

Consumer's Adoption of Last Mile Logistics Innovation: A Systematic Literature Review

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ABSTRACT

Last mile logistics refers to the final stage of the delivery process where products are transported from a distribution center to the end customer. In recent years, advancements in technology and changes in consumer behavior have led to an increased focus on last mile logistics. However, last mile logistics pose challenges due to its complexity and uncertainty affecting both the firms or logistics service providers and the customers. Studies focusing on achieving efficient last mile logistics have gained attention from scholars while research discussing factors affecting customer's adoption on last mile logistics innovation remain scant. This conceptual paper aims to explore the factors that influence customer adoption of last mile logistics through a systematic literature review of selected 21 papers from reputable journals. The papers were analyzed and resulted in three broad categories of perspectives discussing factors considered by customers to adopt last mile logistics innovation. Future studies are recommended to address issues not covered in this study.

Keywords : last mile logistics, logistics innovation, last mile delivery, e-fulfilment

A. Introduction

E-fulfilment and distribution in e-retailers has been the focus of literature (Melacini et al., 2018) as this pose challenges to meet variety consumers' needs and wants as well as their mixed perception in delivery attributes—speed, convenience and cost (Gawor & Hoberg, 2019). Retailers need to consider carefully how they develop last mile logistics (LML) models able to facilitate consumers' needs and motivation (Xueqin Wang, Yuen, et al., 2019) through last mile delivery innovations. These innovations place two important issues to be resolved. The initial relates to investment and the latter is on how to make consumers shift their perception of passive to active delivery, especially LML innovations with requiring customer's participation (Lee, 2012).

Last mile delivery accounts for most

of the overall cost in shipping ranging from 30% to 70% due to its fragmented demands, high differences in products, limited delivery window, and small quantities (NUS, 2017). This is one of the underlying reasons why e-retailers and logistics service providers (LSP) seek to improve their LML performance through last mile delivery innovations. Currently, innovation models in LML being discussed include reception boxes installed at homes, self-collection parcel lockers, customer's pickup points, crowdsourcing logistics (4th milk run), drones, car trunks, time-based delivery pricing, customer behavior patterns, underground facilities (such as pipe, railway track), and robots (Mangiaracina et al., 2019). At least, there are two LML innovation models that receive relatively a sufficient number of attentions from researchers based on the type of actors involved—consumer-based (reception box, pickup points and

parcel lockers or automated parcel station) and crowd-based (crowdsourced logistics) (Mangiaracina et al., 2019).

Reception box allows customers to receive their goods either installed individually at homes or shared communally (Xuping Wang et al., 2014) which may lead to benefits both in customers' and providers' sides (Deutsch & Golany, 2018). Pickup point method in last mile delivery is a method where providers collaborate with local shops acting as pickup points based on time and distance consideration for customers to collect their order (Morganti et al., 2014). This method contributes to cost efficiency and ecological advantages (Durand et al., 2013). While self-collection parcel locker is a method requiring consumers to collect their orders at predetermined pickup point using a one-time code access to open the locker (Xuping Wang et al., 2014) which suggests customer's engagement in online shopping (Xiao et al., 2018), flexibility in location and time for collection (Deutsch & Golany, 2018) and high cost reduction (Arnold et al., 2018) add values to the consumers. Crowdsourced logistics has also gained some attention identified to perform better than dedicated fleet not only economically but also environmentally (Castillo et al., 2018; Guo et al., 2019).

There are currently studies investigating how implementation of innovation in LML affect customers perception (Gawor & Hoberg, 2019; Javed & Wu, 2019; Pan et al., 2017; Vakulenko et al., 2019) and retailers (Arnold et al., 2018; Buldeo Rai, Verlinde, Macharis, et al., 2019; Castillo et al., 2018; Le & Ukkusuri, 2019). However, there are only few studies contributes to conceptual framework of how innovation of LML is adopted by costumers. Body of theories such as perceived value and transaction cost of economics (Yuen et al., 2018a), unified theory of acceptance and use of technology (Zhou et al., 2020), SSTQUAL (Xueqin Wang, Yuen, et al., 2019), diffusion of innovation and theory of reasoned act (Xueqin Wang et al., 2018a), and mental accounting and consumer behavior (Nguyen et al., 2019) have been used to understanding the process of how costumers are willing to

participate in LML. The aim of this paper is to provide systematic review literature of the LML innovations with specific objectives in identifying the components making up the process of adoption and understanding how customers are willing to change their behaviors from passive to active receivers.

The paper is organized as follow: methodology will be discussed in the second section, third section talks about the analysis, fourth section describes potential research opportunities in the future.

B. Methods

While there many different methods used by scholars to do a literature study, this paper applies systematic approach which is the most precise method to collect articles. This approach also makes sure that necessary and relevant data from papers is covered (Snyder, 2019). There are many guidelines available that can help authors to conduct their literature review studies. The approaches can be qualitative or quantitative depending on what is being targeted for the outcome. This study follows steps suggested by Snyder (2019) which includes designing the review, conducting the review, analysis, and structuring and writing the review. To appropriately address the set objectives of this paper, the present study proposes these two research questions: (1) *RQ1*. What are the main factors affecting customers' adoption in LML innovation? This question attempts to underline factors affecting customers' adoption new innovation in last mile delivery; (2) *RQ2*. What are the components that drive customer's participation in LML innovation to co create experience in last mile delivery? This will assess both cognitive and affective factors affecting customer's participation and what suggestions can be made to encourage customers to participate in the LML innovation. In order to address the two research questions, this study adopted stages used by Mangiaracina et al., (2019); literature search, analysis, and hints for future research.

Papers analyzed in the study comprising articles written from 2012 to 2023.

This era is of importance in terms of growing attention being given to last mile logistics as part of the consumers experience. The search is conducted across multiple database such as ScienceDirect, Emerald Insight, Wiley Online Library and Francis-Taylor to ensure that only articles receiving peer review are included. In order to identify papers discussing the topic, we use keywords: last mile delivery, last mile logistics, last mile innovation, self-collection parcel, automated parcel station (APS), click and collect, reception box, collection station,

adoption, intention to use-- in the journal database such as ScienceDirect, Taylor and Francis, Emerald Insight, Springer. This resulted in 134 articles. After 134 articles have been collected, the next step is to choose which articles suitable for the analysis. Titles of the articles are the main component of filtering the articles and continued with abstract checking. If the abstract is not in line with what the study aims at, the articles are dropped. Thorough checking has resulted in 20 selected articles which substantially support the study's

Table 1 List of Selected Papers

No	Authors, Year	Titles	Journal	Methodology	Conceptual Framework
1	(Junjie & Min, 2013)	Convenient pickup point in e-commerce logistics: a theoretical framework for motivations and strategies	Computer Modelling & New Technologies	Case study conceptual model	Cost, Service, Profit
2	Harrington, Singhai, Kumar, & Wohlrab (2016)	Identifying design criteria for urban system last-mile solutions -A multi-stakeholder perspective	Production Planning and Control	In-depth case study	Last mile solutions from stakeholders' perspective
3	Wang, Yuen, Wong, & Teo (2018)	An innovation diffusion perspective of e-consumers' initial adoption of self-collection service via Automated Parcel Station	The International Journal of Logistics Management	Survey	Theory of Diffusion of Innovation (DOI). Theory of Reasoned Act (TRA)
4	(Chen et al., 2018)	Consumer's intention to use self-service parcel delivery service in online retailing: An empirical study	Internet Research	Survey	Resource matching theory, Consumer co-production theory, and technology readiness
5	(Bulmer et al., 2018)	Exploring the adoption of self-service checkouts and the associated social obligations of shopping practices	Journal of Retailing and Consumer Services	Qualitative	Theories of practice
6	Wang, Yuen, Wong, & Teo (2018a)	E-consumer adoption of innovative last-mile logistics services: A comparison of behavioral models	Total Quality Management & Business Excellence	Survey	Theory of Diffusion of Innovation (DOI) and attitude theories (Theory of Reasoned Act)
7	Jara, Vyt, Mevel, Morvan, & Morvan (2018)	Measuring customers benefits of click and collect	Journal of Services Marketing	Survey	Customer value: functional, experiential, and relational benefits

8	Lachapelle, Burke, Brotherton, & Leung (2018)	Parcel locker systems in a car dominant city: Location, characterization and potential impacts on city planning and consumer travel access	Journal of Transport Geography	Case Study: Hierarchical Cluster Analysis	Travel behavior, attitude, spatial attributes
9	Yuen, Wang, Ng, & Wong (2018)	An investigation of customers' intention to use self-collection services for last-mile delivery	Transport Policy	Survey	Theory of Diffusion of Innovation (DOI)
10	Vakulenko, Hellström, & Hjort (2018)	What's in the parcel locker? Exploring customer value in e-commerce last mile delivery	Journal of Business Research	Qualitative	Customer value creation and self-service customer value
11	Buldeo Rai, Verlinde, & Macharis (2019a)	The "next day, free delivery" myth unraveled: Possibilities for sustainable last mile transport in an omnichannel environment	International Journal of Physical Distribution and Logistics Management	Choice based conjoint analysis	Attitude, choice, behavior
12	Liu, Wang, & Susilo (2019)	Assessing the impacts of collection-delivery points to individual's activity-travel patterns: A greener last mile alternative?	Transportation Research Part E: Logistics and Transportation Review	Quantitative: secondary data	Trip behavior: mode choice and trip chaining
13	Wang, Yuen, Wong, & Teo (2019)	Consumer participation in last-mile logistics service: an investigation on cognitions and affects	International Journal of Physical Distribution and Logistics Management	Survey	Utilitarian and psychological consideration
14	Nguyen, de Leeuw, Dullaert, & Foubert (2019)	What Is the Right Delivery Option for You? Consumer Preferences for Delivery Attributes in Online Retailing	Journal of Business Logistics	Survey Conjoint Analysis	Mental Accounting Theory
15	Wang, Wong, Teo, Yuen, & Li (2019)	Decomposing service conveniences in self-collection: An integrated application of the SERVCON and Kano models	International Journal of Physical Distribution and Logistics Management	Survey	Service Convenience
16	Yuen, Wang, Ma, & Wong (2019)	The determinants of customers' intention to use smart lockers for last-mile deliveries	Journal of Retailing and Consumer Services	Survey	Resource matching theory, Value creation and transaction cost
17	De Oliveira, De Oliveira, De Sousa, De Paula Caliari, & De Oliveira Leite Nascimento (2019)	Analysis of accessibility from collection and delivery points: Towards the sustainability of the e-commerce delivery	Urbe	Accessibility analysis with spatial tool	Accessibility Analysis, consumer preference and demographic factors
18	Buldeo Rai, Verlinde, & Macharis (2019b)	Unlocking the failed delivery problem? Opportunities and challenges for smart locks from a consumer perspective	Research in Transportation Economics	Qualitative	Consumers' readiness toward innovation

19	Wang, Wong, Teo, Yuen, & Feng (2019)	The four facets of self-collection service for e-commerce delivery: Conceptualizations and latent class analysis of user segments	Electronic Commerce Research and Applications	Survey	Value co creation:
20	Zhou et al. (2020)	Understanding consumers' behavior to adopt self-service parcel services for last-mile delivery	Journal of Retailing and Consumer Services	Survey	Extended UTAUT
21	Xueqin Wang et al. (2021)	A critical assessment of co-creating self-collection services in last-mile logistics	International Journal of Logistics Management	Content analysis	Practice theory and resource conservation theory

purposes. The selected articles are published from 2016 to 2023. These 21 articles are then analyzed in spreadsheet and categorized to be classified based on the paper general information (author, year, title, journal), methodology, and conceptual framework (theories used by authors to support the proposition).

Table 1 serves as guidance to analyze and determine what areas of last mile logistics innovation which involve consumers' participation. The table lists the papers chronologically as to the issues are discussed by scholars to show how consumers' adoption to this LML innovation develop over time. It is interesting to note that to the knowledge of the author, there has been very little research formulating how innovation in LML with customers' participation is adopted. In terms of the scope, based on the papers analyzed we identified three perspectives in which this adoption is viewed by literature; (1) Innovation and technology acceptance model perspective. The process of intention to use LML consumers' based LML innovation is identified based on the theories of innovation diffusion and technology acceptance models and their modification (3, 6, 9, 18, 20); (2) Consumer value creation. Value creation is adapted to model how consumers are willing to use the LML innovation which also incorporate co creation of the value (4, 7, 10, 16, 19, 21), and (3) Customer behavior and preferences. Behavioral patterns are used to predict consumers' intention to adopt LML innovation together with utilitarian preferences (1, 5, 8, 11, 12, 13, 16, 17, 18) .

C. Results and Discussion

In general, the selected articles are mainly discussing the trends in last mile innovation in Asia countries where China and Singapore are two leading countries implementing LML innovation such as automated parcel station (APS) or self-collection lockers followed by other countries such as Taiwan, New Zealand, Sweden, Australia. Methodologies used also vary which interestingly show that there are studies applying qualitative approaches signaling lack of empirical previous studies examining the process of consumers adoption of LML innovations (Mangiaracina et al., 2019).

1. Innovation and technology acceptance model perspective

Theory of innovation and diffusion (DOI) explain consumers' attributes toward innovation characteristics which are significant antecedent of their adoption towards intention to use it (Yuen et al., 2018b) while theory of technology acceptance (TAM-UTAUT) are predictors to describe behavioral intent of technology adoption (Zhou et al., 2020). These two perspectives are modified and combined to identify the importance of underlining the necessity to focus not only on the innovation characteristics but also how these are brought about to the consumers and how the they feel about them (Xueqin Wang et al., 2018a). Table 2 presents constructs used.

Consumer acceptance plays an important role in determining to what extent

Table 2 Papers with DOI and TAM/UTAUT framework

No	Authors	Construct	Conceptual Framework
1	Wang, Yuen, Wong, & Teo (2018)	Perceived compatibility, Perceived relative advantage, Perceived complexity, Perceived observability, Perceived trialability, Attitude, Relative advantage (direct to intention)	Theory of Diffusion of Innovation (DOI). Theory of Reasoned Act (TRA)
2	Wang, Yuen, Wong, & Teo (2018a)	Relative advantage, Perceived compatibility, Attitude (mediating), demographic (moderating)	Theory of Diffusion of Innovation (DOI) and attitude theories (Theory of Reasoned Act)
3	Yuen, Wang, Ng, & Wong (2018)	Compatibility, Relative advantage, Complexity, Trialability, Observability	Theory of Diffusion of Innovation (DOI)
4	Buldeo Rai, Verlinde, & Macharis (2019b)	delivery preferences (location), experiences with failed deliveries, and respondents' perception	Consumers' readiness toward innovation
5	Zhou et al. (2020)	Behavioral intention, Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Condition, Perceived Satisfaction, Perceived Risk	Extended UTAUT

new technology is adopted (Buldeo Rai, Verlinde, & Macharis, 2019b). While consumer behavior of process decision is affected by both internal (needs, values, lifestyle) (Xueqin Wang et al., 2018b) and external factors (delivery attributes), when it comes to deciding to use LML innovation, consumers' perceived compatibility, complexity and trialability affect the consumers' decision. In the meantime, the newly developed UTAUT focuses how perception or customer's subjective feelings are influenced by emotional and cognitive factors (Zhou et al., 2020). The current model of diffusion innovation theory incorporate compatibility, relative advantage, compatibility, trialability, observability, and complexity. In this literature review, all constructs have been identified to have influence over LML innovation. However, not all provide the same power on affecting the customers because it is found that the characteristics which have direct

utilitarian effects—perceived advantage—and emotional effect—compatibility—have stronger effects than the others (Yuen et al., 2018b), the study by Buldeo Rai, Verlinde, & Macharis, (2019b) adds another important factor affecting customers' intention that is how the characteristics of the innovation is presented and delivered thus influence the perception formed.

2. Consumer Value Creation

Active consumers who are involved in self-collection of ordered items, in addition to other attributes such as the website, customer relationship and service, are co creating value (Jara et al., 2018) where the value itself can only be perceived by individual consumers who encounter it (Xueqin Wang, Wong, Teo, Yuen, & Feng, 2019). This value creation can only occur either during the service (taking the delivery in the self-collection parcel) or when customers return their goods which

should carry some meaning in the customers' mind and affect his or her next interaction with the last mile delivery method of shipping (Vakulenko et al., 2018). Interestingly, the intention to use LML innovation is mostly affected by consumers perceived value rather than economics, reliability, and privacy protection factors (Yuen et al., 2019). It appears that the novelty of the technology that drives consumers to adopt this innovation (Chen et al., 2018; Xueqin Wang, Wong, Teo, Yuen, & Feng, 2019) while specific factors such as distance and time convenience also possess direct relationship (Nguyen et al., 2019). In the long, service providers must maintain aspects of customer relationship and customer experience to ensure long term value perceived by consumers, as well as other actors (Jara et al., 2018; Xueqin Wang et al., 2021).

3. Customer preferences

Convenience is one important aspect considered by consumers if they want to participate in the self-collection method of logistics delivery which translates to proximity (De Oliveira et al., 2019; Junjie & Min, 2013; Lachapelle et al., 2018), accessibility (De Oliveira et al., 2019; Lachapelle et al., 2018; Liu et al., 2019), security (Harrington et al., 2016; Xueqin Wang, Wong, Teo, Yuen, & Feng, 2019), and time information related the availability of the goods to be picked up (Buldeo Rai, Verlinde, & Macharis, 2019b; Harrington et al., 2016). In addition, customer's experience also play an important role in process decision making to participate in the delivery process (Wang, Wong, Teo, Yuen, & Li, 2019). Moreover, this convenience leads to what consumers expect as personalization which can allow them to modify their preferences (Wang, Yuen, et al., 2019) without being forced to accept pre-determined choice that may lead to lack of motivation (Bulmer et al., 2018).

D. Conclusion

Since this study focuses on LML innovation requiring consumers participation, it is worth noting that factors involving both

cognitive and affective aspects are both co-exist when decision process making occurs to adopt or not this LML innovation. This literature review demonstrates factors involving both cognitive and affective driving the intention to adopt LML innovation through the notable theories of behavior, innovation, technology acceptance along with service and attribute characteristics are determinants that may intersect to drive the consumers to adopt it. Moreover, some opportunities are still wide open to study further especially in areas that still need empirical validation such as investigating how to translate intention to adopt into real adoption, differences in attributes of LML innovation that leads to different customer perception, and how service dimensions contribute to this self-service technology. This literature review is far from complete due to limitation in the number of papers with the consumers' perspective of last mile logistics. Future studies should address this shortcoming by including papers discussing methods of last mile logistics which are not covered in this study. In addition, most of the papers are based in developed countries that may bring some differences in less developed geographical areas. Future studies may suggest comparative studies among last mile logistics practices in less developed regions to gain better understanding.

E. References

- Arnold, F., Cardenas, I., Sørensen, K., & Dewulf, W. (2018). Simulation of B2C e-commerce distribution in Antwerp using cargo bikes and delivery points. *European Transport Research Review*, 10(1). <https://doi.org/10.1007/s12544-017-0272-6>
- Buldeo Rai, H., Verlinde, S., & Macharis, C. (2019a). The "next day, free delivery" myth unravelled: Possibilities for sustainable last mile transport in an omnichannel environment. *International Journal of Retail and Distribution Management*, 47(1), 39–54. <https://doi.org/10.1108/IJRDM-06-2018-0104>
- Buldeo Rai, H., Verlinde, S., & Macharis, C.

- (2019b). Unlocking the failed delivery problem? Opportunities and challenges for smart locks from a consumer perspective. *Research in Transportation Economics*. <https://doi.org/10.1016/j.retrec.2019.100753>
- Buldeo Rai, H., Verlinde, S., Macharis, C., Schoutteet, P., & Vanhaverbeke, L. (2019). Logistics outsourcing in omnichannel retail: State of practice and service recommendations. *International Journal of Physical Distribution and Logistics Management*, 49(3), 267–286. <https://doi.org/10.1108/IJPDLM-02-2018-0092>
- Bulmer, S., Elms, J., & Moore, S. (2018). Exploring the adoption of self-service checkouts and the associated social obligations of shopping practices. *Journal of Retailing and Consumer Services*, 42(January), 107–116. <https://doi.org/10.1016/j.jretconser.2018.01.016>
- Castillo, V. E., Bell, J. E., Rose, W. J., & Rodrigues, A. M. (2018). Crowdsourcing Last Mile Delivery: Strategic Implications and Future Research Directions. *Journal of Business Logistics*, 39(1), 7–25. <https://doi.org/10.1111/jbl.12173>
- Chen, Y., Yu, J., Yang, S., & Wei, J. (2018). Consumer's intention to use self-service parcel delivery service in online retailing: An empirical study. *Internet Research*, 28(2), 500–519. www.emeraldinsight.com
- De Oliveira, L. K., De Oliveira, R. L. M., De Sousa, L. T. M., De Paula Caliani, I., & De Oliveira Leite Nascimento, C. (2019). Analysis of accessibility from collection and delivery points: Towards the sustainability of the e-commerce delivery. *Urbe*, 11, 1–17. <https://doi.org/10.1590/2175-3369.011.e20190048>
- Deutsch, Y., & Golany, B. (2018). A parcel locker network as a solution to the logistics last mile problem. *International Journal of Production Research*, 56(1–2), 251–261. <https://doi.org/10.1080/00207543.2017.1395490>
- Durand, B., Mahjoub, S., & Senkel, M. P. (2013). Delivering to urban online shoppers: The gains from “last-mile” pooling. *Supply Chain Forum*, 14(4), 22–31. <https://doi.org/10.1080/16258312.2013.11517325>
- Gawor, T., & Hoberg, K. (2019). Customers' valuation of time and convenience in e-fulfillment. *International Journal of Physical Distribution and Logistics Management*, 49(1), 75–98. <https://doi.org/10.1108/IJPDLM-09-2017-0275>
- Guo, X., Lujan Jaramillo, Y. J., Bloemhof-Ruwaard, J., & Claassen, G. D. H. (2019). On integrating crowdsourced delivery in last-mile logistics: A simulation study to quantify its feasibility. *Journal of Cleaner Production*, 241(2019), 118365. <https://doi.org/10.1016/j.jclepro.2019.118365>
- Harrington, T. S., Singhai, J., Kumar, M., & Wohlrab, J. (2016). Identifying design criteria for urban system last-mile solutions -A multi-stakeholder perspective. *Production Planning and Control*, 27(6), 456–476. <https://doi.org/10.1080/09537287.2016.1147099>
- Jara, M., Vyt, D., Mevel, O., Morvan, T., & Morvan, N. (2018). Measuring customers benefits of click and collect. *Journal of Services Marketing*, 32(4), 430–442. <https://doi.org/10.1108/JSM-05-2017-0158>
- Javed, M. K., & Wu, M. (2019). Effects of online retailer after delivery services on repurchase intention: An empirical analysis of customers' past experience and future confidence with the retailer. *Journal of Retailing and Consumer Services*, September, 101942. <https://doi.org/10.1016/j.jretconser.2019.101942>
- Junjie, X., & Min, W. (2013). Convenient pickup point in e-commerce logistics : a theoretical framework for motivations and strategies. *Computer Modelling & New Technologies*, 17(5C), 209–213. http://www.cmnt.lv/upload-files/ns_39crt003_CMNT18-0739_LG-ed-VG.pdf
- Lachapelle, U., Burke, M., Brotherton, A., & Leung, A. (2018). Parcel locker systems in a car dominant city: Location, characterisation and potential impacts on city planning and consumer travel

- access. *Journal of Transport Geography*, 71(July), 1–14. <https://doi.org/10.1016/j.jtrangeo.2018.06.022>
- Le, T. V., & Ukkusuri, S. V. (2019). Crowd-shipping services for last mile delivery: Analysis from American survey data. *Transportation Research Interdisciplinary Perspectives*, 1, 100008. <https://doi.org/10.1016/j.trip.2019.100008>
- Lee, B. C. Y. (2012). The determinants of consumer attitude toward service innovation - the evidence of ETC system in Taiwan. *Journal of Services Marketing*, 26(1), 9–19. <https://doi.org/10.1108/08876041211199689>
- Liu, C., Wang, Q., & Susilo, Y. O. (2019). Assessing the impacts of collection-delivery points to individual's activity-travel patterns: A greener last mile alternative? *Transportation Research Part E: Logistics and Transportation Review*, 121, 84–99. <https://doi.org/10.1016/j.tre.2017.08.007>
- Mangiaracina, R., Perego, A., Seghezzi, A., & Tumino, A. (2019). Innovative solutions to increase last-mile delivery efficiency in B2C e-commerce: a literature review. In *International Journal of Physical Distribution and Logistics Management* (Vol. 49, Issue 9, pp. 901–920). <https://doi.org/10.1108/IJPDLM-02-2019-0048>
- Melacini, M., Perotti, S., Rasini, M., & Tappia, E. (2018). E-fulfilment and distribution in omni-channel retailing: a systematic literature review. *International Journal of Physical Distribution and Logistics Management*, 48(4), 391–414. <https://doi.org/10.1108/IJPDLM-02-2017-0101>
- Morganti, E., Dablanc, L., & Fortin, F. (2014). Final deliveries for online shopping: The deployment of pickup point networks in urban and suburban areas. *Research in Transportation Business and Management*, 11(February 2012), 23–31. <https://doi.org/10.1016/j.rtbm.2014.03.002>
- Nguyen, D. H., de Leeuw, S., Dullaert, W., & Foubert, B. P. J. (2019). What Is the Right Delivery Option for You? Consumer Preferences for Delivery Attributes in Online Retailing. *Journal of Business Logistics*, 1–23. <https://doi.org/10.1111/jbl.12210>
- NUS. (2017). Key Ideas on Last Mile Logistics. In *Urban Logistics & Land Transportation Management Workshop - Innovations in Urban Last Mile* (Vol. 17).
- Pan, S., Giannikas, V., Han, Y., Grover-Silva, E., & Qiao, B. (2017). Using customer-related data to enhance e-grocery home delivery. *Industrial Management and Data Systems*, 117(9), 1917–1933. <https://doi.org/10.1108/IMDS-10-2016-0432>
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104(July), 333–339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Vakulenko, Y., Hellström, D., & Hjort, K. (2018). What's in the parcel locker? Exploring customer value in e-commerce last mile delivery. *Journal of Business Research*, 88(November), 421–427. <https://doi.org/10.1016/j.jbusres.2017.11.033>
- Vakulenko, Y., Shams, P., Hellström, D., & Hjort, K. (2019). Online retail experience and customer satisfaction: the mediating role of last mile delivery. *The International Review of Retail, Distribution and Consumer Research*, 29(3), 306–320. <https://doi.org/10.1080/09593969.2019.1598466>
- Wang, Xueqin, Wong, Y. D., Li, K. X., & Yuen, K. F. (2021). A critical assessment of co-creating self-collection services in last-mile logistics. *International Journal of Logistics Management*, 32(3), 846–871. <https://doi.org/10.1108/IJLM-09-2020-0359>
- Wang, Xueqin, Wong, Y. D., Teo, C. C., Yuen, K. F., & Feng, X. (2019). The four facets of self-collection service for e-commerce delivery: Conceptualisation and latent class analysis of user segments. *Electronic Commerce Research and Applications*, 39(December 2018), 100896. <https://doi.org/10.1016/j.elerap.2019.100896>

- Wang, Xueqin, Wong, Y. D., Teo, C. C., Yuen, K. F., & Li, K. X. (2019). Decomposing service conveniences in self-collection: An integrated application of the SERVCON and Kano models. *International Journal of Physical Distribution and Logistics Management*, 49(4), 356–375. <https://doi.org/10.1108/IJPDLM-10-2018-0336>
- Wang, Xueqin, Yuen, K. F., Wong, Y. D., & Teo, C.-C. (2018a). E-consumer adoption of innovative last-mile logistics services: A comparison of behavioural models. *Total Quality Management & Business Excellence*, 0(0), 1–27. <https://doi.org/10.1080/14783363.2018.1485484>
- Wang, Xueqin, Yuen, K. F., Wong, Y. D., & Teo, C. C. (2018b). An innovation diffusion perspective of e-consumers' initial adoption of self-collection service via Automated Parcel Station. *The International Journal of Logistics Management*, 29(1), 237–260.
- Wang, Xueqin, Yuen, K. F., Wong, Y. D., & Teo, C. C. (2019). Consumer participation in last-mile logistics service: an investigation on cognitions and affects. *International Journal of Physical Distribution and Logistics Management*, 49(2), 217–238. <https://doi.org/10.1108/IJPDLM-12-2017-0372>
- Wang, Xuping, Zhan, L., Ruan, J., & Zhang, J. (2014). How to choose “last mile” delivery modes for E-fulfillment. *Mathematical Problems in Engineering*, 2014(1). <https://doi.org/10.1155/2014/417129>
- Xiao, Z., Wang, J. J., & Liu, Q. (2018). The impacts of final delivery solutions on e-shopping usage behaviour: The case of Shenzhen, China. *International Journal of Retail and Distribution Management*, 46(1), 2–20. <https://doi.org/10.1108/IJRDM-03-2016-0036>
- Yuen, K. F., Wang, X., Ma, F., & Wong, Y. D. (2019). The determinants of customers' intention to use smart lockers for last-mile deliveries. *Journal of Retailing and Consumer Services*, 49(March), 316–326. <https://doi.org/10.1016/j.jretconser.2019.03.022>
- Yuen, K. F., Wang, X., Ng, L. T. W., & Wong, Y. D. (2018a). An investigation of customers' intention to use self-collection services for last-mile delivery. *Transport Policy*, 66(September 2017), 1–8. <https://doi.org/10.1016/j.tranpol.2018.03.001>
- Yuen, K. F., Wang, X., Ng, L. T. W., & Wong, Y. D. (2018b). An investigation of customers' intention to use self-collection services for last-mile delivery. *Transport Policy*, 66(January), 1–8. <https://doi.org/10.1016/j.tranpol.2018.03.001>
- Zhou, M., Zhao, L., Kong, N., Campy, K. S., Xu, G., Zhu, G., Cao, X., & Wang, S. (2020). Understanding consumers' behavior to adopt self-service parcel services for last-mile delivery. *Journal of Retailing and Consumer Services*, 52(July 2019). <https://doi.org/10.1016/j.jretconser.2019.101911>