

Article

Importance of the Stakeholders' Interaction: Comparative, Longitudinal Study of Two City Logistics Initiatives

Konstantina Katsela ^{1,*}  and Michael Browne ²

¹ Department of Design Sciences, Division of Packaging Logistics, Lund University, PO Box 118, SE-221 00 Lund, Sweden

² School of Business, Economics and Law, Department of Business Administration, Division of Industrial and Financial Management and Logistics, University of Gothenburg, PO Box 610, SE-40530 Gothenburg, Sweden; michael.browne@handels.gu.se

* Correspondence: konstantina.katsela@plog.lth.se

Received: 16 September 2019; Accepted: 18 October 2019; Published: 21 October 2019



Abstract: The main purpose of the paper is to explore the importance of stakeholders' interaction in the different stages of the implementation process of city logistics initiatives and to assess the extent to which interaction may vary between two apparently similar initiatives. A comparative, longitudinal study, with data from two Swedish city logistics initiatives is conducted. The findings highlight the multiple stakeholders' interaction and suggest that various degrees of such interaction can be beneficial for sustainable city logistics initiatives. The study demonstrates that although the interactions can be considered broadly similar, there are differences that have an impact on the implementation and development of such initiatives over time. It also highlights the relevance of integrating initiatives with existing networks to provide longer-term viability in the implementation process.

Keywords: stakeholders; stakeholders' interaction; implementation process; comparative longitudinal study; city logistics; city logistics initiatives

1. Introduction

In the last 30 years, the concept of people and organizations involved in city logistics initiatives are covered by the term stakeholders [1]. Stakeholders are those that have a stake or an interest in the outcomes of city logistics initiatives. The stake is based on the diverse motives of stakeholders that potentially could influence the decision-making during the implementation of city logistics solutions [2]. Hence, it is argued that the stake influences the way stakeholders interact with one another as well as the whole implementation process [3]. Accordingly, it is argued that better decisions are implemented when they are stakeholder-driven [4,5]. Such an approach provides insights on the nature of interaction among the stakeholders in the implementation process.

Stakeholders can have both a positive and negative influence, as they do not hold the same motives to participate in city logistics initiatives. Different stakeholders can have different objectives for the same activities since their points of view can vary in terms of how to improve the part or all of the system. In particular, administrators and residents often focus on environmental and social considerations that should lead to a more attractive city, with less noise and pollution, fewer trucks, and increased safety; whereas shippers, freight carriers, and receivers tend to concentrate more on cost efficiency and increased sales. This implies that the motives to participate in city logistics initiatives vary among the stakeholders, which affect the way they interact. As a result, their individual motives and goals may unintentionally be in conflict with the overarching city logistics objectives. Stakeholders have individual objectives, but they still must collaborate and interact to meet common goals and

drive the initiatives. The diversity of stakeholders and the heterogeneity of their needs can be a barrier for communication in both the private and public sector. This can result in several strategic and operational decisions being made that affect the urban freight systems and the public sector, which has a major role in developing policies, rules, and regulations for city logistics initiatives [2]. This is why there is a great need for the stakeholder groups involved to collaborate and interact in order to obtain more sustainable and livable cities [6,7].

In light of the above, it is clear that by better coordinating the way the stakeholders interact, more long-term viability in the initiatives can be managed [5,8]. The interaction among the stakeholders can be achieved by analyzing the collaboration of the stakeholders involved in the different stages of the implementation process. Therefore, the purpose of this paper is to explore the importance of stakeholders' interaction in the different stages of the implementation process of a city logistics initiative and to evaluate the extent to which interaction may vary between two apparently similar initiatives.

The remainder of the paper is organized as follows: First, a background of the stakeholder behavior in city logistics is presented. Then, the paper presents the methodology by describing the research design, data collection, and data analysis thoroughly. The following sections introduce the SamCity and Stadsleveransen initiatives. The findings from the analysis are then presented, followed by a discussion of these findings. The final section contains the conclusion, implications, and recommendations for future research.

2. Literature on Stakeholder Interaction in City Logistics

To understand the issues and needs of multi-stakeholder collaboration and interaction in city logistics, several researchers try to address the complexity of the relations among the stakeholders involved in the field [9]. The majority of researchers consider four to five stakeholders' groups in city logistics. A synthesis of the categories of stakeholders in city logistics results in five general categories: Shippers, freight carriers, administrators, residents, and others [1,10,11]. The last category can include non-governmental organizations (NGOs) and property owners [12]. These categories show that stakeholders in city logistics are both within the urban area (but are not directly involved in the urban freight transport movements, such as administrators, residents, and others) and within the supply chain (such as shippers and freight carriers). Each stakeholder has a distinct role to play in city logistics initiatives. For instance, shippers are commonly interested in time and cost-efficient deliveries; freight carriers are interested in business and in performing cost-efficient deliveries; administrators are primarily interested in minimizing the environmental impacts of city distribution and in achieving a vibrant and attractive city through economic performance; residents are affected by the city logistics initiatives [11]; others play a key role in implementing city logistics initiatives [12]. All these stakeholders interact with each other in a city logistics initiative and with the customers involved. The stakeholders' interaction is important for implementing the key activities of a city logistics initiative [13,14].

However, all these stakeholders do not hold the same points of view to improve the whole system, and conflicts of interest arise [1]. Due to the scarcity of space, the density, the challenges, and the complexity of the city logistics initiatives, conflicts between stakeholders are common [9]. Most of the conflicts arise due to their diversity and heterogenic needs, which are great challenges in city logistics [15–18] and contribute to barriers for communication between the private and public sectors [2]. Stakeholder theory attempts to identify the fundamental question of which groups of stakeholders deserve or require attention. It addresses both how to prioritize among various stakeholder motives and goals and how to consider their relationship dynamics [19,20].

Modelling the behavior, the objectives, and thus the collaboration of stakeholders has become important for planning several city logistics activities [21–23] and achieving city logistics solutions [9,16–18]. This implies that stakeholder collaboration can contribute to sustainable growth of a city, appropriate development of urban resources, and development of low-impact urban planning and transportation systems [24,25]. Stakeholder collaboration is also required for them to form mutual

motives and goals [26,27], which is a success factor for implementing city logistics initiatives [14], as the way many stakeholders collaborate during the implementation process can affect the way they behave [18,28], which emphasizes the importance of analyzing stakeholders' collaboration procedures and their different needs and constraints in relation to city logistics strategies. According to [24,28,29], the consideration of such collaboration is a success factor for city logistics initiatives. Without a common understanding between stakeholders, it might be difficult to obtain sustainable city logistics initiatives [9,14,15,19].

Further, the way stakeholders collaborate can facilitate efficient city logistics initiatives [30]. Few studies have considered the behavior of the stakeholders, but their diversity and heterogenic needs are great challenges in city logistics [15–18] and contribute to barriers for communication between the private and public sectors [2]. Hence, coordination and collaboration between the stakeholders are necessary to obtain more sustainable and livable cities [7,15,19]. Stakeholder theory argues that the organization has formed relationships with several stakeholders and can maintain the support of these stakeholders by considering their interests [31–35]. However, only a few studies have considered the stakeholders interaction, but it is increasingly valued and regarded as an integral part of city logistics initiatives, since it gives stakeholders the power to influence decisions [4,5,9,23] and the policies [23,29,36].

Most literature on stakeholders' collaboration in city logistics has proposed the use of an agent-based approach [9,15,18,23]; a system-based approach [14]; and the social network analysis [36] to consider the multi-stakeholder domain in city logistics initiatives. The approaches' models have developed different decision models, such as a multi-perspective semantic data model and a validation approach to draw significant insights in terms of stakeholders' objectives [18,23]. The studies show that understanding the way the heterogeneous stakeholders collaborate helps to understand the inefficiency of city logistics. Based on this finding, other researchers have come to the conclusion that better decisions and policies are implemented when they are stakeholder-driven [4,5,23,29,37]. In this context, there is usually a main stakeholder group (mainly a public body) making decisions and proposing solutions. However, in collaborative initiatives, the involved stakeholders are not a number of individuals with different roles but a group with links and relationships making the decisions together.

3. Materials and Methods

The method selected for this paper follows the guidelines by [38] on how to perform comparative, longitudinal research in mono-national or single-country case studies.

3.1. Research Design

The comparative, longitudinal case study approach engages two logics of comparison: First, the more common compare and contrast; and second, a "tracing across" sites or scales. The approach helped to capture the complexity of stakeholder interaction, the criteria, and patterns of the interaction. The longitudinal part of the study was beneficial in order to understand how the stakeholders interacted in the different stages of the implementation process and how this interaction affected their decision-making in the initiatives. The unit of analysis in this study was the criteria and patterns for stakeholder interaction.

First, the importance of stakeholders' interaction in the different stages of the implementation process of the SamCity initiative (complete description in Section 5) was captured in the archival data and semi-structured interviews, and then they were compared to the interview outcomes of the Stadsleveransen initiative (complete description in Section 6). This helped to capture the overall stakeholder interaction approach and to evaluate the extent to which interaction may vary between two apparently similar initiatives.

The two selected cases aim to contribute to cumulative development of knowledge and theory in terms of stakeholders' interaction. Therefore, they explore the same phenomenon, pursue the same

research goal, ask the same set of standardized questions, and select the same theoretical focus and set of variables. An implicit comparison is conducted within these single-country cases, which possess a broader significance as it uses existing typologies as a yardstick to interpret and contextualize the two cases. Specifically, the comparative context and analytical tools of the study come from the comparative literature as presented by [38]. Further, the selection of the cases is considered as a representative of many European city logistics initiatives, which attempt to get cooperation among stakeholders with the aim of improving the urban environment.

3.2. Data Collection

The study captured data from multiple sources including archival data and semi-structured interviews. First, the criteria and patterns of stakeholders' interaction in the different stages of the implementation process of the SamCity initiative were captured through archival data and semi-structured interviews and then they were compared to the interview outcomes of the Stadsleveransen initiative.

In the case of SamCity, the archival data relate to various sources of when a city logistics initiative was implemented in the City of Malmö, such as direct observations, monthly, and weekly meetings. All these data were documented in a case study protocol following the guidelines of [39]. The protocol provided assistance into creating the interview guide as well as guidance for the data collection and analysis. The protocol, which consists of 70 pages and 6 sections, followed a chronological order, and covered all the stages of the implementation process. In particular, the protocol includes:

1. An overview of the initiative with all the published reports about the initiative.
2. Data collection sources: Meeting minutes, notes, events, presentations, performance reports, presentations, e-mail summaries, observations, and interviews.
3. Other form of documentation, such as pictures and illustrations.
4. Detailed list of the involved stakeholders: Organization, number of participants from each organization involved in the initiative, participants name and contact information, participants' position in the company and role in the initiative, years of experience in the organization, and in logistics projects.
5. Links to interview transcriptions and survey results.
6. References to bibliographical information and relevant documents: Journal publications on city logistics initiatives, best practices reports (e.g., BESTUFS and OECD).

The archival data revealed the six criteria for stakeholders' interaction and engagement in the city logistics initiative. The criteria were compared to those described in the current literature. More precisely, the criteria are defined as follows. Knowledge dissemination refers to the cluster of related activities within an initiative that has to do with producing new knowledge. Consultation refers to the meetings with academia where input and feedback is given. Stakeholders' diversity addresses the heterogeneous motives and goals for participating in an initiative that affect the way they behave and interact. Stakeholders' interest shows the different levels of interest of stakeholders in the different stages of the implementation process. Existing collaboration and networks address all the links to pre-existing partnerships. Information relates to the facts provided about the status and performance outcomes of the different stages of the implementation process.

To support the insights on stakeholders' interaction, the researchers conducted two semi-structured hour-long interviews with the managers of the two initiatives. The interviews were recorded, transcribed, analyzed, and summarized by the researchers. Both respondents were experienced in urban planning and active in the city logistics initiatives for more than 3 years. The respondents also discussed the initiatives and city logistics concepts both internally (within their organization) and externally (in seminars, workshops, and conferences).

The semi-structured interviews focused on two parts that generated data for the study: The criteria of stakeholder interaction and the patterns of stakeholder interaction. For contextual understanding

and insights, the interviews covered general information about communication and network strategy in both the initiatives. In the first part of the interviews, the criteria of stakeholder interaction were discussed. Both researchers provided a thorough description of those 6 criteria to the interviewees. In the second and final part of the interviews, the data regarding the patterns that stakeholders have developed in order to interact with each other were captured. This part examined how the patterns were created and whether stakeholders were interacting with one another in specific ways due to pre-existing network.

3.3. Data Analysis

The data were analyzed in three steps. First, the researchers empirically investigated how the SamCity designed, implemented, and perceived stakeholder collaboration and interaction. To do so, the researchers examined thoroughly the protocol of the SamCity initiative. Each part of the protocol that mentions stakeholders' interactions was marked and then summarized. This process captured the overall image of stakeholders' interaction in the SamCity initiative. The identified interactions were then compared to related literature within city logistics.

In the second step, the results of the interviews were analyzed. In this step, the researchers first created a coherent narrative with important quotes from the interviewees. This narrative was further analyzed to find out what criteria for stakeholders' interaction the interviewees addressed, hence a specific labelling was created. Then, the researchers compared the outcomes of the interviews with the summarized outcomes of the protocol of the SamCity initiative in order to evaluate the extent to which interaction may vary between the two initiatives. When differences occurred in the case of SamCity, the researchers went back to the raw data until they reached consensus. During this process, the researchers triangulated the interviews data with the archival data. In addition, while conducting the analysis of the interviews, feedback from the two managers was requested to ensure that the researchers were accurately depicting their experiences and the accuracy of the conclusions drawn from the data.

In the third step, the researchers evaluated the patterns of stakeholders' interaction of the two initiatives. This evaluation was done for all the different stages of the implementation process of the two initiatives. During this process, the researchers evaluated the communication and network strategy of the initiatives and the degrees of stakeholder interaction as was summarized in the interview narratives and in the SamCity case study protocol. Based on this, the patterns of stakeholder interactions through the different stages of the implementation process were identified.

4. The SamCity Initiative

SamCity is a city logistics initiative that was carried out in the City of Malmö, Sweden; a commercial city center undergoing a transition from being an industrial city to a city of knowledge, with logistics, retail and wholesale trade, construction, and property as its strongest sectors.

Since the City of Malmö has been interested in how to consolidate the freight flow in the city center for many years, the focus of SamCity was to create a coordinated freight consolidation and distribution system with logistic services in the city center. The SamCity initiative examines whether this system is economic and environmentally sustainable. Specifically, the SamCity idea evolved into a novel business model through a pre-study that included an examination of user needs, stakeholder collaboration, and inspiration from public conferences and seminars. To support this, a number of stakeholders participated in the project: The municipality (M), two transport providers (TP1 and TP2), a property owner (PO), a city cooperation organization (CCO), a haulage organization (HO), the Confederation of Swedish Enterprise (CSE), a retail consumer organization (RCO), the stores (S), and citizens (CZ) in order to develop and implement a concept for city logistics. Each organization had a representative in the initiative, with the citizens being represented by the RCO and the stores by the CCO. The municipality, which promotes the economic, environmental, and social development of the city, was the driving force of the initiative. TP1 is a leading logistics company with a focus

on innovation, quality, safety, and the environment, while TP2's core competence is recycling; they collect, treat, and recycle waste and residues from industry, organizations, and households throughout Sweden. PO is a trade association of real estate entrepreneurs. It has 2300 members, which together manage over 7000 properties. The task is to create the best possible conditions for the real estate business life. CCO is a platform for supporting business in the city through various projects and initiatives in collaboration with other partners. The goal is to create and maintain an attractive and vibrant city center. HO is a haulage organization dedicated to promoting a sustainable and profitable development of the haulage industry. It is engaged in various haulage issues related to transport and social policy to strengthen the Swedish haulage trade, competitiveness, and improve the conditions for trucking companies. CSE represents the businesses in Sweden. Their long-term goal is to ensure that all companies in Sweden shall have the best possible conditions to operate and grow. CSE represents almost 60,000 small, medium, and large businesses. RCO is a cooperative association founded in 1899 based on the idea of excellent food at reasonable prices. This idea has developed to consider the creation of economic benefits, while making it possible for members through their consumption to contribute to sustainable development for citizens and the environment. There are about 665 RCO stores throughout Sweden, which are owned by 3.4 million members in 32 consumer associations. S is the stores offering a wide range of consumer goods in different product categories. Some of them are part of a retail chain, while others are independent retailers. The opening hours of the stores in the city center differ, which makes transportation challenging. The citizens (CZ) live in the city and are affected the most from city logistics initiatives.

Each stakeholder group proved to play an important role in implementing the provisions of city logistics, either through key activities (mostly problem solving, quality control, and network) and research, or by collaborating and interacting with one another to build capacity within the city and to meet the city logistics commitments and requirements. Weekly and monthly meetings were held throughout the whole implementation process, which incorporated perspectives and feedback of different stakeholder groups. The meetings had different foci and were shaped to enable intensified interaction between the stakeholders in order to establish and maintain trust and provide encouragement. Since the City of Malmö was the driving force behind the initiative, it interacted with all stakeholder groups in every stage of the implementation process in order to develop the initiative. Property owners interacted mainly with the municipality, the city cooperation organization, and the transport providers due to their main aspiration of improving the attractiveness of the city. The two transport providers interacted with one another and with the municipality, the property owners, and the city cooperation organization, as the city is dependent on freight transport and thus the transport providers.

More precisely, TP1 took the initiative for SamCity's effective co-ordination of transport. Its terminal was used as the consolidation center for SamCity. The terminal offered accessible central storage and sortation and was able to reduce the number of freight deliveries going to stores. The unique cooperation is embedded in a smart logistics solution that involves co-load of both private and municipal freight for SamCity. The freight was transported by SamCity's vehicles, powered by renewable fuel. Specifically, one heavy vehicle with a high load factor and smaller footprint was used for the delivery of freight from the local transport provider's terminal to the micro terminal, which was located in the city center. The usage of this vehicle minimized the trips in the city center, as a similar amount of freight would typically require more vehicles to deliver the freight. The freight to be shipped in the city center was collected and delivered from SamCity's micro-terminal with an exhaust emission-free and quiet electric vehicle.

The genesis of the initiative can be dated back to 2010, where the idea of the city logistics emerged, and then started to be concretized in 2013. Time wise, the initiative was carried out from May 2013 to August 2016; the first stage was carried out from May 2013 to January 2014. In May 2014, the SamCity initiative was granted additional funds, which lead to a pilot implementation in 2015. This represents

the second stage of the initiative, and lasted from 2014 until 2016, embracing the same initiative constellation as the first stage.

5. The Stadsleveransen Initiative

Stadsleveransen started in 2012 and has grown steadily since then in terms of the number of deliveries and the area within the inner city of Gothenburg where deliveries are made. A consolidation center located close to the city center receives packages from two transport providers one Scandinavian and one international. These packages are received from small vehicles and grouped into delivery rounds that are performed by four electric vehicles. A number of stakeholders have been involved in the initiative since it started including the two transport providers TP1 and TP2. The operations (i.e., the terminal sorting, driving, and delivery work) are carried out by a small independent haulage organization (HO). However, the service is formally provided by 'Innerstaden' (I), a non-profit company owned by the property owner association (Fastighetsägarna GFR) and the merchant trades association in Gothenburg (Köpmannaförbundet). Innerstaden brings together property owners, shops, hotels, restaurants, cafes, service companies, banks, tenant associations, and cultural organizations based in or related to the city center of Gothenburg (these stakeholders can be abbreviated as property owners (PO); shops or stores (S); hotels, restaurants, and cafes (HRC); and other businesses (OB)). Innerstaden also works in cooperation with the municipality (M) the City of Gothenburg. However, the Urban Transport Administration of the City of Gothenburg (Trafikkontoret) also plays a more specific role and is identified as TK.

The initial concept for the service came from the Trafikkontoret, and this organization took the lead in bringing the initial stakeholder groups together and have supported further development of the service. This support is mainly by providing the time for an initiative manager who is responsible for coordinating the service and ensuring that the service continues to develop.

Stadsleveransen has developed in three stages. Stage 1 (2012–2013) focused on establishing the concept, mapping, and evaluation of options and deliveries being made to a small number of shops. During this stage, the consolidation center was established and could act as a c/o address so the shops could have their packages re-directed via that point. Stage 2 (2014–2016) saw expansion of the service. Deliveries were made to a larger number of shops and the main flow of freight came from the transport operators that agreed to deliver to the Stadsleveransen consolidation terminal. Some additional services were also developed, and revenue was obtained from advertising on the electric vehicles. During Stage 3 (2017 onwards), the service has continued to grow and has been opened to all businesses in the inner-city area, where there has been a strong focus on making the service commercially viable.

The consolidation center is located about 1 km from the city center. At present, about 800 packages a day are delivered to a range of businesses in the city center; an area where there are time restrictions on the use of heavy freight vehicles. Some of the businesses have specific delivery requirements that are the result of their own decisions or constraints e.g., they are not able to receive freight before 10:00. On the other hand, businesses with some dedicated staff and available receiving space can accept the majority of freight before 10:00. The service is financed by the transport companies that pay for the final delivery into the city center, advertising revenue for company adverts placed on the Stadsleveransen vehicles, and a small amount of public funding. Regular meetings are held among the following stakeholders: Trafikkontoret, the transport operators, the independent haulage company, and Innerstaden. However, not all meetings involve all stakeholders but are organized according to specific and changing requirements. Innerstaden represents the interest of the receivers, such as the businesses in the center of Gothenburg, which receive the packages delivered.

6. Results

The results of the study are building blocks for creating cumulative development of knowledge about stakeholders' interaction. Specifically, the two selected cases provide deep explanation about the

stakeholders' interaction and their patterns in the different stages of the implementation process and are discussed in the first and second part of this section. The third part describes criteria for identifying stakeholders' interaction. The fourth part presents the patterns of stakeholder interaction.

6.1. Results from the SamCity Initiative

The SamCity initiative engaged the commercial stakeholders from the very first stage of the implementation process by creating a strong network and a communication strategy among them. The transport providers engaged in the second stage of the implementation process, since only then was it necessary for them to be included in the initiative. In particular, the stakeholder groups that the SamCity initiative engaged were already part of the freight system and freight network of the City of Malmö. Hence, there were indications of promising stakeholders' interaction for SamCity due to some pre-existing collaboration. The criteria that provided such indications of promising stakeholders interaction was the consultation and collaboration outside the initiative. Further criteria that provided stakeholder interaction were the knowledge dissemination and the information.

To support the development of the initiative and the stakeholders' interaction, the City of Malmö, as the driving force of the initiative, organized strategic meetings, specific training of advisors, and joined meetings with academia where feedback and guidelines were given constantly on the engagement of the stakeholders. In line with this, the City of Malmö took into consideration the varying motives of the different stakeholder groups' and tried to use them in a beneficial way. More precisely, the City of Malmö conducted several rounds of negotiations that met both stakeholders' motives and served the needs of the initiative. Based on this, a trustworthy cooperation network between the stakeholders was created, which helped the creation of a long-term vision for stakeholders' interaction.

There was a constant information flow between the involved stakeholders and, hence, a fruitful dialogue between them in the meetings organized by the City of Malmö leading to a broader interaction. The meetings consisted of implementation meetings and consortia meetings and had different foci. More subtly, the implementation meetings took place once a week where the City of Malmö, the two transport operators, the city cooperation organization, and the haulage organization participated. The aim of these meetings was to exchange and analyze information on the ongoing progress of the initiative and its performance. During such a meeting, the City of Malmö distributed performance reports among the involved stakeholder groups to allow them to gain a broader view into the status of the initiative, the performance levels of each stage, and the decisions that were taken. The consortia meetings took place once a month with the City of Malmö, the property owners, the city cooperation organization, the retail consumer organization, the haulage organizations, and the Confederation for Swedish Enterprise as core participants. These meetings aimed to review and guide the freight flow modelling, and analyze the environmental and economical sustainability performance of the initiative.

However, due to the different needs of the initiative in the different stages of the implementation process, the changes in the market, economy, and technology, the needs for stakeholder engagement changed as well. This, however, led to a few changes due to the concern that new stakeholder groups would change the dynamics of the initiative and conflicts of interest would arise. Despite the strong network and communication strategy, in the final stages of the implementation process, where the SamCity initiative gained additional funds, it was observed that the marketing and the financial situation of the initiative affected the way stakeholders interacted. More precisely, in the final stages, it became clear that the marketing, advertisement, and financial benefits were the only motives for the commercial stakeholders and the transport providers for still participating in the initiative. However, since it was in the final stages, it did not affect the implementation process.

6.2. Results from the Stadsleveransen Initiative

There are several core stakeholder groups involved in the Stadsleveransen initiative: Transport operators that deliver freight to the Stadsleveransen terminal from where the freight is delivered in the city by Stadsleveransen, the City of Gothenburg—specifically Trafikkontoret,

Innerstaden (the organization that represents businesses in the central part of Gothenburg), and the haulage organization—and the company that is paid by Innerstaden to run the terminal and operate the electric vehicles that deliver the goods in the city center by means of the Stadsleveransen service. There have been several different phases and stages to the initiative and the stakeholders, and their roles have changed over time. Engagement is required in all stages, but the intensity and the type of engagement has changed over time due to the different needs of the initiative as well as the different motives and goals of the stakeholders.

The stakeholders have been engaged in the initiative since the start but in most cases, engagement has been focused on one stakeholder group at a time. There have been few meetings where all stakeholders gather together. However, this changed during 2019 with a wider network of organizations meeting together. It is expected that this change will facilitate further growth and ensure that the service is 'owned' by the stakeholders. The full range of stakeholders have been active from very first step, but specific meetings have been held for each stakeholder and/or stakeholder group.

Interaction among stakeholders is essential for Stadsleveransen, but the type of interaction has changed as the initiative developed. At the beginning, interaction was needed to exchange ideas and develop a strong plan for the initiative. However, even when the Stadsleveransen service was operating, the initiative still required interaction because the development process does not just happen by itself—intervention and communication are necessary even as the service becomes more mature. Ensuring that the service continues to develop is essential and very important in promoting the long-term success of the initiative. Interaction with the receivers is managed by Trafikkontoret with the support of Innerstaden, and this can be considered an essential activity.

There was a communications strategy from the start of the initiative, and presentations were made by Trafikkontoret at local events and more widely. The goal for the communication was to explain the service and also, importantly, to explain how this contributed to the long-term vision for central Gothenburg. Existing networks have been important in sharing the development of the service and in gaining wider views and opinions. The most important network in this respect has been the Gothenburg freight network (Godsnätverket), which has played a role in supporting continuity over time. It was found that connecting with existing networks and institutional actors was important and helped avoid unnecessary meetings. The network played a crucial role in that manner as the same stakeholders are part of meetings; they know about the decisions that have been made before.

Stakeholder engagement and communication helped to increase understanding of the positive benefits to the inner city that could be made by consolidation services and specifically the Stadsleveransen service. This included an improved environment for pedestrians and for the attractiveness of the city streets for people working and living in the city as well as for visitors. The input clarified the nature of the very dense central area where typical city delivery services are not appropriate, since the streets are much better for shoppers, visitors, and residents when large vehicles are not present, thus small vehicles are used. Therefore, it was important to get the transport operating companies to consider this. One impact that has been is that more stakeholders understand the link between traffic, freight traffic, and the environment of the city. The continuity of the Stadsleveransen service has been supported by the neutral and shared role played by Innerstaden in bringing the businesses in the inner-city area together. They are a stakeholder that can act in a neutral way and encourage cooperation and working together. Neutral stakeholders that can take actions can be very important.

6.3. Criteria for Identifying Stakeholders' Interaction

Investigating both the case study protocol and the semi-structured interviews, we identified the following six criteria for stakeholders' interaction: (1) Knowledge dissemination, (2) consultation, (3) stakeholder diversity, (4) stakeholder interest, (5) existing collaborations and network, and (6) information. The criteria are summarized in the Table 1.

Table 1. Overview of the six criteria for stakeholders' interaction.

Criteria	Description
Knowledge dissemination	Knowledge dissemination refers to the cluster of related activities within an initiative that has to do with producing new knowledge.
Consultation	Consultation refers to the meetings with academia where input and feedback is given.
Stakeholder diversity	Stakeholders' diversity addresses the heterogeneous motives and goals that affect the way they interact.
Stakeholder interest	Stakeholders' interest shows the different levels of interest of stakeholders in the different stages of the implementation process.
Existing collaborations and networks	Existing collaboration and networks address all the links to pre-existing partnerships.
Information	Facts perceived about the status and the performance outcomes of the implementation process of the initiatives.

6.3.1. Criterion 1: Knowledge Dissemination

Both initiatives have a clear scope resulting from lessons learnt from field experiments and the pilot implementation phases. They are shifting to target the knowledge missing about the implementation process of city logistics initiatives and several solutions and activities. As introduced in both initiatives, this requires systems, target, and transformation knowledge. However, in specific situations, the lack of one or the other type of knowledge can be more critical for fostering more sustainable development of the city logistic initiatives. Moreover, it depended on the perspectives of the stakeholder and whether they perceived production of systems knowledge as the sole possible knowledge goal, or if target and transformation knowledge are also perceived as part of the initiatives.

In the studied initiatives, knowledge dissemination was perceived as important in the final stages of the implementation process, as initially the initiatives strove to generate target and/or transformation knowledge. For instance, to prevent negative impacts on urban freight transportation, the initiatives sought to provide systems knowledge about the effects of freight consolidation. Further, the initiatives perceived that development of strategies for more sustainable freight goods transportation required not only better understanding of the transportation systemic, but also envisioning of more desirable futures (target knowledge) and identification of tools to achieve these futures (transformation knowledge). Our analysis revealed that the knowledge dissemination requires a variety of stakeholders' interaction.

6.3.2. Criterion 2: Consultation

All the stakeholder groups are consulted by both the academia and the managers of the initiatives regarding the policies within city logistics concepts. In this criterion, advice was given towards the decision-making. Further, opinions were given by the academia about the outcomes of the initiatives at each stage and predictions were made for future steps based on the societal needs for city logistics and challenges. Moreover, the consultation and the input given is used to shape the policies of the initiatives as several of those policies are trying to reconcile the often-conflicting interests of the many stakeholders within their jurisdiction. Hence, with the consultation managers and regulators implement policies to mitigate the negative impacts of city logistics. Thus, the consultation of the stakeholders leads to minor thematic adjustments of the initiatives' scope and influence final interpretations and recommendations for future steps.

6.3.3. Criterion 3: Stakeholder Diversity

The stakeholder diversity is found to be a core criterion when identifying patterns and degrees of stakeholder interaction. This criterion refers to the stakeholder diversity and heterogeneous interests, motives, and goals of participating in city logistics initiatives that can affect the way they collaborate with each other and hence create problems in the implementation process. Stakeholder diversity is recognized as a principal challenge and barrier of stakeholder coordination and managing the diversity

of goals among stakeholders when implementing city logistics. More accurately, higher stakeholder diversity tended to be accompanied by higher levels of consultation. However, it was noted that in both initiatives, higher numbers of interactions and greater heterogeneity of interests called for more intense stakeholder engagement approaches. Spontaneous, occasional, and informal contact for the purpose of information sharing and feedback appeared very promising when only a few stakeholders were involved in some parts of the implementation process stages such as in the consortia meetings in the case of SamCity. However, interaction events generally required more careful planning to enable not only information sharing, but also broader consultation, knowledge exchange, and joint development of new knowledge. In such cases, the interactions between stakeholders and the opportunities for the stakeholders to meet and decide were important.

6.3.4. Criterion 4: Stakeholder Interest

This criterion involves the different levels of interest of stakeholders for participating in city logistics initiatives. This is related to their diverse motives and goals for participation in the initiatives. Such different levels of interest affect the way stakeholders interact. If important stakeholders were more indifferent or critical, the stakeholder interaction processes had to be designed with greater care. In general, stakeholder engagement processes also needed to be more intense in cases of particularly indifferent/critical stakeholders. The differences in stakeholder interests in city logistics means that they have different perspectives on how to improve the transport system, which may lead to conflicts of interest and missed opportunities to obtain the best possible solution. Thus, to obtain more sustainable and livable cities through a city logistics initiative, the stakeholders' interest should be addressed. This implies that in several cases the city administrators disregarded to involve the transport providers in the decision-making due to inadequate consideration of the transport providers' prerequisites within urban development. Thus, the transport providers were only considered for the implementation.

6.3.5. Criterion 5: Existing Collaborations and Networks

This criterion addresses the links to longer-term existing collaborations and networks, which can help in overcoming problems of the implementation process. These existing collaborations and networks are beneficial for stakeholders' interaction in the implementation process. The willingness to be committed to a long-term engagement process can be seen in both initiatives. Continuity in terms of the stakeholders' interaction is also important as it takes time to build trust among the different stakeholder groups.

More subtly, this criterion concerns both the long-term commitment of the stakeholders in the initiatives as well as their intense stakeholder interaction. Both initiatives were built on existing networks to select the most relevant and appropriate stakeholder groups. As the managers of the initiatives were familiar with the urban freight network the stakeholders belonged to, there was mutual understanding to easily agree on the initiatives' priorities. Based on their prior collaboration, the stakeholders trusted the group dynamics to produce relevant outcomes. The selected stakeholder groups were all experienced in urban challenges and planning, and well familiar with city logistics concepts. The stakeholders frequently discussed city logistics concepts internally in their organizations in order to represent the organization's standpoint in the initiatives.

6.3.6. Criterion 6: Information

The stakeholders are informed about the status and the performance outcomes of the implementation process of the initiatives. Feedback from their side is encouraged, e.g., in the different types of meetings where a fruitful dialogue is encouraged. Further, the stakeholders are informed about final outcomes of each stage by means of articles, presentations, reports, seminars, and workshops. These offer a chance to clarify the status of the implementation process and the final outcomes as well as recommendations for future steps are jointly discussed.

This criterion describes the exchange of data between the stakeholders within the different types of meeting. There is plenty of information sharing within both initiatives that is increasing as more intense interaction is created. Hence, information becomes easier to share across them and helps them with the decisions that need to be made and the policies that need to be implemented.

Information plays a crucial role in every stage of the implementation process and thus in the decision-making process. Decision-making is the most important task of the city logistics initiatives. Therefore, to enable the stakeholders to take the proper decisions, it is important to provide them with information.

6.4. Patterns of Stakeholders' Interaction

The analysis of the case study protocol and the semi-structured interviews revealed a variety of patterns of stakeholders' interaction throughout the whole implementation process. Those patterns are mainly based on the communication and network strategy that both the initiatives formed since the early stages of the implementation process. Further, the analysis revealed that patterns were also created during the different types of meetings of the two initiatives, where stakeholders were interacting with one another in specific ways. Since there were different types of meetings, patterns and promising degrees of interaction were mostly created with the stakeholders involved in each type of meeting. For instance, in both initiatives, the municipality collaborates with the other stakeholders to develop the initiative further. In the case of SamCity, PO collaborate mainly with the municipality, the CCO, and the transport providers due to their interest in the initiative, which is to improve the attractiveness of the city; the TP mainly collaborates with the M, the PO, and the CCO, whereas in the case of Stadsleveransen, the transport providers collaborate with the haulage organization, which in turn collaborates with Urban Transport Administration of the City of Gothenburg (Trafikkontoret), property owners, stores, and other businesses.

More precisely, the analysis showed that the patterns of stakeholder interaction ranged from rather formal ones consisting of a collaboration and meeting protocol to complex collaborative ones in which stakeholders were part of the decision-making team. Accordingly, the analysis showed that the patterns and the degrees of stakeholder interaction were different in the beginning or the end of the different stages of the implementation process, where more information was provided, and more knowledge was created. For instance, at the end of each stage of the implementation process, several reports were produced that presented the adaptations that were carried out to come up with solutions at this stage of the implementation process.

In this light, the findings show that the patterns differed not only regarding the promising degrees of stakeholders' interaction, but also regarding the degree of interaction over time. Overall, we identified six different patterns of stakeholder interaction over the three different implementation stages that are related to the criteria of interaction.

7. Discussion

This paper emphasizes the importance of the interaction between the stakeholders and their different needs and constrains in relation to city logistics strategies in the different stages of the implementation process. The stakeholders of city logistics continuously interact with each other, which reflects their behavior and forms mutual goals as they strive in the same direction. This is a concretization of the findings in [26], who demonstrated that the freight partnerships have fostered mutual understanding among urban freight stakeholders. Further, it is in line with the findings by [27], who pointed out that stakeholder interaction is a success factor for city logistics measures, as without a common understanding among stakeholders, it might be difficult to obtain long-term solutions for city logistics.

The analysis of the interviews and the case study protocol revealed a variety of patterns of stakeholders' interaction. These patterns ranged from rather classical patterns with limited stakeholders' interaction, to complex collaborative ones in which stakeholders were part of the team of problem

framing and decision-making throughout the whole implementation process. Accordingly, the communication strategy ranged from information tools such as presentations and reports to methods that enabled knowledge exchange and co-production of knowledge such as workshop series, seminars and conferences, and a combination of stakeholders in the different types of meetings.

Moreover, the analysis identified six promising criteria for stakeholders' interaction during the different stages of the implementation process, which are (1) knowledge dissemination, (2) consultation, (3) stakeholder diversity, (4) stakeholder interest, (5) existing collaborations, and (6) information. Some criteria called for consistently lower or higher intensity of interaction, while others called for varying intensity according to the needs of the different stages of the implementation process, with higher levels required at the beginning and/or end of each stage. For instance, in the stages where the initiatives seek to induce actions for sustainability consistently, higher degrees of stakeholder interaction were required (co-production) than those aimed at generating systems knowledge related to rather uncontested issues (information). Further, in situations where stakeholder collaborations were already well-established (from pre-existing collaborations and networks), lower degrees of interaction were observed, whereas in those stages that the academia wanted to raise awareness about possible future risks, degrees of interactions needed to gradually increase.

The current literature shows that relatively low degrees of stakeholder interaction appear destructive for the long-term viability of city logistics initiatives. However, our findings show that more intense interactions were needed at the beginning or end of the different stages of the implementation process in order to raise awareness, to jointly frame the problem, make decisions, and to bring the results to fruition. In both initiatives, a steadily rising degree of stakeholder interaction appeared necessary, as higher overall degrees of such interaction were required throughout the whole implementation process. Further, it is important to collaborate with these stakeholders so as to contribute to the value creation, knowledge, insight, and support in shaping the initiatives vision and objectives. Accordingly, the stakeholders' interactions had considerable impact on the implementation process and the performance levels. For instance, the interaction led to reframed goals and focus of the initiative in general and to the creation of the actual initiative in the case of SamCity; while in the case of Stadsleværnsen, one important impact of such interaction has been that more stakeholders understand the link between traffic and the environment of the city.

As many different stakeholders with different motives and goals were involved, it proved important to frame the initiatives' objectives in consultation with those that are concerned and to collaborate with them throughout the whole implementation process. However, the analysis revealed instances that relevant stakeholders were not engaged to sufficient degrees, supporting the findings of [40,41]. This lack of engagement created difficulties in some crucial stages of the implementation process. For instance, the city administrators or municipalities disregarded the involvement of the transport providers in the decision-making due to inadequate consideration of the transport providers' prerequisites within urban development and only considered them for the implementation. Hence, transport providers are considered more as an obstacle to decision-making during these different stages than as a core stakeholder group. This provides an explanation to why city administrators and governmental authorities have focused more on policies for individual vehicle activities in the city centers than on the supply chains that these activities are part of, and supports the findings of [42]. In this regard, city administrators and initiatives' managers should be neutral and understand how the different stakeholders can facilitate the implementation of city logistics solutions. This neutral way of acting will encourage stakeholders' interaction and collaboration and form dynamic relationships between them.

8. Conclusions

Stakeholders' interaction is important for the implementation of city logistics initiatives, but it is often underestimated. It reflects stakeholders' behavior and can lead to aligned motives and goals. This can help stakeholders strive in the same direction as they avoid the conflicts and implement

effective solutions for city logistics. Therefore, it is important as the stakeholders are getting the initiatives from inception to a successful completion. Stakeholder theory influences the study, as this theory emphasizes that the establishment of stakeholders' interaction helps organizations to retain stakeholders' long-term participation and commitment [35,43].

The links to longer-term existing partnerships and networks helps in overcoming complex issues, concerns, and problems an initiative might face during the implementation process. The willingness to be committed to a long-term engagement process can be seen in both initiatives. Continuity in terms of the stakeholders involved is also important as it takes time to build trust. This is hard to measure but there are benefits from having a core group of individuals working together in the initiative.

There are many existing relationships and established business practices that are often beneficial for the stakeholders' interaction and need to be considered. However, the analysis highlights that changing practices that have often been in place for many years is also beneficial but takes time; meaning that initiatives that run for a shorter period of time may have difficulties establishing the new ways of interaction and the new engagement processes needed to really achieve change in city logistics.

A contribution of the paper is that it identifies the patterns of the stakeholders' interaction as well as the six criteria for stakeholders' interaction during the different stages of the implementation process. With the comparative, longitudinal study, the variety of patterns of stakeholders' interaction was revealed. They ranged from rather classical patterns with limited stakeholders' interaction, to complex collaborative ones. Further, the stakeholders' commitment to the implementation process was demonstrated through the comparative, longitudinal study. Prerequisites for implementing city logistics solutions is stakeholders' commitment as well as a comprehensive understanding of the relationship dynamics between stakeholders and how they can be involved in the decision-making. This can determine their level of interaction and collaboration. This gives the tools on how to engage stakeholders and establish interactions between them. Hence, the findings support and expand the stakeholder theory.

Another contribution of the paper is towards the dynamics of stakeholders' relationships, where stakeholders have direct and indirect relationships with one another. More precisely, it showed how the interaction in the different stages affect the outcomes of the initiatives, the decision-making process, and hence the implementation process as whole over time. The relationships between an initiative's manager and its stakeholders are essential for the success and long-term viability of the initiative. It is also the most appropriate way of coping with conflicts and uncertainties.

From a practical perspective, the outcomes of the paper can help practitioners to coordinate to facilitate collaboration and interaction between stakeholders. This can help the managers of initiatives to create a communication and network strategy for stakeholder engagement, which in turn can contribute to an increased success rate of city logistics initiatives as conflicts of interest will be avoided. The specific insights of the paper show that engagement is required in all stages, but the intensity and the type of engagement can change over time due to the different needs of the initiatives, external factors such as policies, rules, and regulations, as well as due the different motives and goals of the stakeholders. Hence, the paper provides a guideline for stakeholder interaction that is applicable to other city logistics initiatives.

A potential limitation of the study is that it focuses on mono-national or single-country cases, which are apparently similar. Thus, it is difficult to know if the extent to which stakeholders' interaction may vary between two completely different initiatives or between two initiatives from different countries. Although a holistic approach of the stakeholders' interaction was captured, it would have been interesting to explore such similarities or differences in terms of the service being implemented and the stakeholders being involved in initiatives from different countries and more initiatives. This could demonstrate if there are any particular differences in national levels and would generalize the results of this paper. In future research, it would be useful to highlight the importance of networks of stakeholders and communication strategies to find ways to solve problems that have not been addressed or solved before. However, it needs to take clear account of the existing and ongoing

stakeholder engagement that takes place within the city. In this regard, future research needs to map the existing freight transportation networks and patterns of stakeholder interaction within a city. There are many overlapping networks and initiatives, some of which extend beyond the freight and logistics sphere; hence, finding ways to engage with ongoing work is essential in fostering new initiatives and creating strong stakeholders' interaction.

Author Contributions: K.K. produced drafts of the texts and introduced the idea to M.B. who provided experienced advice and suggestions. Both researchers, who shared data collection and analysis, were responsible for the research design and writing of the text. The propositions and final version of the paper were developed in agreement by both researchers.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Taniguchi, E.; Thompson, R.G.; Yamada, T.; van Duin, R. *City Logistics: Network Modelling and Intelligent Transport Systems*; Pergamon Press: Oxford, UK, 2001.
2. Taniguchi, E. Green Logistics for Greener Cities Concepts of City Logistics for Sustainable and Livable Cities. In Proceedings of the First International Conference Green Cities, Department of Urban Management, Kyoto University, Kyoto, Japan, 19–21 May 2014.
3. Walker, D.; Shelley, A.; Bourne, L. Influence, stakeholder mapping and visualization. *Constr. Manag. Econ.* **2008**, *26*, 645–658. [[CrossRef](#)]
4. Le Pira, M.; Marcucci, E.; Gatta, V.; Ignaccolo, M.; Inturri, G.; Pluchino, A. Towards a decision-support procedure to foster stakeholder involvement and acceptability of urban freight transport policies. *Eur. Transp. Res. Rev.* **2017**, *9*, 1–14, 54. [[CrossRef](#)]
5. Lindholm, M.; Blinge, M. Assessing knowledge and awareness of the sustainable urban freight transport among Swedish local authority policy planners. *Transp. Policy* **2014**, *32*, 124–131. [[CrossRef](#)]
6. Banister, D. *Unsustainable Transport—City Transport in the New Century*; Oxfordshire: Routledge, UK, 2005.
7. OECD. *Delivering the Goods. 21st Century Challenges to Urban Foods Transport*; OECD: Paris, France, 2003; pp. 1–153.
8. Lindholm, M. Successes and Failings of an Urban Freight Quality Partnership—The Story of the Gothenburg Local Freight Network. *Procedia—Soc. Behav. Sci.* **2014**, *125*, 125–135. [[CrossRef](#)]
9. Holguín-Veras, J.; Aros-Vera, F.; Browne, M. Agent interactions and the response of supply chains to pricing and incentives. *Econ. Transp.* **2015**, *4*, 147–155. [[CrossRef](#)]
10. An Overview of Models to Assist in the Design and Evaluation of City Logistics Projects. Available online: [https://www.researchgate.net/profile/Jaume_Barcelo/publication/228376775_AN_OVERVIEW_OF_MODELS_TO_ASSIST_IN_THE_DESSIGN_AND_EVALUATION_OF_CITY_LOGISTICS_PROJECTS/links/02e7e52cd298b276c5000000/AN-OVERVIEW-OF-MODELS-TO-ASSIST-IN-THE-DESSIGN-AND-EVALUATION-OF-CITY-LOGISTICS-PROJECTS.pdf](https://www.researchgate.net/profile/Jaume_Barcelo/publication/228376775_AN_OVERVIEW_OF_MODELS_TO_ASSIST_IN_THE_DESIGN_AND_EVALUATION_OF_CITY_LOGISTICS_PROJECTS/links/02e7e52cd298b276c5000000/AN-OVERVIEW-OF-MODELS-TO-ASSIST-IN-THE-DESSIGN-AND-EVALUATION-OF-CITY-LOGISTICS-PROJECTS.pdf) (accessed on 21 October 2019).
11. Benjelloun, A.; Crainic, T.G.; Bigras, Y. Towards a Taxonomy of City Logistics Projects. *Procedia—Soc. Behav. Sci.* **2010**, *2*, 6217–6228. [[CrossRef](#)]
12. Pålsson, H.; Katsela, K. A multi-criteria decision-model for prioritising stakeholder motives in city logistics. In Proceedings of the NOFOMA 2016—28th Annual Nordic Logistics Research Network Conference, Turku, Finland, 8–10 June 2016.
13. Gatta, V.; Marcucci, E.; Nigro, M.; Patella, S.M.; Serafini, S. Public Transport-Based Crowdshipping for Sustainable City Logistics: Assessing Economic and Environmental Impacts. *Sustainability* **2018**, *11*, 145. [[CrossRef](#)]
14. Awasthi, A.; Proth, J.-M. A Systems-Based Approach for City Logistics Decision Making. *J. Adv. Manag. Res.* **2006**, *3*, 7–17. [[CrossRef](#)]
15. Alves, R.; da Silva Lima, R.; Custódio de Sena, D.; Ferreira de Pinho, A.; Holguín-Veras, J. Agent-Based Simulation Model for Evaluating Urban Freight Policy to E-Commerce. *Sustainability* **2019**, *11*, 20. [[CrossRef](#)]
16. Guerlain, C.; Renault, S.; Francesco Ferrero, F.; Sébastien Faye, S. Decision Support Systems for Smarter and Sustainable Logistics of Construction Sites. *Sustainability* **2019**, *11*, 2762. [[CrossRef](#)]

17. Anand, N.; Yang, M.; Van Duin, J.; Tavasszy, L. CenCLOn: An Ontology for City Logistics. *Expert Syst. Appl.* **2012**, *39*, 11944–11960. [[CrossRef](#)]
18. Taniguchi, E.; Tamagawa, D. Evaluating City Logistics Measures Considering the Behavior of Several Stakeholders. *J. East. Asia Soc. Transp. Stud.* **2005**, *6*, 3062–3076.
19. Rowley, T.J. Moving Beyond Dyadic Ties: A Network Theory of Stakeholder Influences. *Acad. Manag. Rev.* **1997**, *22*, 887–910. [[CrossRef](#)]
20. Bridoux, F.; Coeurderoy, R.; Durand, R. Heterogeneous motives and collective value creation. *Acad. Manag. Rev.* **2011**, *36*, 711–730.
21. Oliveira, L.K.; Barraza, B.; Bertocini, B.; Isler, C.; Dannúbia, R.; Pires, D.R.; Madalon, E.C.N.; Lima, J.; Vieira, J.G.V.; Meira, L.; et al. An Overview of Problems and Solutions for Urban Freight Transport in Brazilian Cities. *Sustainability* **2018**, *10*, 1233. [[CrossRef](#)]
22. Browne, M.; Sweet, M.; Woodburn, A.; Allen, J. *Urban Freight Consolidation Centres*; Final Report; University of Westminster: London, UK, 2005.
23. Le Pira, M.; Marcucci, E.; Gatta, V.; Inturri, G.; Ignaccolo, M.; Pluchino, A. Integrating discrete choice models and agent-based models for ex-ante evaluation of stakeholder policy acceptability in urban freight transport. *Res. Transp. Econ.* **2017**, *64*, 13–25. [[CrossRef](#)]
24. Gatta, V.; Marcucci, E.; Delle Site, P.; Le Pira, M.; Carrocci, C.S. Planning with stakeholders: Analyzing alternative off-hour delivery solutions via an interactive multi-criteria approach. *Res. Transp. Econ.* **2019**, *13*, 53–62. [[CrossRef](#)]
25. Lebeau, P.; Macharis, C.; Van Mierlo, J.; Janjevic, M. Improving policy support in city logistics: The contributions of a multi-actor multi-criteria analysis. *Case Stud. Transp. Policy* **2018**, *6*, 554–563. [[CrossRef](#)]
26. Lindholm, M.; Browne, M. Local authority cooperation with urban freight stakeholders: A comparison of partnership approaches. *Eur. J. Transp. Infrastruct. Res.* **2013**, *13*, 20–38.
27. Quak, H.; Lindholm, M.; Tavasszy, L.; Browne, M. From Freight Partnerships to City Logistics Living Labs—Giving Meaning to the Elusive Concept of Living Labs. *Transp. Res. Procedia* **2016**, *12*, 461–473. [[CrossRef](#)]
28. Stathopoulos, A.; Valeri, E.; Marcucci, E. Stakeholder Reactions to Urban Freight Policy Innovation. *J. Transp. Geogr.* **2012**, *22*, 34–45. [[CrossRef](#)]
29. Marcucci, E.; Gatta, V.; Marciani, M.; Cossu, P. Measuring the effects of an urban freight policy package defined via a collaborative governance model. *Res. Transp. Econ.* **2017**, *65*, 3–9. [[CrossRef](#)]
30. Marcucci, E.; Gatta, V.; Le Pira, M. Gamification design to foster stakeholder engagement and behavior change: An application to urban freight transport. *Transp. Res. Part A Policy Pract.* **2018**, *118*, 119–132. [[CrossRef](#)]
31. Clarkson, M.B.E. *The Corporation and Its Stakeholders: Classic and Contemporary Readings*; University of Toronto Press: Toronto, ON, Canada, 1998.
32. Evan, W.; Freeman, R. A Stakeholder Theory of the Modern Corporation: Kantian Capitalism. In *Ethical Theory and Business*; Beauchamp, T., Bowie, N., Eds.; Prentice Hall: Englewood Cliffs, NJ, USA, 1993; pp. 97–106.
33. Freeman, R.E. *A Stakeholder Approach to Strategic Management*; Cambridge University Press: Cambridge, UK, 1984.
34. Harrison, J.S.; Wicks, A. Stakeholder Theory, Value, and Firm Performance. *Bus Ethics Q.* **2013**, *23*, 97–124. [[CrossRef](#)]
35. Jones, T.M.; Wicks, A.C. Convergent Stakeholder Theory. *Acad. Manag. Rev.* **1999**, *24*, 206–221. [[CrossRef](#)]
36. Le Pira, M.; Marcucci, E.; Gatta, V. Role-playing games as a mean to validate agent-based models: An application to stakeholder-driven urban freight transport policy-making. *Transp. Res. Procedia* **2017**, *27*, 404–441. [[CrossRef](#)]
37. Lozzi, G.; Gatta, V.; Marcucci, E. European urban freight transport policies and research funding: Are priorities and H2020 calls aligned? *Region* **2018**, *5*, 53–71. [[CrossRef](#)]
38. George, A.L.; Bennet, A. *Case Studies and Theory Development in the Social Sciences*; MIT: Cambridge, MA, USA, 2015.
39. Yin, R.K. *Case Study Research*; Sage publications: Thousand Oaks, CA, USA, 2014.

40. Hu, W.; Dong, J.; Hwang, B.; Ren, R.; Chen, Z. A Scientometrics Review on City Logistics Literature: Research Trends, Advanced Theory and Practice. *Sustainability* **2019**, *11*, 2724. [[CrossRef](#)]
41. Brotcorne, L.; Perboli, G.; Rosano, M.; Wie, Q. A Managerial Analysis of Urban Parcel Delivery: A Lean Business Approach. *Sustainability* **2019**, *11*, 3439. [[CrossRef](#)]
42. Browne, M.; Piotrowska, M.; Woodburn, A.; Allen, J. *Literature Review WM9: Part I—Urban Freight Transport, Carried out as Part of Work Module 1 Green Logistics Project*; Green Logistics Report; University of Westminster: London, UK, 2007.
43. Bridoux, F.; Stoelhorst, J.W. Microfoundations for Stakeholder Theory: Managing stakeholders with heterogeneous motives. *Strateg. Manag. J.* **2013**, *35*, 107–125.



© 2019 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).