., Ireland, P., Lonsdale, C., Sanderson, J., & Watson, G.** *Supply Chains, Markets and Power: Managing Buyer and Supplier Power Regimes*. SUNY Press, New York, 2003.

²⁸ **Hubner, A. H., Kuhn, H., & Wollenburg, J.** Last-Mile Fulfilment and Distribution in Omni-Channel Grocery Retailing: A Strategic Planning Framework. *International Journal of Retail and Distribution Management*, 44(3), 2016, pp. 228–247, <https://doi.org/10.1108/IJRDM-11-2014-0154>.

²⁹ **INSEE – L’Institut national de la statistique et des études économiques (2021).** Créations d’entreprises et d’établissements de 2011 à 2020 et stocks d’unités légales et d’établissements au 31 décembre 2018, <https://www.insee.fr/fr/statistiques/2021271>.

Obtaining financing from the state or EU institutions does not always result in long-term success. For example, the Take Eat Easy company, which specializes in meal delivery, went bankrupt after receiving €16 million. In turn, Instacart, which was founded in the United States in 2012, reached profitability six years later.³⁰ Today, however, the 2020 pandemic COVID-19 stock exchange, the firm, the company, increased the news by up to 500% and cooperation in 2021 of the common stock exchange on the stock exchange.³¹

The COVID-19 pandemic, which has lasted more than a year, is also a huge obstacle that may permanently stymie the growth of crowd logistics, both through direct impact on population prevalence and by generating a general climate of suspicion in social contacts. The disease caused widespread disruptions, the magnitude of which, in comparison to earlier crises (earthquakes, tsunamis, terrorist attacks, etc.), is worldwide and the medium-term impact is indefinite. It has an immediate impact on the sharing economy, which places the individual at the core of the company strategy. This is true for any consumer-consumer connection that is based primarily on direct social interactions, such as crowd logistics.³²

Strict protocols are currently in place all around the world (keeping physical distance, the need to wear masks and use disinfectants, etc.). Among the limitations is shopping in stores, which is permitted only after following a number of rigorous restrictions and with a significant reduction in physical touch, particularly with the items. This makes it difficult to purchase a wide range of things, such as apparel or household appliances.³³ It is projected that social connections would be fairly limited in the following months. This is a condition that will have an effect on the operation and growth of crowd logistics.

Thus, the present pandemic may contribute to a renewed interest in professional logistics, meeting the highest quality requirements, particularly in the framework of ISO certificates, and ensuring strict adherence to complicated processes to ensure the service's safe implementation. Professional logisticians who are bound by contracts with their employers, risk losing their jobs if a severe breach occurs. As a result, it cannot be ruled out that the pandemic may result in a full halt to the operation of crowd logistics initiatives.

Conclusions

The article describes and characterizes a new type of logistics service delivery: crowd logistics, which is based on the use of inactive private resources and underutilized logistics potential via internet platforms. An initial conception and classification of this activity was proposed on the basis of an exploratory website analysis of crowd logistics projects. It discusses the key contrasts between crowd logistics and traditional commercial logistics, as well as the possible influence of crowd logistics on traditional logistics service providers.

The research methodology was based on an examination of the websites of organizations that provide crowd logistics services. This is a drawback since such pages are designed to entice new users, which can result in a skewed, biased presentation of information.

The acquired exploratory results point to a number of prospective research directions. Crowd logistics initiatives are part of the global social evolution, and their development will be influenced by the progress of other community practices (crowdsourcing, crowdfunding, and so on), as well as by the formation of a new sharing economy. The latter is primarily built on trust, which is commonly recognized

³⁰ **Carson, B.** Instacart Grabs Extra \$600M in Funding at \$7.6B Valuation, Says IPO 'On the Horizon'. *Forbes*, 2018, <https://www.forbes.com/sites/bizcarson/2018/10/16/instacart-600-million-ipo-plans/?sh=6b3646eb4172>.

³¹ **Franklin, J.** Exclusive: Instacart Taps Goldman Sachs to Lead IPO at \$30 Billion Valuation – Sources. Reuters, 2020, <https://www.reuters.com/article/us-instacart-ipo-exclusive-idUSKBN27S3AG>.

³² **Paché, G.** La crowd logistics en danger. *Management & Data Science*, 4(4), 2020, <https://doi.org/10.36863/mds.a.13280>.

³³ **Rouquet, A., & Paché, G.** Logistique de magasinage en distribution alimentaire: une approche fictionnelle relative à l'usage du smartphone. *Logistique & Management*, 28, 2020, <https://doi.org/10.1080/12507970.2020.1730253>.

as its primary pillar³⁴, but which is now increasingly viewed as one of its vulnerabilities³⁵. In this regard, it would be fascinating to investigate how the collapse of the sharing economy's trust-based image can affect the growth of emergent crowd logistics.

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