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CITY LOGISTICS: A REVIEW AND RESEARCH FRAMEWORK

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Abstract

City logistics is one of the significant branches of supply chain management, dealing with the logistics and transportation activities in urban areas. This research area has known an exponential growth of publications for the last five years. This paper presents a systematic literature review, which is the result of surveying more than 200 papers and research works published during the past five years. We identify the top contributing authors, countries and key research topics. The most common keywords used in city logistics literature are referred and allow us to propose six research clusters in which scholars could be encouraged to contribute.

Keywords: City Logistics, Review, Bibliometric Analysis, Clusters.

1. Introduction

City logistics deals with the logistics and transportation activities in urban areas and is spotted as the last stage of supply chain management. By 2050, around 70% of the world's population will live in cities (Lee, 2014). In this manner, economic growth, improvement of urbanization environmental effects, resolving urban unemployment, safe urban freight transport and regional economy development will all be affected by city logistics. Thus, appropriate and optimal city logistics design and planning will have a great impact on social welfare and peace in society (Rao *et al.*, 2015). In this stage, not only the interactions between freight forwarders exist but also the interactions between all others stakeholders: suppliers, retailers, consumers and local authorities need to be considered to approach the fully complex governance. City logistics includes plenty of subjects which require to be organized and then treated to achieve mobility, sustainability and livability within a city (Taniguchi *et al.*, 2014). To facilitate the study of city logistics field, it is fruitful to break it into several small subsets including different aspects of the problem to investigate each of which more deeply and precisely. In this study, various important aspects of city logistics are extracted from the literature and briefly discussed. Statistical analysis is done on the number of research works released since 2010. A classification based on keywords listed in articles is introduced to categorize related research activities on this field of research. More than 200 scientific works have been studied comprising conference and journal papers, books and book chapters, and Master's and PhD thesis. The aim of this paper is to present the different aspects of city logistics and its recent trends to provide a comprehensive view on this extensive research field.

In section 2, a review on city logistics literature is presented concerning its different definitions and contributions; section 3 explains our applied methodology to perform a systematic bibliometric analysis on city logistics by evaluating around 200 articles published

since 2010; in section 4, we propose different classifications based on papers type, papers region profile and papers' keywords are presented. Regarding to these keywords, six established and emerging clusters are proposed which would encourage scholars to expand research on city logistics.

2. City logistics: significance and position

City logistics is one of the most argued concerns in most cities around the world regarding to recent issues linked to phenomena such as urbanization or the rise of citizen's expected welfare level (Bozzo *et al.*, 2014). Efficient city logistics creates more productive and attractive urban areas (Taniguchi *et al.*, 2014). Figure 1 illustrates the growing number of studies published in the city logistics field since 2010. Note that available published studies until end of May 2016 have been reviewed and taken into account for this study.

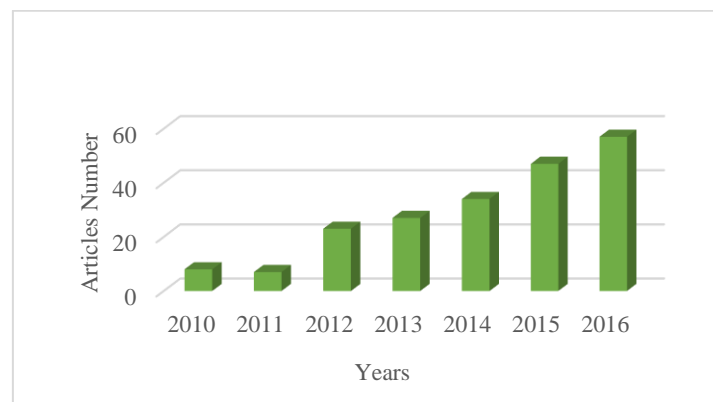


Figure 1. Number of academic publications on city logistics

City logistics is described as “The process for optimizing both logistics and transport activities done by private companies in urban areas while considering the traffic environment, traffic congestion and energy consumption within the framework of a market economy” (Taniguchi *et al.*, 1999).

The basic philosophy of city logistics is to propose a proper planning for goods distribution within a city (Morfoulaki *et al.*, 2015). City logistics aims to optimally plan, manage and

control the freight movements within a logistical network in a metropolitan area considering integration and coordination among involved stakeholders (Amaral and Aghezzaf, 2015). The consequences of such planning are expected to reduce noise pollution, air pollution, congestion and carbon emission; it also implies measures and evaluation methods (Browne *et al.*, 2010).

Two principal difficulties are addressed in comprehensive city logistics studies. The first difficulty is the high number of stakeholders and their heterogeneous aims (Maggi et Vallino, 2015). The main stakeholders are shippers, freight carriers, local authorities and residents (consumers) who preserve different objectives and perspectives towards their own goals (Taniguchi *et al.*, 2012). The most conflicting interactions almost happen between private and public stakeholders (Gonzalez-Feliu *et al.*, 2013). Thus, it is essential to consider stakeholders' behavior in city logistics measures evaluation (Tamagawa *et al.*, 2010). The latter inconvenience is the lack of real data on city logistics. On one side, a wide number of involved stakeholders and their disinclination in sharing information and, on the other side, a lack of interest among the former local authorities to provide data as public stakeholders lead to real data shortage in city logistics context (Russo and Comi, 2011).

3. Methodology

City logistics is a research area that crossbreeds several disciplines ranging from Social and Human Sciences to Engineering Sciences. In order to understand the current status of this large field, related research works are surveyed and analyzed in this paper. Our paper is a complementary study to literature reviews published in recent years (Ambrosini and Routhier, 2004; Anand *et al.*, 2015; Comi *et al.*, 2012).

Methodology used to review and analyze the literature on city logistics is presented in Figure 2. We started by scanning definitions and finally, this work led to literature classification.

First, purpose and scope of the study are defined. In the second step, related keywords, which enable us to conceptualize the research and help to find relevant articles are identified. In our case, urban logistics, city logistics, urban freight transportation, freight transport, freight and logistics constitute the main used keywords for the search on the databases: Science Direct, Web of Science, Google Scholar, Wiley and Springer. More than 200 articles were found in the city logistics field since 2010 as the result of our research on the above-mentioned scientific platforms. The next step was to discover the scope of each paper in city logistics context through evaluating the article’s title, abstract, keywords and full text. To focus purely on city logistics issues, less related articles were eliminated. At the end, 202 publications directly connected to the topic were left in our database built on an Excel file. Papers were classified based on predefined criteria in the last step. In our study, three different classifications based on papers type, papers region profile and paper’s keywords are introduced. Detailed information about different classifications is explained in section 4.

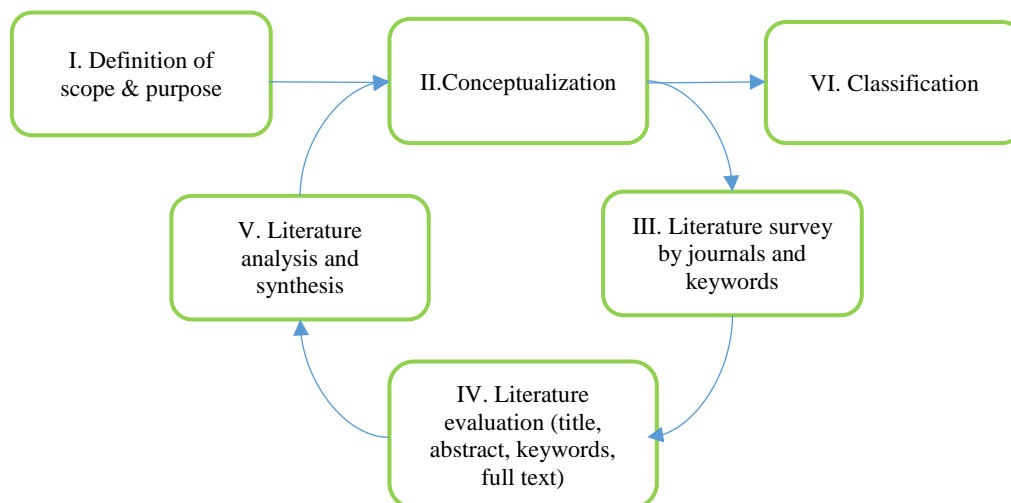


Figure 2. Applied framework for literature analysis (adapted from Gahm *et al.*, 2016)

With reference to the reviewed articles, we noticed that keywords used by the authors are diverse, which reveals the magnitude of city logistics scope, its relative emergence, and the enthusiasm generated by it. It also highlights the lack of framework to organize the studies in

this immense field of research. To cope with this issue, a classification is introduced based on keywords used in the articles and conducts to the identification of six clusters. After implementing the top-down methodology explained above, a bottom-up approach was employed to categorize the keywords used in articles, and then to classify them into the established clusters. The result of this approach is presented in section 4.3. To conclude, three classifications are introduced for the reviewed papers and related statistics are presented as the current status of the city logistics research field.

4. Bibliometric Analysis

Bibliometric analysis can be conducted with different purposes. In our analysis, we mostly focused on information such as paper's author(s), title, type, publication year, keywords and affiliation. The main aims of this literature analysis are to specify the research trends in city logistics, to introduce various aspects of this field of research to the scholars and also to identify more and less noticed aspects. In order to achieve these goals, three classifications are proposed based on papers type, papers region profile and papers keywords. Related statistics are presented for each class. Following sub-sections (4.1), (4.2) and (4.3) elaborate each proposed classification.

4.1. Papers Type

The studied research works are sorted into four different classes based on their origins: 1) conference papers form the highest percentage of the researches on city logistics which indicate the necessity of exhaustive discussions on this field of research; 2) articles published in scientific journals; 3) books and book chapters; 4) researches presented as Master or PhD thesis. Figure 3 represents the percentage of each research work type per year since 2010.

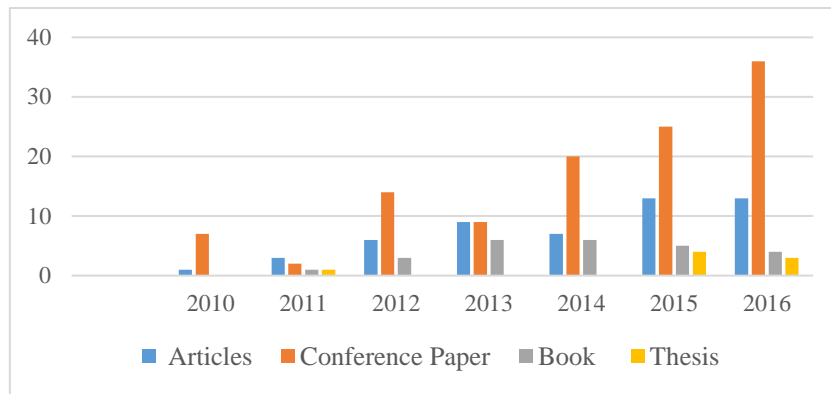


Figure 3. Classification of different scientific works by origin and by year

This figure demonstrates that the number of research works in city logistics is exponentially increasing, and this growth is obvious since 2012 for the total number of published works, especially for conference papers. This shows the emergent nature of the research field.

4.2. Papers Region Profile

We considered the affiliation of first author to assign the research works to the countries. Classification of articles based on region represents that each continent has its share, even low, in city logistics research field and implies that high number of articles have been published by European countries, especially France, Italy and Netherlands, Figure 4 (a and b). This heterogeneity implies different city logistics environments in Europe comparing to other continents. In European countries, the most important issue is to deliver micro-size shipments into dense, historical centers within urban areas. So, contributions are mainly around improving the last mile deliveries through narrow streets and historical centers to preserve heritage sites and in parallel to attain sustainable and socially efficient delivery system. Local authorities in these countries are highly interested in designing appropriate restrictions and policies to limit the number of vehicle movements in congested areas (Muñuzuri and Gonzalez-Feliu 2013).

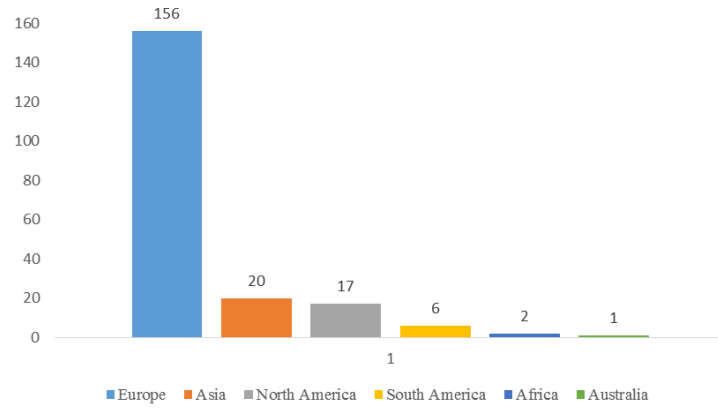


Figure 4.a Region profiles by continents

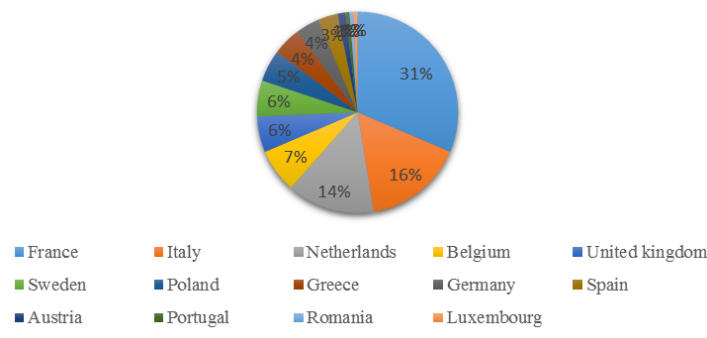


Figure 4.b Region profiles, comparing European countries

4.3. Papers Keywords Analysis

Reason and procedure of keywords analysis are explicitly presented in this section. First, we intended to classify articles directly based on their keywords, which are worthy representatives for the scope of each article. Exploring articles keywords clarified the existence of about 530 different keywords used in the 202 surveyed articles. Diversity and dissimilarity within these keywords reveal the propagation of city logistics issues, its various aspects and also, the lack of consensus between authors. This led us to categorize them. The first step was to group keywords with common concepts into different categories. As some keywords could be assigned to more than one category, the most related one was selected for each of which. In this way, 490 keywords were sorted and the remaining keywords (which were cited only once) were discarded. Then, categories were organized into clusters.

Reassessing the proposed classes led to final clustering. Six clusters were introduced as follows: 1) Definition and Perimeters, 2) Policy, 3) Innovative Solutions, 4) Sustainability, 5) Methods and 6) Stakeholders. Each cluster is explained in the next sub-sections. It is necessary to note that all the used words within the categories are derived from keywords and that there is no new added word. Table 1 shows the number of articles that have at least one keyword in each cluster per year.

Table 1. The number of articles in each cluster

Year (Articles N°)	2010	2011	2012	2013	2014	2015	2016
Clusters	(8)	(7)	(23)	(27)	(34)	(47)	(56)
Definition & Perimeters	7	6	20	22	27	38	49
Policy	2	1	5	7	7	7	13
Innovative solutions	2	0	9	8	7	20	16
Sustainability	4	2	6	4	14	9	11
Methods	2	4	15	19	22	30	37
Stakeholders	1	2	2	3	2	2	6

4.3.1. Definition and Perimeters

This cluster comprises all keywords used to define different aspects of city logistics issues. We tried to distinguish between the close concepts to clarify their position and leverage in this issue. The result of this endeavor is depicted in Figure 5 which includes all the perimeters of city logistics. Since city logistics is considered as the last step of Supply Chain Management, keywords including supply chain frequently appear in city logistics literature. Thus, city logistics is presented as a subset for a supply chain. However, *Freight Transport* exists in different steps of a supply chain, and in the city logistics field, freight transport in urban area is considered. *Logistics* is a general concept which comprises several activities, but in city logistics domain, only logistics activities within cities are considered. Types and goals of logistics have been noticed as *Logistics Land Use* (Diziain *et al.*, 2012), *Green Logistics* (Jedliński, 2014), and *Intermodal Logistics* (Bandinelli *et al.*, 2016). *Distribution* in city logistics reflects freight distribution in urban area considering the existing constraints.

Delivery is a subset of distribution, and nowadays it is a notable issue in terms of pick-up and delivery spaces in the cities, mainly in European countries. Another important factor in city logistics refers to *Urban Area* that is mainly defined from size, character and desired quality of the studied area.

The flow of merchants within the city by the goal of distribution creates *Urban Goods Movement* as an important issue in city logistics. In some optimization-based problem, urban goods movement is occasionally assumed equal to city logistics; however, city logistic is never limited to urban goods movement. If distribution is combined by delivery purpose, in this way it can be considered as a *Last Mile Delivery* issue, which has dramatically increased in recent years.

All these sub problems could be handled by different points of view, by *Designing New Network or Facilities*, providing new infrastructure such as *Logistics Information Platform* (Liu *et al.*, 2014) and *Geographical Information System* (Guerlain *et al.*, 2016) or Management approaches such as *Freight Distribution Management* (Jiang and Mahmassani, 2014) and *Freight Demand Management* (Holguín-Veras *et al.*, 2016).

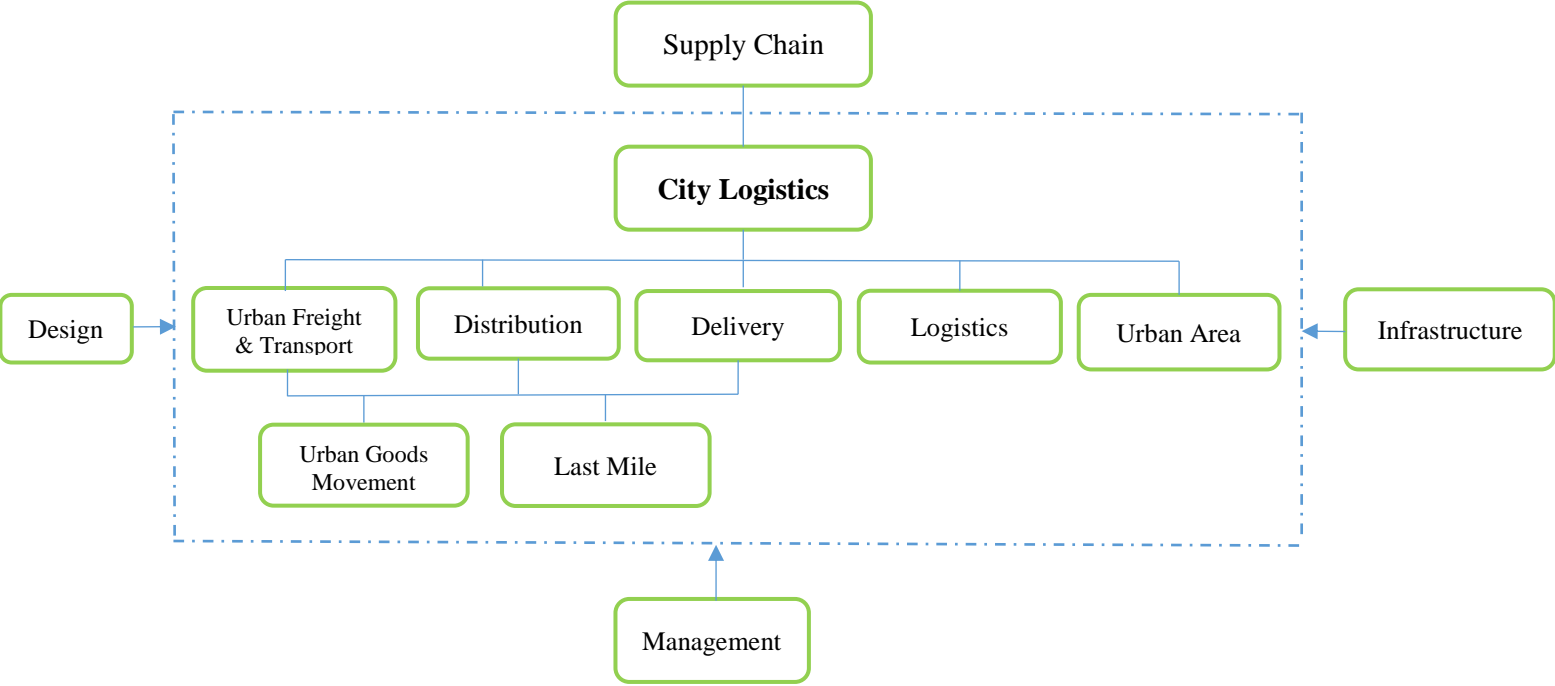


Figure 5. Definition and Perimeters category extracted from keywords

4.3.2. Policy

Polices are defined to organize a comprehensive framework for planning and developing efficient freight distribution systems in urban areas (Stathopoulos *et al.*, 2011). *Policy* is an overall word and can be broken to three different actions, as shown in Figure 6. In this area, governance refers to *Urban Governance* (Schliwa *et al.*, 2015) and *New Governance Model* (Marciani and Cossu, 2014), which is a topic rather underestimated in academic researches. *Planning* is essential to achieve medium and long term objectives and is done for different aspects of city logistics such as *City Logistics Planning* (Nuzzolo and Comi, 2014, Jiang and Liu, 2016; Awasthi *et al.*, 2016), and *Transport Planning* (Betanzo-Quezada *et al.*, 2013). *Measures* are defined as actions that are taken to implement a plan or a decision. Measures are divided into two subsets regarding to their application. First, *Regulations* related to city logistics are defined by *Local Authorities* (considered as public sector) to exert restrictions in accessing to the urban area (Ville *et al.*, 2013). Second subset of measures is *Innovative*

Solutions which are widely applied and developed by private sectors, although their success highly depends on public sectors supports.

Because of interactions existing among different stakeholders (e.g. carriers, retailers, shippers, large or small transport operators and local authorities) whose interests are almost always conflicting, implementing policies is a difficult task. Several researches concentrate only on *Policy* and endeavor to recognize its characteristics and influences on the whole parts of city logistics (Marcucci and Musso, 2010; Stathopoulos *et al.*, 2011; Ville *et al.*, 2013).

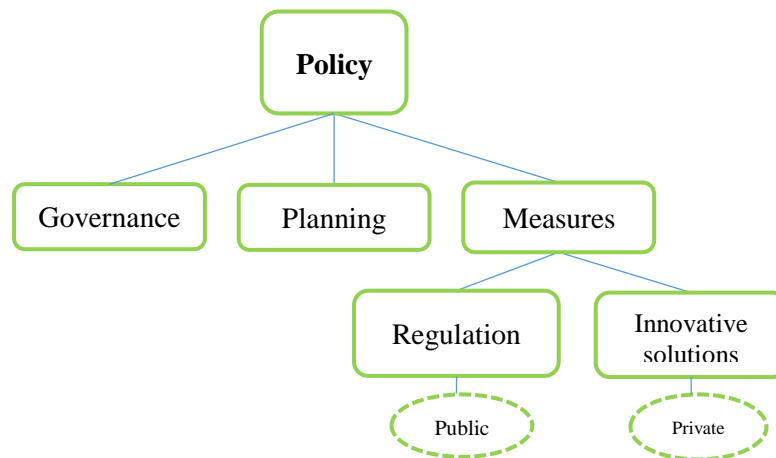


Figure 6. Policy category extracted from keywords

4.3.3. Innovative solutions

During several years, many measures have been proposed and implemented in order to mitigate city logistics complex issues. Most of these proposed and implemented solutions are based on collaboration between stakeholders. Using keywords like *Distribution Center* (Morganti and Gonzalez-Feliu, 2015; Diziain *et al.*, 2012) *Consolidation* (Faure *et al.*, 2013; Van Duin *et al.*, 2013; Janjevic *et al.*, 2013; Gonzalez-Feliu *et al.*, 2014; Trentini *et al.*, 2015), *Pooling* (Ballot and Fontane, 2010; Gonzalez-Feliu, 2011; Xu *et al.*, 2012,) and *Hub* (Lange *et al.*, 2013) refer to *Innovative Solutions* based on collaboration. Other mostly argued solutions are the use of *Light Goods Vehicle* (Browne *et al.*, 2010) or *Electrical Vehicle* (Van

Duin *et al.*, 2013; Amodeo *et al.*, 2015; Schöder *et al.*, 2016; Lebeau *et al.*, 2016), *Off Hour Deliveries* (Holguín-Veras *et al.*, 2014; Dos Santos and Sánchez-Díaz, 2016; Verlinde and Macharis, 2016; Jaller *et al.*, 2016), proposing manipulation deliveries during night and finally the use of *Cycles* (Schliwa *et al.*, 2015; Choubassi, 2015) for last mile deliveries. Some other innovative solutions are proposed and their feasibility and applicability are discussed (Evrard Samuel and Cung, 2015).

However, solutions are almost the same all around the world. In France, a high percentage of research works insist on collaboration concepts to cope with city logistics issues. Italy has focused mainly on Policy definition and execution. In Netherland and United Kingdom the use of *Electrical vehicle* and *Cycles* are further discussed. In this context, United States and China mostly focus on mathematical approaches to optimize proposed solutions. The most argued issue in optimization context is *Vehicle Routing Problem* (Cattaruzza *et al.*, 2015; Heng *et al.*, 2015; Lim *et al.*, 2016).

4.3.4. Sustainability

Environmental, social and economic considerations create a cluster around sustainability, which is one of the most significant issues among the researches in both city logistics and supply chain management. Competitive business environment, resource shortage and conflicting goals caused to appearance of several steady states to oblige agents pursuing these rules. City logistics could be established as a specialized discipline to face with sustainability issues encountered in urban freight transport (Anand *et al.*, 2012). Sustainable city logistics almost addresses the problems caused by freight transportation within city centers (Russo and Comi, 2012). Sustainability concept has been reported in different sectors of city logistics such as *Sustainable Urban Freight* (Holguín-Veras *et al.*, 2016), *Sustainable mobility* (Trentini *et al.*, 2012), *Sustainable Urban Logistics Plan* (Morfoulaki *et al.*, 2016). *Fuel Consumption* (Koç, *et al.*, 2015, Koç *et al.*, 2016) and *Polluting Emission* (Daniela *et al.*,

2014) are the environmental impact of city logistics. Social preoccupation mainly points out *Quality of life* (Witkowski and Kiba-Janiak, 2014), *Congestion* (Alho *et al.*, 2014, Jiang and Mahmassani, 2014, Jaller *et al.*, 2016) and concerns related to *Historical Urban Area Preservation* (Pulawska and Starowicz, 2014).

4.3.5. Methods

There are a large number of techniques and approaches developed to solve city logistics problems by concentrating on different aspects of the problem. Indeed, they are almost different in nature. Some novel approaches which have been presented to cope with city logistics issues practically require a high infrastructural support to be launched (Nowicka, 2014); some others mostly try to only improve existing situations by defining and assessing different scenarios. There are also other solutions that have been already established, and for which researchers try to optimize their efficiency. Different types of methods are shown in Figure 7.

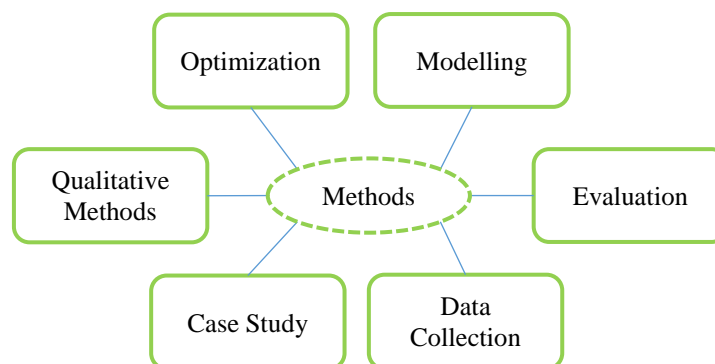


Figure 7. Methods category extracted from keywords.

4.3.6. Stakeholders

Different stakeholders with contradictory goals are intrinsic feature of city logistics issues. Two general divisions of stakeholders are Public and Private Stakeholder. *Local Authority* or *Local Government* are considered as public stakeholders (Lindholm and Behrends, 2012). Consumer, Supplier, Manufacturer, Logistics Service Provider and Retailer are grouped as

Private Stakeholders. Recently, stakeholder's analysis has absorbed attention of number of researchers. They mostly focused on *Stakeholders' Needs* (Ballantyne *et al.*, 2013), *Involvement* (Lebeau *et al.*, 2016) and *Engagement* (Marciani and Cossu, 2015). Additionally, *Trust* among stakeholders is lately presented and discussed as a crucial factor (Daudi *et al.*, 2012).

5. Conclusion

This paper presents a systematic literature review on city logistics and identifies main research trends to provide a comprehensive view on this extensive and emergent research field. The results are obtained by surveying more than 200 relevant articles since 2010. A bibliometric analysis is applied to extract important issues in city logistics. Three classifications are proposed based on papers type, papers region profile and papers keywords. From the keywords analysis, we establish six clusters, which demonstrate the most important aspects of city logistics. These clusters will help those who are currently working on city logistics to appreciate the current status of the city logistics research field.

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References

- Alho, A., Silva, J. D. A., de Sousa, J. P. (2014). A state-of-the-art modeling framework to improve congestion by changing the configuration/enforcement of urban logistics loading/unloading bays. *Procedia-Social and Behavioral Sciences*, 111, 360-369.
- Amaral, R. R., Aghezzaf, E. H. (2015). City Logistics and Traffic Management: Modelling the Inner and Outer Urban Transport Flows in a Two-tiered System. *Transportation Research Procedia*, 6, 297-312.
- Amodeo, L., Lamari, D., Musolino, G., Placido, V., Polimeni, A., Praticò, M., Vitetta, A. (2015). An ex-ante evaluation of last-mile freight distribution services for city logistics. *WIT Transactions on the Built Environment*, 146, 291-302.
- Anand, N., van Duin, R., Quak, H., Tavasszy, L. (2015). Relevance of city logistics modelling efforts: a review. *Transport Reviews*, 35(6), 701-719.

- Anand, N., Yang, M., Van Duin, J. H. R., Tavasszy, L. (2012). GenCLOn: An ontology for city logistics. *Expert Systems with Applications*, 39(15), 11944-11960.
- Awasthi, A., Adetiloye, T., Crainic, T. G. (2016). Collaboration partner selection for city logistics planning under municipal freight regulations. *Applied Mathematical Modelling*, 40(1), 510-525.
- Ballantyne, E. E., Lindholm, M., Whiteing, A. (2013). A comparative study of urban freight transport planning: addressing stakeholder needs. *Journal of Transport Geography*, 32, 93-101.
- Ballot, E., Fontane, F. (2010). Reducing transportation CO2 emissions through pooling of supply networks: perspectives from a case study in French retail chains. *Production Planning & Control*, 21(6), 640-650.
- Bandinelli, R., d'Avolio, E., Rinaldi, R. (2016). Advanced intermodal freight transportation system for sustainable city logistics: An application in fashion industry. *WIT Transactions on Engineering Sciences*, 113, 356-363.
- Betanzo-Quezada, E., Romero-Navarrete, J. A., Obregon-Biosca, S. (2013). An index to evaluate public policies in urban freight transport. *Gestion y Politica Publica*, 22(2), 313-354.
- Bozzo, R., Conca, A., Marangon, F. (2014). Decision Support System for City Logistics: Literature Review, and Guidelines for an Ex-ante Model. *Transportation Research Procedia*, 3, 518-527.
- Browne, M., Allen, J., Nemoto, T., Visser, J. (2010). Light goods vehicles in urban areas. *Procedia-Social and Behavioral Sciences*, 2(3), 5911-5919.
- Cattaruzza, D., Absi, N., Feillet, D., González-Feliu, J. (2015). Vehicle routing problems for city logistics. *EURO Journal on Transportation and Logistics*, 1-29.
- Choubassi, C. (2015). An assessment of cargo cycles in varying urban contexts. *Doctoral dissertation, The University of Texas at Austin, Austin, United States*.
- Comi, A., Delle Site, P., Filippi, F., Nuzzolo, A. (2012). Urban freight transport demand modelling: A state of the art. *European Transport\Trasporti Europei*, Issue 51, Paper N° 7, ISSN 1825-3997.
- Daudi, M., Hauge, J. B., & Thoben, K. D. A Trust Framework for Agents' Interactions in Collaborative Logistics. Bremen University, Germany.
- Daniela, P., Paolo, F., Gianfranco, F., Graham, P., & Miriam, R. (2014). Reduced urban traffic and emissions within urban consolidation centre schemes: The case of Bristol. *Transportation Research Procedia*, 3, 508-517.
- Diziain, D., Ripert, C., Dablanc, L. (2012). How can we bring logistics back into cities? The case of Paris metropolitan area. *Procedia-Social and Behavioral Sciences*, 39, 267-281.
- Dos Santos, E. M., Sánchez-Díaz, I. (2016). Exploring carriers' perception about city logistics initiatives 2. Initiatives, 2, 3.
- Evrard Samuel, K., Cung, V.D. (2015). Towards evaluation tools for last mile delivery projects: insights from france, 6th METRANS International Urban Freight Conference, Long Beach CA, USA, October 21-23.
- Faure, L., Battaia, G., Marquès, G., Guillaume, R., Vega-Mejía, C. A., Montova-Torres, J. R., Quintero-Araújo, C. L. (2013, July). How to anticipate the level of activity of a sustainable collaborative network: the case of urban freight delivery through logistics platforms. In 2013 7th IEEE International Conference on Digital Ecosystems and Technologies (DEST) (pp. 126-131). IEEE.
- Gahm, C., Denz, F., Dirr, M., Tuma, A. (2016). Energy-efficient scheduling in manufacturing companies: A review and research framework. *European Journal of Operational Research*, 248(3), 744-757.

- Gonzalez-Feliu, J. (2011, November). Costs and benefits of logistics pooling for urban freight distribution: scenario simulation and assessment for strategic decision support. *CREI Seminar, Rome, Italy*
- Gonzalez-Feliu, J., Taniguchi, E., d'Arcier, B. F. (2013). Financing urban logistics projects. From public utility to public-private partnerships. *Chapter in "Sustainable Urban Logistics: Concepts, Methods and Information Systems", Part of the series EcoProduction, pp 245-265.*
- Gonzalez-Feliu, J., Salanova Grau, J. M., Beziat, A. (2014). A location-based accessibility analysis to estimate the suitability of urban consolidation facilities. *International Journal of Urban Sciences, 18(2), 166-185.*
- Guerlain, C., Cortina, S., Renault, S. (2016). Towards a collaborative Geographical Information System to support collective decision making for urban logistics initiative. *Transportation Research Procedia, 12, 634-643.*
- Heng, C. K., Zhang, A. N., Tan, P. S., Ong, Y. S. (2015). Multi-objective heterogeneous capacitated vehicle routing problem with time windows and simultaneous pickup and delivery for urban last mile logistics. *In Proceedings of the 18th Asia Pacific Symposium on Intelligent and Evolutionary Systems, Volume 1 (pp. 129-140). Springer International Publishing.*
- Holguín-Veras, J., Wang, C., Browne, M., Hodge, S. D., Wojtowicz, J. (2014). The New York City off-hour delivery project: lessons for city logistics. *Procedia-Social and Behavioral Sciences, 125, 36-48.*
- Holguín-Veras, J., Sánchez-Díaz, I., Browne, M. (2016). Sustainable urban freight systems and freight demand management. *Transportation Research Procedia, 12, 40-52.*
- Jaller, M., Sánchez, S., Green, J., Fandiño, M. (2016). Quantifying the impacts of sustainable city logistics measures in the Mexico City Metropolitan Area. *Transportation Research Procedia, 12, 613-626.*
- Janjevic, M., Kaminsky, P., Ballé Ndiaye, A. (2013) Downscaling the consolidation of goods – state of the art and transferability of micro-consolidation initiatives. *European Transport \ Trasporti Europei, 54, Paper n° 4.*
- Jedliński, M. (2014). The position of green logistics in sustainable development of a smart green city. *Procedia-Social and Behavioral Sciences, 151, 102-111.*
- Jiang, L., Mahmassani, H. (2014). City Logistics: Freight Distribution Management with Time-Dependent Travel Times and Disruptive Events. *Transportation Research Record: Journal of the Transportation Research Board, (2410), 85-95.*
- Jiang, Z. H., & Liu, J. (2016). Development of Urban Logistics in China. *In Contemporary Logistics in China (pp. 179-191). Springer Berlin Heidelberg.*
- Koç, Ç., Bektaş, T., Jabali, O., Laporte, G. (2016). The impact of depot location, fleet composition and routing on emissions in city logistics. *Transportation Research Part B: Methodological, 84, 81-102.*
- Lange, V., Auffermann, C., Mahlstedt, K., Möde, S. (2013). Urban Retail Logistics—Research into the Bundled Urban Store Deliveries of the Future. *Efficiency and Logistics (109-119).*
- Lee, H.L., 2014. Urbanisation proceeding on unprecedented scale. *World Cities Summit, Marina Bay Sands, Singapore.*
- Lebeau, P., Macharis, C., Van Mierlo, J. (2016). Exploring the choice of battery electric vehicles in city logistics: A conjoint-based choice analysis. *Transportation Research Part E: Logistics and Transportation Review, 91, 245-258.*
- Lindholm, M., Behrends, S. (2012). Challenges in urban freight transport planning—a review in the Baltic Sea Region. *Journal of Transport Geography, 22, 129-136.*

- Liu, K., Dong, H., Bi, J., Lu, Z. (2014). Research on Construction of Urban Logistics Information Platform. *In Proceedings of the 2013 International Conference on Electrical and Information Technologies for Rail Transportation (EITRT2013)-Volume I* (365-371).
- Lim, S. F. W., Zhang, A. N., Goh, M., Ong, Y. S., Tan, P. S (2016). Three-Dimensional Vehicle Routing Problem for Urban Last Mile Logistics: Problem Formulation and Computational Analysis. *18th International Conference on Computer Modelling and Simulation. Miami, United States.*
- Maggi, E., Vallino, E. (2015) Simulating urban mobility and the role of public policies: the challenges of Agent Based Models.
- Marcucci E., Musso E., (2010), “Urban Freight Modelling and Policy Analysis” in Van de Voorde, E. and Vanelslader, T., (Editors). *Applied Transport Economics. A Management and Policy Perspective, de Boeck, Antwerpen.*
- Marciani, M., Cossu, P. (2014). How the URBeLOG Project Will Enable a New Governance Model for City Logistics in Italian Metropolitan Areas. *Procedia-Social and Behavioral Sciences, 151, 230-243.*
- Marciani, M., Cossu, P. (2015). Stakeholders’ involvement and new governance models: The best practice case of Turin, Italy. *FIT Consulting, Rome, Italy.*
- Morfoulaki, M., Kotoula, K., Stathacopoulos, A., Mikiki, F., Aifadopoulou, G. (2016). Evaluation of specific policy measures to promote sustainable urban logistics in small-medium sized cities: the case of Serres, Greece. *Transportation Research Procedia, 12, 667-678.*
- Morfoulaki, M., Mikiki, F., Kotoula, N., Myrovali, G. (2015). Integrating city logistics into urban mobility policies. *In 7th international congress on transportation research, Athens, Greece.*
- Morganti, E., Gonzalez-Feliu, J. (2015). The last food mile concept as a city logistics solution for perishable products. Enterprise Interoperability. *Interoperability for Agility, Resilience and Plasticity of Collaborations Bppk, (I-ESA 14 Proceedings), 202.*
- Muñuzuri, J., Gonzalez-Feliu, J. (2013). Decision-making tools and procedures for City Logistics. *European Transport/Trasporti Europei, 54(1), 1-3.*
- Nowicka, K. (2014). Smart city logistics on cloud computing model. *Procedia-Social and Behavioral Sciences, 151, 266-281.*
- Nuzzolo, A., Comi, A. (2014). City logistics planning: demand modelling requirements for direct effect forecasting. *Procedia-Social and Behavioral Sciences, 125, 239-250.*
- Pulawska, S., Starowicz, W. (2014). Ecological urban logistics in the historical centers of cities. *Procedia-Social and Behavioral Sciences, 151, 282-294.*
- Rao, C., Goh, M., Zhao, Y., Zheng, J. (2015). Location selection of city logistics centers under sustainability. *Transportation Research Part D: Transport and Environment, 36, 29-44.*
- Russo, F., Comi, A. (2012). City characteristics and urban goods movements: A way to environmental transportation system in a sustainable city. *Procedia-Social and Behavioral Sciences, 39, 61-73.*
- Russo, F., Comi, A. (2011). A model system for the ex-ante assessment of city logistics measures. *Research in Transportation Economics, 31(1), 81-87.*
- Schliwa, G., Armitage, R., Aziz, S., Evans, J., Rhoades, J. (2015). Sustainable city logistics-Making cargo cycles viable for urban freight transport. *Research in Transportation Business & Management, 15, 50-57.*
- Schöder, D., Ding, F., Campos, J. K. (2016). The Impact of E-Commerce Development on Urban Logistics Sustainability. *Open Journal of Social Sciences, 4(03), 1.*

- Stathopoulos, A., Valeri, E., Marcucci, E., Gatta, V., Nuzzolo, A., Comi, A. (2011). Urban freight policy innovation for Rome's LTZ: A stakeholder perspective. *City distribution and urban freight transport. Multiple perspectives*, Edward Elgar Publishing, Cheltenham UK, 75-100.
- Tamagawa, D., Taniguchi, E., Yamada, T. (2010). Evaluating city logistics measures using a multi-agent model. *Procedia-Social and Behavioral Sciences*, 2(3), 6002-6012.
- Taniguchi, E., Thompson, R. G., Yamada, T. (2014). Recent trends and innovations in modelling city logistics. *Procedia-Social and Behavioral Sciences*, 125, 4-14.
- Taniguchi, E., Thompson, R.G., Yamada, T. (2012). Emerging techniques for enhancing the practical application of city logistics models. *Procedia-Social and Behavioral Sciences*, 39, 3-18.
- Taniguchi, E., Thompson, R. G., Yamada, T. (1999). Modelling city logistics. In *City Logistics*, Taniguchi E., Thompson R.G., Yamada T. eds., Institute of Systems Science Research, Kyoto, 3-37.
- Anna Trentini, Jesus Gonzalez Feliu, Nicolas Malh  n   (2015). Developing urban logistics spaces: UCC and PLS in South-Western Europe.<halshs-01214749>
- Trentini, A., Malh  ne, N. (2012). Flow management of passengers and goods coexisting in the urban environment: Conceptual and operational points of view. *Procedia-Social and Behavioral Sciences*, 39, 807-817.
- Van Duin, J. H. R., Tavasszy, L. A., Quak, H. J. (2013). Towards E (lectric)-urban freight: first promising steps in the electronic vehicle revolution. *European Transport-Trasporti Europei*, 54, 2013.
- Van Duin, J. H. R., de Goffau, W., Wiegmans, B., Tavasszy, L. A., Saes, M. (2016). Improving home delivery efficiency by using principles of address intelligence for B2C deliveries. *Transportation Research Procedia*, 12, 14-25.
- Verlinde, S., Macharis, C. (2016). Who is in favor of off-hour deliveries to Brussels supermarkets? Applying Multi Actor Multi Criteria analysis (MAMCA) to measure stakeholder support. *Transportation Research Procedia*, 12, 522-532.
- Ville, S., Gonzalez-Feliu, J., Dablanc, L. (2013). The limits of public policy intervention in urban logistics: Lessons from Vicenza (Italy). *European Planning Studies*, 21(10), 1528-1541.
- Witkowski, J., Kiba-Janiak, M. (2014). The Role of Local Governments in the Development of City Logistics. *Procedia-Social and Behavioral Sciences*, 125, 373-385.
- Xu, X., Pan, S., Ballot, E. (2012). Allocation of Transportation Cost & CO 2 Emission in Pooled Supply Chains Using Cooperative Game Theory. *IFAC Proceedings Volumes*, 45(6), 547-553.