



Governing the sharing economy: Towards a comprehensive analytical framework of municipal governance



Yuliya Voytenko Palgan*, Oksana Mont, Simo Sulkakoski

International Institute for Industrial Environmental Economics (IIIEE) at Lund University, Sweden

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ABSTRACT

The sharing economy is having a transformative impact on our cities, and many municipalities are facing a challenge – how to systematically engage with the sharing economy to both mitigate its negative and enhance its positive impacts. Academic understanding of municipal governance mechanisms of the sharing economy remains poor. To address this gap, we develop a comprehensive analytical framework for municipal governance of the sharing economy, comprising five mechanisms (regulating, providing, enabling, self-governing, collaborating) and eleven roles. We employ a mixed-method approach comprising literature analysis, 139 semi-structured interviews, five workshops, three focus groups, and seven mobile research labs conducted in Amsterdam, Berlin, Gothenburg, London, Malmö, San Francisco and Toronto. We then go on to demonstrate how municipalities have positive and negative interactions with SEOs through various mechanisms. Explaining why municipalities differ in their governance approaches towards SEOs is an important area of future research. The framework contributes to knowledge on municipal governance by offering a holistic classification of mechanisms and roles of municipal governance relating to the sharing economy. In addition to its academic value, the framework has value for urban policy and planning, as it can help municipalities navigate the governance complexity and become more agile when engaging with SEOs.

1. Introduction

With increasing urbanisation, cities are facing multiple sustainability challenges, such as overpopulation, gentrification, worsening air quality, environmental degradation, waste generation, health threats, undermined safety, unemployment, large wage gaps, and social segregation issues. These challenges need to be addressed, prompting the United Nations (UN) to incorporate “inclusive, safe, resilient and sustainable cities” into its 2030 Agenda for Sustainable Development (UN, 2015). While striving to remain competitive, attractive and liveable, many municipalities around the globe are taking a lead in the work on UN Sustainable Development Goals. They are exploring novel ideas that hold a potential to address urban sustainability challenges, including ‘sharing economy’, ‘smart cities’ and ‘circular economy’ (SCA, 2019; SCS, 2019).

Since there is no academic consensus on how to define the sharing economy (Curtis & Lehner, 2019), in this paper we define the term as a consumption-production mode in a city, in which value is generated through transactions between actors (both organisations and individuals) involving temporary access to idling or underutilised rivalrous¹ physical assets (Mont, Voytenko Palgan et al., 2019). The sharing economy has been growing for over a decade, particularly triggered and enabled by the rapid digitalisation, i.e. penetration of digital devices such as laptops, tablets, and smartphones in people's everyday lives, and IT infrastructure that enables ubiquitous access to the Internet. Various assets are shared in cities, from rooms and homes, to bicycles, cars, and boats, to clothes, land plots and gardening tools. Transactions, which are mediated by ‘sharing economy platforms’, may occur between individual users (peer-to-peer), an organisation and an individual (business-to-peer), two organisations (business-to-business)

Abbreviations: IWSE, International Workshop on the Sharing Economy; KEG, Kollaborativ Ekonomi Göteborg (Collaborative Economy Gothenburg); MOOC, Massive Open Online Course; MRL, mobile research lab; NGO, non-governmental organisation; OECD, Organisation for Economic Co-operation and Development; SEO, sharing economy organisation

* Corresponding author at: P.O. Box 196, 22100 Lund, Sweden.

E-mail address: yuliya.voytenko_palgan@iiiee.lu.se (Y. Voytenko Palgan).

¹ Rivalrous means that the use of shared goods by one actor prevents the simultaneous use by another actor (Curtis & Lehner, 2019). Our definition therefore excludes sharing of public transport, roads, and parks, as well as file-sharing and video-streaming. In our research we focus on tangible goods because knowledge on evaluating their sustainability impacts is more profound than that of evaluating services.

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or “from one to many, from many to one, or from many to many” (crowd) (Curtis & Mont, 2020). Sharing economy organisations vary in terms of size (from global short-term rental platforms to local clothes libraries), market orientation (from for-profit car-sharing companies to non-profit tool pools) and organisational form (from municipal bicycle sharing schemes to umbrella sharing businesses to community-based toy libraries). All these initiatives are transforming production and consumption systems in cities around the globe, in both positive and negative ways (Martin, 2016; May et al., 2017; McLaren & Agyeman, 2015; Schor, 2014; SOU, 2017; Voytenko Palgan et al., 2017; Zvolška et al., 2018).

The sharing economy is still a contested concept (Cohen, 2016; Schor, 2014; Sundararajan, 2016). On the one hand, it is argued to have a potential to reduce environmental impact, strengthen social cohesion and stimulate entrepreneurship (Botsman & Rogers, 2011; WEF, 2017). On the other, the sharing economy is seen as a threat to professionalism, security, and labour laws (SOU, 2017; Vith et al., 2019), and a potential cause of increased consumption and associated environmental burdens (Martin, 2016; Sulkakoski, 2018; Zvolška et al., 2018). In particular, the rapid penetration of sharing services delivered by multinational platform giants such as Airbnb and Uber have been taking many municipalities by surprise, since they were unprepared for the challenges that might arise (Davidson & Infranca, 2016; Ferreri & Sanyal, 2018; Finck & Ranchordas, 2016; Sulkakoski, 2018; Zvolška et al., 2018).

In their review of government position papers from 16 global cities, Vith et al. (2019) identified the key sustainability challenges of the sharing economy as perceived by municipalities. These include public or social challenges (safeguarding public interest and stability, employee protection and social security), market challenges (protection of existing companies and market participants, consumer protection and safety issues), and environmental challenges (additional resource use and rebound effects). Municipalities also acknowledge opportunities that the sharing economy offers (Vith et al., 2019), including public or social opportunities (macro-economic growth and job creation, social and societal improvements), market opportunities (economic diversity, new business models, innovation, increased consumer choice), and environmental opportunities (conserving natural resources, reducing emissions). Sharing economy platforms are also viewed as catalysts for innovation in cities (WEF, 2017), and digitalisation may be one way to build a more attractive city image (May et al., 2017). In other words, the sharing economy has key implications for spatial urban structures and for socio-economic and environmental spheres of city life, thereby making it of relevance for urban policy and planning.

Many municipalities therefore develop individual governance approaches for engaging with both global and local sharing economy organisations (SEOs). These approaches are shaped by different challenges the cities are facing and/or the opportunities that SEOs are offering. Some municipalities engage with SEOs proactively and aim to develop collaborative governance approaches, while others employ coercive measures to combat the negative impacts of SEOs on cities, their inhabitants, incumbent industries or the environment (Bernardi & Diamantini, 2018; Davidson & Infranca, 2016; Finck & Ranchordas, 2016).

Either way, it is municipalities that often influence the types of SEOs that emerge and flourish in cities or those that face hardships and ultimately fail (Bernardi & Diamantini, 2018). The role of municipalities in governing the sharing economy is becoming increasingly important for urban policy and planning since, if managed well, the sharing economy may have a transformative impact on cities and their economic prosperity, social viability and environmental quality. The sharing economy may also advance more innovative and collaborative ways of governing urban sustainability transitions (Khan, 2013) that move beyond traditional regulatory governance approaches (Bernardi & Diamantini, 2018; Davidson & Infranca, 2016; Finck & Ranchordas, 2016). Considering the rapid development of SEOs, Sharp (2018)

argues that adapting governance structures and regulatory frameworks is important for urban planners and policy-makers. It is important for municipalities to govern the sharing economy more proactively and strategically rather than providing “one-off responses to each new sharing-economy firm that disrupts existing regulatory schemes” (Davidson & Infranca, 2016, 276). Municipalities may reap sustainability benefits that the sharing economy offers instead of reactively tackling the challenges that SEOs cause. Understanding the types of governance approaches available to municipalities could help them strengthen their position towards SEOs and even find ways to collaborate, benefiting cities and their residents (Sulkakoski, 2018; Zvolška et al., 2018).

Although it is evident that municipalities can no longer ignore the rise and effects of the sharing economy (Vith & Höllerer, 2020), their governance mechanisms are not yet well understood and “the best response policy is not self-evident” (Maginn et al., 2018, 397). We define governance mechanisms as “processes through which collective goals are defined and pursued” (Betsill & Bulkeley, 2006, 144) by multiple public and private actors, who engage in debates and contestations, and compete with each other for gaining and maintaining power over an issue that is governed. In this article, we primarily focus on *municipal governance* of the sharing economy, i.e. the actions taken by municipalities when governing SEOs.

The emerging research on “sharing cities” (Bernardi & Diamantini, 2018; McLaren & Agyeman, 2015; Sharp, 2020), and particularly the role of municipalities in the sharing economy (Davidson & Infranca, 2016; Finck & Ranchordas, 2016; Ganapati & Reddick, 2018), is fragmented and does not offer a systematic analysis of municipal governance processes. Urban policy literature tends to focus on regulatory aspects of governance rather than on other governing mechanisms (Aguilera et al., 2019; Crommelin et al., 2018; Davidson & Infranca, 2016; Ferreri & Sanyal, 2018; Finck & Ranchordas, 2016; Gurrán, 2018; Oskam, 2019; Rahman, 2016). Many studies focus on regulating one sharing economy domain, predominantly short-term rentals (Aguilera et al., 2019; Gurrán, 2018), or even one platform, mainly Airbnb (Crommelin et al., 2018; Ferreri & Sanyal, 2018; Oskam, 2019) or Uber (Rahman, 2016; Thelen, 2018). Another focus is municipal governance of SEOs in one country or region (Davidson & Infranca, 2016; Finck & Ranchordas, 2016; Hult & Bradley, 2017; Palm et al., 2019; Palm et al., 2019; Skjelvik et al., 2017), or in a small number of cities (Bernardi & Diamantini, 2018; Vith & Höllerer, 2020; Sulkakoski, 2018; Zvolška et al., 2018; Moon, 2017). Studies also often provide predominantly positive ways of municipal engagement with SEOs (Palm, Södergren, & Bocken, 2019). Some scholars who attempt to distinguish different roles of municipal engagement with SEOs (Vidal & Morell, 2018) offer only brief descriptions of municipal roles, without analysing how these roles are exercised in different cities and with what implications.

The purpose of this article is twofold:

- 1) to explore municipal governance mechanisms and roles for engaging with sharing economy organisations;
- 2) to propose a comprehensive analytical framework of municipal governance of the sharing economy.

With this framework we seek to contribute to both scholarly and policy debate on the sharing economy, and to advance our earlier research (Mont, 2018; Mont et al., 2018; Mont, Plepys et al., 2019; Mont, Voytenko Palgan et al., 2019). The framework is driven by both theory and empirics, since it has been iteratively built using rich empirical evidence systematically collected from seven global cities: Amsterdam, Berlin, Gothenburg, London, Malmö, San Francisco and Toronto, and from about 60 SEOs worldwide. The framework is therefore comprehensive, and it may be applied and adjusted in any urban context where SEOs are present. The case cities actively and in different ways engage with the sharing economy, which offers both fruitful ground for scholarly generalisation of our findings and inspiring cross-city examples for

urban planners and policy-makers around the globe. Unlike earlier urban policy studies that mainly focused on regulatory responses to short-term home rentals, with this framework we seek to provide an entire spectrum of mechanisms and roles for how municipalities (may) govern the sharing economy in the three domains: accommodation, mobility and physical goods sharing. We therefore respond to the need of urban policy makers and planners “to understand the implications of the sharing economy and devise appropriate policy regimes that will both regulate and facilitate the on-going evolution of the sharing economy” (Maginn et al., 2018, 394).

Section 2 positions this research in the emerging literature on sharing cities, urban policy, and planning literature that addresses municipal responses to the sharing economy, and in the established stream on governance of urban sustainability transitions. Research design and methods for data collection and analysis are explained in Section 3. Section 4 presents five governance mechanisms and exemplifies them with empirical and secondary data from seven cities. Section 5 presents a new comprehensive analytical framework of municipal governance of the sharing economy that distinguishes between five governance mechanisms and eleven roles. In Section 6, we discuss possible applications of the framework by researchers and practitioners, and we draw conclusions and identify areas for future research in Section 7.

2. Governing the sharing economy in cities

Given the contested nature of the sharing economy (Cohen, 2016; Schor, 2014; Sundararajan, 2016), an interdisciplinary research stream on ‘sharing cities’ has emerged in recent years (Bernardi & Diamantini, 2018; Cohen & Munoz, 2015; McLaren & Agyeman, 2015; Sharp, 2020, 2018). It emphasises the importance of advancing a sharing economy that is not only based on economic profitability but that is also socially just and environmentally sustainable. Municipalities are often identified as powerful and resourceful actors in these governance processes (Bernardi & Diamantini, 2018; Sulkakoski, 2018; Zvoltska et al., 2018).

Urban policy literature provides useful examples of the ways in which municipalities around the globe engage with the sharing economy (Davidson & Infranca, 2016; Finck & Ranchordas, 2016; Ganapati & Reddick, 2018). However, these studies offer no systematic analysis of the governance processes. Some focus predominantly on the regulatory responses by municipalities to the emergence and growth of SEOs (Aguilera et al., 2019; Crommelin et al., 2018; Davidson & Infranca, 2016; Ferreri & Sanyal, 2018; Finck & Ranchordas, 2016; Gurran, 2018; Oskam, 2019; Rahman, 2016), particularly the largest ones, such as Uber (Rahman, 2016; Thelen, 2018) and Airbnb (Aguilera et al., 2019; Crommelin et al., 2018; Ferreri & Sanyal, 2018; Oskam, 2019). Their findings are therefore limited to the regulating governance mechanism, thereby omitting other mechanisms and roles, and to a specific sharing economy domain (most often short-term rentals or ride-hailing). While one study (Vidal & Morell, 2018) goes beyond municipal regulatory responses to examine one type of platform, and proposes roles of municipal intervention in the sharing economy, it does not follow any systematic approach for developing a framework or anchoring it in theory. Vidal and Morell (2018) also offer only brief descriptions of proposed municipal roles, without analysis of how these roles are exercised in different cities and with what implications.

Several studies on municipal governance of the sharing economy and sharing cities discuss findings from one country, e.g. the US (Davidson & Infranca, 2016; Finck & Ranchordas, 2016) and Sweden (Hult & Bradley, 2017; Palm, Södergren, & Bocken, 2019; Sulkakoski, 2018; Zvoltska et al., 2018), one region, e.g. Nordic countries (Skjelvik et al., 2017), or from a limited number of cities, e.g. Vienna (Vith & Höllerer, 2020), Seoul (Moon, 2017), Seoul and Milan (Bernardi & Diamantini, 2018), London and Berlin (Sulkakoski, 2018; Zvoltska et al., 2018). Other studies depict predominantly positive ways of municipal engagement with the sharing economy (Palm, Södergren, & Bocken,

2019). However, it is important to recognise that there is a spectrum of municipal governmental actions in relation to the sharing economy from ‘nurturing’ to ‘restriction’ (Vith et al., 2019) or from ‘supporting’ to ‘prohibiting’ (Sulkakoski, 2018; Zvoltska et al., 2018).

Vith et al. (2019) explore perceived opportunities and challenges of the sharing economy through studies of 16 municipalities, and the public governance strategies formulated in response to those opportunities and challenges. Based on a meta-analysis of municipal documents and websites, they discuss the following categories for public governance strategies: *promotion, regulation, information, partnering, alignment, expert knowledge, technology, and provision*. They identify four framings of the sharing economy that municipalities adhere to when designing their policies: ‘societal endangerment’, ‘societal enhancement’, ‘market disruption’ and ‘ecological transition’. The paper highlights which governance strategies municipalities are more likely to employ towards each narrative, including ‘regulation’, ‘provision’, ‘alignment’ and ‘information’. The authors build their work on secondary data and therefore call for research on governance practice, which we seek to address with this paper by offering empirically generated comparative insights from municipal governance of the sharing economy in seven international cities.

As discussed in the Introduction, the rapid development of the sharing economy in cities brings both sustainability challenges and opportunities (Vith et al., 2019). It is therefore relevant to consider the role that the sharing economy plays in urban sustainability transitions.² Literature within the established school of thought on governing urban sustainability transitions (Bulkeley et al., 2017; Evans et al., 2016; Frantzeskaki et al., 2017; Hodson & Marvin, 2010, 2009) has explored new roles for municipalities when governing such transitions in cities (Van Der Heijden, 2015; Kronsell & Mukhtar-Landgren, 2018; Mukhtar-Landgren et al., 2019). For example, when developing and implementing voluntary environmental programmes (VEP), municipalities may provide administrative and financial support, perform monitoring and enforcement, market VEPs, or act as customers (Van Der Heijden, 2015).

In their comparative analysis of local climate change policy in Germany and the UK, Bulkeley and Kern (2006) identified four distinct modes for municipalities in governing climate change: *self-governing, governing by authority, governing by provision, and governing through enabling*. Self-governing refers to the capacity of municipalities to govern their own activities. Governing by authority involves the use of traditional forms of authority such as regulations. Governing by provision is “the shaping of practice through the delivery of particular forms of service and resource” (Bulkeley & Kern, 2006, 2242). Governing through enabling refers to the roles of municipalities in “facilitating, coordinating and encouraging action through partnership with private- and voluntary-sector agencies, and to various forms of community engagement” (Bulkeley & Kern, 2006, 2242). Governing through enabling and self-governing were the two increasingly used modes, while there was an overall transition from direct service provision towards enabling in different areas of public policy. These findings were supported by Kern and Alber (2008), who analysed the governance modes employed by OECD countries in climate mitigation and adaptation. In the later development of this framework, Bulkeley et al. (2009) included *governing through partnerships* to emphasise the importance of collaborative or network governance (Bogason & Musso, 2006; Khan, 2013) when addressing complex urban sustainability issues.

These studies inspired the emerging research on municipal governance of the sharing economy. One of the first studies to analyse a palette of municipal governance roles in the sharing economy was our earlier work (Sulkakoski, 2018; Zvoltska et al., 2018). We identified four

² Urban sustainability transitions are “fundamental and structural changes in urban systems through which persistent societal challenges are addressed” (Frantzeskaki et al., 2017, 1).

Table 1

Framework for collecting, coding and analysing empirical data.

Source: based on Bulkeley et al. (2009), Voytenko Palgan, Mont et al. (2019), Zvolkska et al. (2018).

Governance mode Bulkeley et al., 2009	Governance roles Authors' previous work (Voytenko Palgan, Mont et al., 2019; Zvolkska et al., 2018)	Questions to operationalise the mode in this study Authors' elaboration
Authority	City as a <i>regulator</i>	Does the municipality use laws, taxes, bans or other policy instruments to support or constrain SEOs? If yes, which SEOs does it support/constrain and how?
Provision	City as a <i>provider</i>	Does the municipality provide or withdraw any services, material, or infrastructural means when governing SEOs? If yes, which SEOs are engaged in such municipal interactions and how?
Enabling	City as an <i>enabler</i> <ul style="list-style-type: none"> ● Investor ● Host ● Match-maker ● Communicator ● Partner 	Does the municipality enable or disable SEOs through intangible means, e.g. by providing information, offering training, networking, organising competitions, or offering voluntary certification schemes? If yes, which SEOs are engaged in such municipal interactions and how?
Self-governing	City as a <i>consumer</i>	Does the municipality include any sharing solutions within its own operations and activities? If yes, which ones and how?
Partnership	— ^a	Has the municipality established any partnerships with SEOs? If yes, with which ones and how?

^a In our previous research, our point of departure was the four governance modes by Bulkeley and Kern (2006), who did not separate 'governing through partnership' mode, so the 'city as a partner' role was included under 'governing through enabling' mode.

overarching roles for a municipality to assume when engaging with the sharing economy: *city as a regulator*, *city as an enabler*, *city as a provider*, and *city as a consumer* (see also Table 1 in Section 3.2). Testing this framework with data from Berlin and London, we found that both municipalities governed SEOs primarily via the regulatory mechanism aiming to reduce negative impacts of SEOs in these cities. We demonstrated that both municipalities assumed the roles of 'provider' and 'enabler' to a certain extent by providing premises for SEOs and engaging with local sharing projects. The least active role was that of 'consumer'.

While our earlier work has proved useful in outlining municipal governance roles in the sharing economy, and was adopted by other researchers (Berendsen, 2019; Palm, Södergren, & Bocken, 2019; Sulkakoski, 2018; Zvolkska et al., 2018), it has several limitations. First, it is based on limited empirical data from two European cities. Second, it aggregates the 'city as a partner' role under the enabling governance mode, while a growing number of researchers call for a more nuanced understanding of *governing through partnerships* (Bulkeley et al., 2009; Khan, 2013). Third, there are other roles that municipalities employ when engaging with the sharing economy, as shown by other studies (Berendsen, 2019; Davidson & Infranca, 2016; Finck & Ranchordas, 2016; Ganapati & Reddick, 2018) and from our data (Voytenko Palgan, 2019; Voytenko Palgan et al., 2017; Voytenko Palgan, McCormick et al., 2019; Voytenko Palgan, Mont et al., 2019; Voytenko Palgan, Sulkakoski et al., 2019; Voytenko Palgan et al., 2020).

The study by Palm, Södergren, and Bocken (2019) builds on the work by other authors (Bulkeley & Kern, 2006; Sulkakoski, 2018; Zvolkska et al., 2018), and identifies three municipal governing modes of the sharing economy: *governing by self-government*, *provision and authority*, *governing by partnership and enabling*, and *governing through volunteering*. The first two modes combine three different modes of governing. This conflicts with the call for a more nuanced understanding of various roles that municipal governments may assume when engaging with the sharing economy. Palm, Smedby, and McCormick (2019) suggest incorporating empirical data from four Swedish cities, but the dominant focus is on, and empirical material from, Malmö. In addition, the framework may be relevant for policy makers and urban planners, but its current presentation (in table and bullet point form) risks losing appeal for non-academic audiences.

This article therefore aims to address the gaps in our work (Sulkakoski, 2018; Zvolkska et al., 2018) and that of others (Bernardi & Diamantini, 2018; Davidson & Infranca, 2016; Finck & Ranchordas, 2016; Palm, Södergren, & Bocken, 2019; Vidal & Morell, 2018; Vith et al., 2019; Vith & Höllerer, 2020) by developing a new comprehensive

analytical framework for municipal governance of the sharing economy. The framework is intended to provide novel insights to both scholarly and policy debate on governing the sharing economy.

3. Methodology

3.1. Research design

The framework was developed through a qualitative abductive methodology (Mantere & Ketokivi, 2013) that combined a deductive research strategy in initial stages (testing existing conceptualisations in practice) with theory refinement through inductively collected and coded qualitative data. The abductive nature is reflected in multiple iteration cycles of theory testing in new empirical contexts and continuously emerging new empirical data. These cycles of iteration also include interpretive work (Schwartz-Shea & Yanow, 2013) associated with discerning, coding and classifying the different governance mechanisms and roles of municipalities in governing the sharing economy. Three principal researchers, individually and collectively, performed this work, incorporating feedback from other researchers and non-academic contributors. The framework continually evolved through the iterative cycle of establishing or updating the state-of-the-art (SoA) on theory, data collection and data analysis. By soliciting feedback from academic experts and practitioners, and validating it with municipalities, the framework was continuously tested and revised.

3.2. Data collection and analysis

A deductive research strategy was used in the initial stages, including narrative literature analysis (Efron & Ravid, 2018), and early conceptualisations of the governance modes were identified (Bulkeley & Kern, 2006; Gibson et al., 2015; Kern & Alber, 2008; Kronsell & Mukhtar-Landgren, 2018). The literature analysis reviewed academic publications in Scopus, Web of Science and Google Scholar, official documents (e.g. city strategies), grey and business literature from SEOs, and online sources, including city and SEO websites. The main search words and phrases were "urban sharing", "governance", "municipal governance", "sharing city", "sharing economy", "sharing economy organisations", "governance mechanisms", and "governance modes". The initial conceptualisations of the governance modes were used to develop the first prototype of the framework. The framework was then tested in the context of Berlin and London (Sulkakoski, 2018; Zvolkska et al., 2018), where the research team conducted two mobile research labs (Sulkakoski, 2018; Zvolkska et al., 2018): Berlin in April 2017 and

London in November 2017. The prototype was used both as a guide for data collection (when developing interview guides for sharing actors) and data analysis.

The mobile research lab (MRL) is a mixed-method approach comprising three months of preparation and one-week visits to the cities, including interviews with relevant sharing economy actors, observations of SEOs, engagement with users through interviews, visits to sharing settings, and focus groups and workshops involving academia, municipal representatives and other actors. The multiple sources of secondary and primary data allow for data triangulation (Jick, 1979) and strengthen validity.

Approximately 20 semi-structured interviews were conducted per city. We conducted interviews with representatives of municipal governments and other actors including SEOs, academia and knowledge institutes, third-party organisations (ShareNL, Collaborative Economy Gothenburg, EUCoLab), industry associations (Sharing Economy UK, Bundesverband CarSharing), and sharing networks (Shareable, iShare, Sharing Economy Today, Sharing Cities Alliance). The interviews were conducted both during the preparatory phase via telephone, Zoom or Skype, and in face-to-face settings during our visits to the cities. Each interview, lasting 1–1.5 h, contained open-ended questions about the landscape of the sharing economy in the city, its institutionalisation pathways,³ prevailing and outstanding types of SEOs and their sustainability profiles, and specific questions derived from existing knowledge on municipal governance modes by Bulkeley et al. (2009). Most interviews were recorded, anonymised, and transcribed.⁴

The interview material amounted to at least 300 pages of transcribed material per city. We followed a three-stage coding process, inspired by abductive reasoning (Mantere & Ketokivi, 2013). The first stage, which we call *conceptual interrogation*, i.e. interrogation of empirical material through a conceptual lens in a deductive way, was guided by the conceptualisations of the governance modes deduced from the analysed literature (Table 1). When coding, we were specifically looking for data about municipal activities, including strategies to proactively and reactively engage with the sharing economy, and short- and long-term plans for enabling and supporting, or limiting and constraining, the emergence and spread of the sharing economy. We also collected data about institutionalisation pathways of SEOs in cities and types of SEOs, as certain governance modes are related to the types and activities of SEOs. The governance modes were then coded and classified by identifying direct words, expressions, and sentences in the interview transcripts.

The second stage, which we call *open interrogation*, is first-order coding where descriptive codes emerge from the empirical data beyond those classified in the first stage. In the third stage, called *interpretation and contrasting*, the first-order codes are grouped into more interpretative governance mechanisms and roles. These are then compared with the original modes in the literature to understand which of them have been confirmed in stage 1, which of them have not been confirmed in our empirical data, and what new governance mechanisms and roles have emerged from the empirical data in stages 2 and 3. The coding is done by at least two researchers separately, and their interpretation and classification are then compared.

The coding is part of a three-month stage of post-visit data analysis in the mobile research lab. The results of the city-oriented studies were then presented at academic conferences, where feedback from peers was solicited. Besides academic results, practitioner-oriented publications targeting municipalities, SEOs and industry associations were

³ Institutionalisation pathways encompass processes and mechanisms through which the sharing economy becomes embedded in the institutional landscape of a city and/or accepted and understood by the key actors in the sharing economy organisational field.

⁴ Since 2019 the interviews have been transcribed with the help of HappyScribe service (<https://www.happyscribe.co/>) and edited by researchers.

produced, such as an Urban Sharing city report and a two-page snapshot of the city sharing landscape.⁵ These practitioner-oriented publications offer further possibility to solicit feedback, clarify our findings and interpretations, and refine our methods.

The results of the first two MRLs in Berlin and London led to refinement of the framework. In stages 2 and 3 of the coding, more nuanced ways for municipalities to engage with the sharing economy than original governance modes have emerged. We saw the need to distinguish a more detailed set of governance roles within each governance mode. The framework was then applied to the cases of municipal governance of the sharing economy in Malmö and Gothenburg, Sweden, and San Francisco, US. The changes were documented in our conference papers.⁶ The latter version of the framework was based on additional empirical data from MRLs in Malmö (March 2018) (Sulkakoski, 2018; Zvolkska et al., 2018), San Francisco (April 2018) and Gothenburg (October 2018) (Sulkakoski, 2018; Zvolkska et al., 2018), and was again revised to accommodate new empirical evidence and feedback from academics (Sulkakoski, 2018; Zvolkska et al., 2018). More nuanced roles were distinguished, which also included the dichotomy of responses, i.e. positive and negative directions of municipal interactions with regard to SEOs. Further empirical data were gathered using the MRL methodology in Amsterdam (April 2019) and Toronto (November 2019).

By the end of 2019, the empirical data on which this paper is based consisted of 139 semi-structured interviews, seven MRLs, five participant observation workshops, and three focus groups with sharing economy users. We continued to test the framework with different actors.⁷ The framework is now being used by the Swedish cities of Malmö, Gothenburg, and Karlstad when they present their sharing economy activities to different audiences, including local and national politicians. The governance framework has been also presented in the Massive Open Online Course (MOOC) [Sharing Cities: Governance and Urban Sustainability],⁸ and six short films on municipal governance of the sharing economy⁹ have been recorded and disseminated through diverse academic and social media channels.

4. Municipal governance modes in case study cities

This section presents and analyses empirical results from the transnational study of municipal governance of the sharing economy in seven cities: Amsterdam, Berlin, Gothenburg, London, Malmö, Toronto and San Francisco. It structures the data against original municipal governance modes identified by Bulkeley et al. (2009).

4.1. Governing by authority

Many cities are challenged by the pace of development of SEOs. Kassin and Orsi (2012) argue that, in the future, municipal governments may need their own “sharing lawyers” to handle the legal

⁵ See examples of Urban Sharing city reports and snapshots on [<http://www.urbansharing.org/>]

⁶ This work was presented, for example, at the Sharing Cities Symposium on 5 March 2018 in Milan (Sulkakoski, 2018; Zvolkska et al., 2018) and at the 5th International Workshop on the Sharing Economy (IWSE) on 28–29 June 2018 in Mannheim (Sulkakoski, 2018; Zvolkska et al., 2018)

⁷ These actors included members of the Sharing Cities Sweden network: representatives from Malmö, Gothenburg, Stockholm and Umeå that work with sharing projects. Feedback was obtained during a Sharing Cities Sweden webinar in February 2019 and in a workshop in August 2019 in Gothenburg. Academic feedback was obtained at the 6th IWSE in Utrecht in June 2019. The framework was also presented at the Sharing Cities Summit in Lund in October 2019.

⁸ [<https://www.coursera.org/learn/sharing-cities>].

⁹ [1 <https://www.sharingandthecity.net/news/making-of-the-video-series-the-roles-of-city-governments-in-the-sharing-economy/>].

conundrums that the sharing economy creates. By employing various forms of enforcement and sanction enshrined in regulations, municipalities may constrain the emergence and spread of SEOs or support them by providing regulatory confirmation of their operations. While governing by authority in Amsterdam, Berlin and London is mainly seen as a restrictive approach that sets boundaries on SEO operations, the City of Toronto states that “the regulation is there to enable the companies to work in the city legally” (Int#T16).

The types of regulatory responses or engagement of municipalities also depend on the various types of SEOs, their market orientation, size and scale, values and goals, as well as on the significant difference in city context conditions and economic and political factors in different countries (Thelen, 2018). Some suggest that SEOs could be given regulatory responsibility in the form of self-regulation or be assigned partner status in developing regulatory frameworks (Cohen & Sundararajan, 2015). Others argue that, instead, incumbent industries should be deregulated as a way to maintain a balance between the sharing and incumbent organisations (Brail, 2017). As such, the City of Toronto relaxed some vehicle accessibility requirements for the taxi industry, bringing them into line with ride-hailing companies and to ensure fair competition.

We find that municipalities primarily regulate ride-hailing services and short-term accommodation rentals. These are provided mainly by large multinational platforms, which have arguably contributed to exacerbation of urban challenges of housing shortage, hotel industry stagnation, and traffic congestion. The cities of Amsterdam, Berlin, London, Toronto and San Francisco have specific yet different ways to regulate or ignore large disruptive SEOs. The ride-hailing services Lyft and Uber are not restricted by regulations in their home city, San Francisco, since they are seen as contributing to local employment. In Berlin, Uber was banned, while Transport for London revoked the Uber license in November 2019 after discovering that over 14,000 trips had involved drivers with fake identities – a decision that Uber is appealing in court (The Guardian, 2019). In Amsterdam, Gothenburg and Malmö, only drivers with a taxi license may drive Uber cars. In Toronto, regulatory provisions mainly concern passenger and pedestrian safety, so proper training of Uber and Lyft drivers is required, together with improved accessibility of vehicles, for which ride-hailing companies must pay.

Operations of short-term accommodation rentals (e.g. Airbnb, VRBO, One Fine Stay) are restricted by the number of permitted rental days per year in Amsterdam, Berlin, London, Toronto and San Francisco. In Amsterdam, Berlin and San Francisco, all homeowners who rent out their property on a short-term basis must register. In San Francisco, failing to register with the City Office of Short-term Rentals brings a fine of USD 1000 for every day the property is listed on a home-sharing website. Amsterdam was the first city in Europe to negotiate with Airbnb a maximum of 60 days per year rental of a property, to ensure that short-term rentals do not contribute to the housing crisis and to regulate the uncontrolled growth of tourism and preserve the city's authentic charm for its inhabitants. In 2019, this cap was reduced to 30 days per year (Airbnb, 2020). The Municipal Licensing and Standards division at the City of Toronto sets registration and tax requirements for short-term accommodation rental platforms and their hosts, and allows hosts to rent out only their primary residence. Malmö and Gothenburg saw no need to develop individual responses to short-term accommodation rental because this is regulated at national level (Hofverberg, 2018).

Other sharing services subject to municipal regulations are free-floating bikes and e-scooters (kick bikes). The City of Amsterdam banned free-floating bikes because they were perceived as clogging the streets:

“... [T]here was one company that put out 5000 bikes on the streets and the other ones... a few hundreds, maybe thousands. ... And one company just dumped all the bikes [on the streets] but that's the image people will

remember - no we don't want this. So it's really how it works that is really important... So now we have the policy.”

(Int#A19)

E-scooters are regulated at national or regional levels in Berlin, Gothenburg, London, Malmö and Toronto. E-scooters are restricted to private land in the UK (Hirst, 2019), in Sweden they must adhere to the same rules as bicycles (Malmö Stad, 2019), and they must follow speed limits, parking and other rules in Germany (The Local, 2019). Malmö and Gothenburg are planning designated parking zones and pedestrian zones where the use of e-scooters would be prohibited. In San Francisco, providers of e-scooters are subject to municipal permits (Marshall, 2018). The City of Toronto is taking a more proactive approach pending the arrival of e-scooters. The municipality is exploring possible locations for e-scooters and the potential of e-scooters to solve the last mile problem for multi-modal trips and reduce private car use.

4.2. Governing by provision

When governing by provision, municipalities may supply SEOs with services, material and infrastructural means, or withdraw them. One example is when municipalities provide financial support to SEOs. The lessons from the Sharing City Seoul initiative show that sharing initiatives need to be supported financially in their early stages of development (Moon, 2017). The City of Gothenburg provided funding for opening several Bike Kitchens (bike repair workshops, where users share tools, space and knowledge) in the city. It has also provided initial funding to map urban farming activities to the Grow Gothenburg platform, which connects people owning land in the city with those who would like to rent land for growing fruits and vegetables. The City of Amsterdam offers funding opportunities to SEOs through its StartupAmsterdam programme. The City of San Francisco subsidises membership in the ‘Bay Wheels’ bike-sharing scheme (run by Lyft) via its Bike Share for All programme, to encourage the use of the service by low-income individuals (SFMTA, 2017). We have not discovered any examples of municipalities providing financial support to SEOs in Berlin, London, Malmö or Toronto.

Municipalities may also provide infrastructure or space to SEOs. Agyeman et al. (2013) argue that provision of sharing infrastructure is one of the most important municipal tasks in the pursuit of more sustainable cities. In Malmö, examples include a publicly procured bicycle pool Malmö-by-Bike, for which the City provides parking stations, and Volvo Sunfleet car pools offered by public housing companies to their dwellers. In Toronto, a similar bicycle pool procured and hosted by the municipality is Bike Share Toronto, and Gothenburg municipality procured the Styr och Ställ bicycle pool until the end of 2019. The City of London provided parking spaces for station-based car-sharing companies, while most London districts withdrew from providing parking spaces to free-floating car-sharing operators. Gothenburg municipality also provides premises for a Toy Library and a Bike Kitchen. Development of new neighbourhoods, Sege Park in Malmö and Södra Älvstranden in Gothenburg, as part of the national programme Sharing Cities Sweden¹⁰ enables both municipalities to host sharing organisations in their buildings.

Our data also offers examples of where municipalities not only provide funding or infrastructure to SEOs but also start and run SEOs themselves, i.e. own them. These include a library for tools and household items, Garaget, and a free rental of sports equipment, Fritidsbanken, in Malmö.

“Malmö municipality supports us with the premises and has provided a start-up budget, furniture, containers, transportation, materials, computers and other... They not only support us, but they own the project, and this is... driving.”

¹⁰ <https://www.sharingcities.se/>.

(Int#M2)

In Gothenburg, a municipally owned neighbourhood service, Fixoteket, offers opportunities to borrow tools, swap items, or repair broken clothes. In a trial project, the City of Amsterdam shared empty municipal buildings with socially oriented organisations. Gothenburg and Malmö are interested in testing similar projects.

We have also found two examples of municipalities providing data to citizens. The City of London has a free open data-sharing portal, the London Datastore, which offers 700 datasets to help various actors “understand the city and develop solutions to London’s problems” (Mayor of London, 2020). The City of Gothenburg has worked with opening its data on various aspects of urban life since 2009, as it sees its citizens as active developers of sharing economy organisations:

“The City has a lot of data, everything from traffic to how people move in the city. Our idea is that we shouldn’t be the one who develops all the apps when citizens are better at doing that. So we try to facilitate by making as much data open as possible.”

(Int#G2)

We provided examples of how municipalities support SEOs through provision, but they may also intentionally or unintentionally ignore SEOs. Municipalities may refuse financial resources to SEOs or withdraw existing infrastructure support. For example, in Berlin, London and Toronto, the municipalities mainly provide spaces or infrastructure to SEOs, while provision of funding or data, or examples of owning SEOs, are less apparent.

Municipalities may develop and strengthen their roles through the governance mode of provision in other ways. For example, they may choose to subsidise rental costs for their premises, in which they host sharing economy start-ups that are piloting or testing new concepts. Municipalities may also look for ways to impose requirements on property owners, or negotiate with them on ways to plan for sharing economy initiatives on the ground floors of new houses, something that Gothenburg and Amsterdam are exploring. Another way for municipalities to engage with SEOs is through the provision of digital infrastructure, e.g. by offering free wi-fi Internet in public areas, thereby enabling communication and transactions on sharing platforms.

4.3. Governing through enabling

Municipalities may govern SEOs by enabling or disabling them through intangible means such as persuasion, argument and incentives. Almirall et al. (2016) suggest that enabling collaboration should form the basis of a municipality’s policy, involving active listening and identification of innovation partners. For example, Gothenburg and Amsterdam organise workshops and meet-ups for SEOs to enable collaboration. Together with network and knowledge organisations, Collaborative Economy Gothenburg (KEG) and ShareNL, both municipalities provided information about the sharing and platform economies and offered SEOs training:

“[S]ometimes we travel to other cities like when we went to Barcelona and there were a few platforms with us... and then what we tried to do is that they meet the right people in the other city to do business with... But also we try to connect them with venture capitalists. So we have all these meetups... Because we know everyone... the knowledge institutes... the venture capitalists... the start-ups,... the companies... it’s a lot of connecting, organising meetups, where they can meet these relevant people.”

(Int#A1)

Another example of a municipality building connections is when the City of Amsterdam connected 10,000 low-income citizens, who hold a City Pass, with ten chefs in their neighbourhoods through the Share a Meal food sharing platform. People were given access to a subsidised meal from a local chef. The City did this to stimulate social cohesion and promote digital literacy for all. The City of Toronto invited the

Rover platform for sharing parking spaces to speak at meetings on the sharing economy, where other SEOs were present.

Municipalities may enable certain SEOs (and sometimes disable others) by disseminating, marketing or certifying the best sharing practices. Cooper et al. (2015) suggest that municipalities should map their local SEOs in order to promote them and connect them with relevant resources. Together with an NGO, KEG, the City of Gothenburg created the Smart Map¹¹ of over 100 sharing and collaborative economy initiatives in the city. The partners made the Smart Map open source, which allowed the City of Malmö to create a similar map. A for-profit clothes-swapping initiative in Malmö and a commercial platform for sharing parking spaces in Toronto requested endorsement in municipal communications. The Mayor of London supported a platform for sharing parking spaces, Just Park, by inviting them to represent London at the Smart City Expo World Congress in Barcelona.

Municipalities may also ignore or disable SEOs, but ignoring SEOs could have an enabling effect too. The City of San Francisco ignores the ride-hailing platforms Uber and Lyft by not imposing any restrictions on them, thereby enabling their operations. In London, car-sharing SEOs were more likely to gain municipal endorsement, while small non-profit initiatives involved in sharing consumer goods often remained unnoticed. Free-floating bike-sharing companies and a platform for sharing storage spaces in London and car-sharing SEOs in Berlin would like much more active municipal intervention through enabling. However, enabling may become controversial if a municipality supports SEOs selectively. Municipalities risk being accused of preferential treatment of certain commercial SEOs or of intruding into the free market, thereby breaching competition laws. This is one of the reasons why Malmö and Gothenburg focus their enabling efforts on local non-profit SEOs.

4.4. Self-governing

Our data offers examples of this governing mode when municipalities either adopt sharing practices in their own operations, e.g. through municipal public procurement, or when different municipal units engage in sharing activities with each other. In the first case, the London Borough of Croydon offers Zipcar vehicles to its employees for temporary use, while the City of Malmö has a bike and a car pool for its employees.

The second instance is when a municipality shares its own assets. We observe that these are often experimental initiatives. The London Waste and Recycling Board ran a project on sharing high-value low-use assets such as forklift trucks, mobile cranes or chewing-gum removal machines among London boroughs. Malmö and Gothenburg have services that facilitate sharing and reuse of office furniture and other items within municipal organisations (Malmö Stad, 2013). Similarly, San Francisco City’s online platform, Virtual Warehouse, facilitates sharing and reuse of appliances, electronics, office furniture, and supplies among city agencies, non-profits, and schools (Ganapati & Reddick, 2018).

4.5. Governing through partnership

Municipalities may also engage with SEOs through partnerships in which both parties play active roles in the governance process.

Municipalities often collaborate with SEOs as they seek to address urban sustainability challenges. The example of the City of Amsterdam collaborating with Share a Meal platform that connected chefs and low-income citizens is valid here. The City of Amsterdam did this with the goal to stimulate social cohesion and to promote digital literacy for all. The City of Malmö collaborates with Stapeln, which is a makerspace that hosts many sharing initiatives. They organise joint events and

¹¹ <https://smartakartan.se/en/>.

activities for children whose parents cannot afford holiday travels. The City of Malmö and Stapeln collaborated on a project for waste collection and upcycling called ReTuren. The City of Gothenburg collaborates with several local SEOs through the national programme Sharing Cities Sweden. These include the clothes library Klädoteket, the Toy Library, the Bike Kitchen, a platform that connects land-owners with urban farmers, Grow Gothenburg, and a platform that connects Gothenburg visitors with its citizens, Meet the Locals. The City of San Francisco and Airbnb together created a tool for free accommodation listings to be activated during natural disasters (Finck & Ranchordas, 2016). The Mayor's Office at the City of London and Airbnb developed a guide for tourists to promote cultural attractions in the Borough of Southwark. No similar partnerships were found in Berlin and Toronto.

Apart from partnering with SEOs, municipalities may engage in negotiation processes with SEOs to support their policy making. In 2014 for example, the City of Amsterdam was the first city in Europe to negotiate a deal with Airbnb, resulting in hosts being able to rent their properties for a maximum of 60 days per year. The municipal regulation from 1 January 2019 reduced this cap to 30 days, which Airbnb initially argued as being too restrictive, but which it finally accepted (Airbnb, 2020). In 2019, the City of Amsterdam also negotiated a Social Charter with Uber in parallel with its new taxi policy. The ambition of the Charter and the policy is to ensure that taxi transport is "safe, reliable and trustworthy, so that it can contribute to quality of life and accessibility in the city" (Gemeente Amsterdam and Uber, 2019, 2). Similarly, the City of Toronto has negotiated with ride-hailing platforms to decide on the regulations and to obtain data from them.

At the same time, formal partnerships between municipalities and commercial SEOs are hard to establish, often due to the potential risk of market distortion through a municipality giving preferential treatment to one SEO over another.

5. Developing a comprehensive analytical framework for municipal governance of the sharing economy

We now propose a comprehensive analytical framework for municipal governance of the sharing economy (Fig. 1), based on empirical findings presented in Section 4. The framework distinguishes between five municipal governing mechanisms (regulating, providing, enabling, self-governing and collaborating), which are divided into 11 roles. Municipalities can employ any of these mechanisms and roles, and combine them to varying degrees when governing SEOs. In this way they explicitly or implicitly promote or inhibit the emergence and operation of SEOs. We discuss and motivate the principal differences between this framework and earlier versions of the framework (including those developed by us and by others), which were discussed in Section 2 and summarised in Table 1 of Section 3.2.

Collaborative or network governance (Bogason & Musso, 2006; Khan, 2013; Sørensen, 2002) is becoming increasingly important in urban settings, as municipalities "around the world are experimenting with new forms of governance that include collaboration and partnerships with civil society and business actors" (Khan, 2013, 134). Therefore, we first distinguished a **collaborating governance mechanism** from the enabling mechanism in Fig. 1 (Bulkeley & Kern, 2006; Kern & Alber, 2008; Voytenko Palgan, Mont et al., 2019; Zvolška et al., 2018). Bulkeley et al. (2009) include 'governing through partnerships' as an additional governance mode to their earlier framework (Bulkeley & Kern, 2006), to emphasise the importance of collaborative governance when addressing complex urban sustainability issues. Some authors (Bond, 2014; Cannon & Summers, 2014; Ma et al., 2018) argue that municipalities should establish collaborative agreements with SEOs as a way of dealing with new regulatory needs and to ensure cooperative relationships from the start.

We distinguish two governance roles under the collaborating mechanism: 'city as a partner' and 'city as a negotiator'. The *city as a partner* role, which was evident in Amsterdam, Gothenburg, London,

Malmö and San Francisco, can also be exemplified with the following initiatives in other cities (Finck & Ranchordas, 2016). The City of Portland, Oregon, USA, partnered with a car-sharing platform Getaround, the Federal Highway Administration and the State administration to promote peer-to-peer car sharing, and the City of Milan and Airbnb entered into a partnership to provide accommodation to visitors of the 2015 Milan Expo.

Finck and Ranchordas (2016, 8) discuss how municipalities collaborate with SEOs "in the drafting of new regulations and policy instruments for platforms". They cite an example of the City of Amsterdam and Airbnb, which signed a memorandum of understanding in 2014 to "initiate a relationship of mutual cooperation", and an example of the City of Phoenix, Arizona, USA, which made an agreement with Airbnb to collect local taxes. Finck and Ranchordas (2016) call such a collaborative governance process a "negotiated co-regulation". Our data also provides examples of the City of Amsterdam negotiating deals with Airbnb and Uber, and the City of Toronto negotiating with ride-hailing platforms on the regulations and obtaining data from them. To classify these examples, we consider it important to distinguish the *city as a negotiator* role under the collaborating governance mechanism (Fig. 1).

Municipalities may also govern SEOs through the **provision or withdrawal** of services, material and infrastructural means (Voytenko Palgan, Mont et al., 2019; Zvolška et al., 2018). Earlier, we identified two roles: 'city as a host' and 'city as an investor' (Table 1) under the providing governance mechanism. The first refers to instances where a municipality provides infrastructural support to SEOs, and the second when it provides funding. In the proposed framework (Fig. 1), we consider it important to add two other roles: 'city as an owner' and 'city as a data provider'.

City as an owner refers to situations where municipalities establish, own and provide a sharing service to their citizens. According to our data, Amsterdam opened its municipal buildings for shared use by socially-oriented organisations, and both Gothenburg and Malmö run initiatives where various consumer goods are shared between citizens. The literature also discusses how municipalities develop platforms inspired by existing commercial examples (Finck & Ranchordas, 2016). For instance, the City of Seoul "operates a website to reserve sport facilities, lecture halls and meeting rooms for educational and cultural events" (WEF, 2017, 12). The municipalities of Berkeley, California, and Portland, Oregon (USA) offer tool sharing (Davidson & Infranca, 2016). Such interventions in the sharing economy are important when there is insufficient interest towards a certain service among citizens or businesses while municipalities consider it worth promoting (WEF, 2017), e.g. from a sustainability perspective. There are also instances where commercial platforms are not an option, e.g. after banning Uber, Seoul developed its own open source ride-hailing app (Finck & Ranchordas, 2016).

City as a data provider reflects the situation whereby municipalities share their data by, for example, creating and operating open data platforms. This facilitates the engagement of citizens and businesses in sharing movements, as they may themselves develop applications and services that cater to needs of urban populations (Almirall et al., 2016; Cohen et al., 2017; Cooper et al., 2015). Such initiatives may also increase the accountability and transparency of municipalities (Moon, 2017). The Open Data Platform in Melbourne is "a public-sector platform that releases municipal data to encourage innovation by businesses, researchers, students, programmers and data scientists" (WEF, 2017, 10). The City of Barcelona engages in open data efforts to induce new kinds of economic activity in the city by its residents (Capdevila & Zarlenga, 2015). Our empirical data offered examples of this role exercised by Gothenburg and London.

Self-governing mechanism in the context of the sharing economy encompasses the capacity of municipalities to include sharing solutions within their own operations and activities. In addition to the role of *city as a consumer* (Kern & Alber, 2008; Voytenko Palgan, Mont et al., 2019;



Fig. 1. Comprehensive analytical framework of municipal governance of the sharing economy (the inner circle represents municipal governance mechanisms, and the outer circle municipal governance roles when engaging with sharing economy organizations).

Source: Authors' elaboration based on Bulkeley et al. (2009), Voytenko Palgan, Mont et al. (2019), Zvoltska et al. (2018).

Zvoltska et al., 2018), we see it as important to add one more role here: 'city as a sharer' (Fig. 1). *City as a sharer* is when municipal units offer assets they own for shared use by other municipal units. In Section 4, we provided examples of Gothenburg, Malmö, London and San Francisco sharing physical assets between municipal organisations. Similarly, Michigan and Oregon, USA, use Munirent, a platform that allows municipalities to lend heavy and expensive equipment between each other (Finck & Ranchordas, 2016).

We keep the remaining roles under the governing mechanisms of *regulating* (i.e. 'city as a regulator') and *enabling* ('city as a communicator' and 'city as a matchmaker') the same as in our earlier studies (Kern & Alber, 2008; Voytenko Palgan, Mont et al., 2019; Zvoltska et al., 2018) since neither empirical data nor data from the literature so far have provided examples of any further distinct municipal governance roles. In the *regulator* role, municipalities use laws, taxes, bans and policies to govern the establishment, operation and scaling-up of SEOs, either supporting or restricting them. *City as a match-maker* is evident when municipalities facilitate collaboration of SEOs with other similar organisations, potential users, knowledge institutes or venture capitalists (Voytenko Palgan, Mont et al., 2019; Zvoltska et al., 2018). In their role as *communicators*, municipalities may disseminate information about the best SEOs and market it to different stakeholders, organise competitions or offer voluntary certification schemes to recognise the best sharing practices (Voytenko Palgan, Mont et al., 2019; Zvoltska et al., 2018).

In the next section, we discuss how the proposed framework could be used by researchers and practitioners.

6. Possible applications of the framework

The main purpose of this article is to propose a comprehensive

analytical framework, which would offer an entire spectrum of mechanisms and roles for how municipalities (may) govern the sharing economy. Our framework is novel as, unlike the majority of studies that focus on municipal regulatory responses to sharing economy platforms, it suggests five mechanisms and 11 roles through which municipalities may govern the sharing economy. While most research relating to urban policy and planning focuses on regulatory responses to Airbnb and Uber, our framework is built using data from three sharing economy domains, i.e. sharing of accommodation, mobility, and physical goods. The framework is both theoretically and empirically driven, and it departs from systematically collected data in seven global cities and from about 60 international SEOs. This makes it easily adjustable and applicable in any urban context where SEOs exist.

We see the potential use of this framework and the knowledge generated as being two-fold. First, it is intended to help researchers obtain a comprehensive picture of the municipal governance phenomenon in relation to the rapidly developing and innovative field of the sharing economy, and allow for comparative analyses of various kinds. Second, it seeks to capture nuances of municipal engagement with SEOs, so may become a navigation, communication, and inspiration tool for municipal leaders, urban planners, policy-makers, and other practitioners.

6.1. Application of the framework by researchers

The framework can be used to structure data for comparing municipal governance of different SEO types (e.g. local vs global, small vs large, commercial vs non-profit), SEOs in different segments (e.g. sharing of accommodation, mobility or physical goods), and SEOs across segments and across different geographic contexts. Our analysis in Section 4 shows that municipalities may govern SEOs through

several mechanisms or undertake several roles simultaneously. But why do municipalities employ certain governance mechanisms or undertake specific roles when governing SEOs? How do municipal governance approaches differ in relation to specific SEOs and across different geographical contexts? How do they differ according to the size and scale, market orientation and goals and values of different SEOs?

Below we present initial observations from our analysis in Section 4, which exemplify how the framework may help guide scholarly inquiries designed to address the above questions. However, it is important to emphasise that the primary purpose of this article is not to deliver a cross-case comparison of municipal governance approaches, but to offer an analytical framework that would enable such a comparison to explain differences between municipalities.

When comparing how municipalities regulate SEOs, our data shows that they do so towards ‘the big and the loud’, i.e. large for-profit and often multinational short-term accommodation rental and ride-hailing SEOs. Activities of such SEOs often fall outside the scope of existing regulations, although they often bring externalities of various kinds,¹² thereby challenging the mission of municipalities to safeguard public interests. The reasons why the regulations towards these SEOs differ across cities can be explained by different *starting conditions* (e.g. existing regulations for taxi and housing markets, a distribution of competences and power between the municipality and higher levels of government, the level of housing or public transport infrastructure development), *political-economic arguments* (i.e. underlying governing principles in liberal market economies vs those in coordinated market economies), and *political arguments* (i.e. those based on electoral logic and electoral arrangements) (Aguilera et al., 2019; Thelen, 2018). For example, two Swedish cities (Malmö and Gothenburg) stand out from the other case studies, as they do not themselves develop regulations for short-term accommodation rental and ride-hailing platforms. These platforms in Sweden are subject to national regulations, so municipalities have no mandate to develop individual regulatory responses to these platforms. While other factors explain Swedish municipal governance approaches to the sharing economy, the distribution of competences in a multi-governance setting between municipal and state governments is an important starting condition in the case of regulating short-term accommodation rental and ride-hailing platforms.

The City of Berlin demonstrates a rather defensive governance approach, with restrictive regulations towards commercial multinational SEOs, while the City of San Francisco is an example of a largely hands-off approach to governing all types of SEOs apart from short-term accommodation rentals, which are seen as exacerbating the housing crisis in the city. This difference could be explained using political-economic arguments, which define “liberal market economies” like the USA as potentially more welcoming to commercial SEOs than “coordinated market economies” like Germany (Thelen, 2018). However, the studies that discuss the contested ‘politics of regulation’ of Uber in the US, Germany and Sweden (Thelen, 2018), and short-term accommodation rentals in Barcelona, Paris and Milan (Aguilera et al., 2019), argue that it is purely political arguments that often define why municipalities regulate similar SEOs differently. In particular, both studies argue that mobilising actors and forming coalitions, which frame the issues behind public policy actions, are key to explaining differences in municipal governance approaches of SEOs.

The City of Amsterdam is an interesting case in the latter respect, as the role of a knowledge institute ShareNL (and later its spinoff, a network organisation, Sharing Cities Alliance) in framing and advocating the potential of the sharing economy has been decisive. It is thanks to ShareNL that Amsterdam became the first Sharing City in Europe in 2015. ShareNL organises meet-ups between Amsterdam municipality

and SEOs that offer a platform for both the City and SEOs to understand each other's needs and challenges, and find potential ways of collaboration. ShareNL also supported the City of Amsterdam in developing and adopting its Action Plan on the Sharing Economy in 2016. Amsterdam exercises all governance mechanisms, which demonstrates both a strategic and proactive approach to governing SEOs and the relatively high degree of maturity of the sharing economy phenomenon in the city.

While more research is needed on the politics of the sharing economy in the studied cities, our observation is that the vector of engagement with non-commercial SEOs by Malmö and Gothenburg, both of which have a long tradition of left-wing governments, is positive in that these municipalities strategically support the SEOs with an eco-social agenda. They do so mainly through the mechanisms of providing and enabling. In particular, the issues of climate change, social justice and integration are high on the municipal agendas in both Malmö and Gothenburg, and this is where the municipalities see a role for SEOs.

Given the innovative nature of the sharing economy phenomenon, we expected that municipalities would employ the collaborative governance mechanism towards SEOs more broadly by seeking ways to experiment and make partnerships with SEOs. However, our data shows very limited evidence of this. Mostly the partnerships between a municipality and a SEO occurred under the umbrella of pilot or short-term projects, which is related to the municipal mandate to ensure equal treatment of all organisations and maintain free market competition. For the same reason, municipalities tend to enable primarily non-profit or community-based initiatives.

6.2. Application of the framework by practitioners

Apart from its applicability for research, we see potential for our framework to be used as a navigation, communication, and inspiration tool by municipal leaders, urban planners, policy makers and other practitioners.

By offering five governing mechanisms and eleven distinct roles, our framework seeks to depart from the traditional use of regulations assigned to municipalities and instead capture nuances and diversity of municipal engagement with SEOs. To assist with this, the framework can potentially be operationalised into a navigation tool for municipalities. Such a tool would help them better understand the complexity of the governance processes and choose the most suitable strategies and approaches for managing the complex and heterogeneous field of the sharing economy. We argue that the diversity of mechanisms and roles described in the framework opens up opportunities for municipal leaders to better utilise the innovation potential of the sharing economy, to capitalise on its potential benefits, and thereby help them circumvent the pitfalls and challenges of the sharing economy.

The framework may also be used by municipalities for communication purposes. In our workshops and discussions with municipalities, we have encountered an interest among public officials to use the framework for mapping the ways in which their municipalities govern SEOs. They also suggested they would use the framework to communicate municipal governance actions and ambitions when building an understanding of the sharing economy among politicians in their respective cities and soliciting political support for municipal actions, as well as in communications with citizens, SEOs and other relevant stakeholders.

Some municipalities may use the framework as an inspiration to develop policy documents, handbooks, guidelines or other working papers that focus on the aspects of municipal governance of the sharing economy. Currently, our framework is being used as inspiration for the development of a handbook on governing the sharing economy in small and medium-sized cities in Sweden.

The classification of mechanisms and roles may also be of potential value for SEOs and other actors, e.g. investors, who seek to better

¹² Externalities range from negatively affecting the affordability of housing markets to undermining consumer safety to raising the issues of taxation or unfair labour conditions.

understand the nature of governance mechanisms of municipalities where SEOs operate, and prepare strategic responses or partnership strategies.

7. Conclusions

7.1. Summary of findings and contributions

This study develops a comprehensive analytical framework for municipal governance of the sharing economy that comprises five governance mechanisms – regulating, providing, enabling, self-governing and collaborating – and 11 governance roles. To develop the framework, we used insights from the emerging interdisciplinary field of sharing cities: urban policy and planning studies that investigate municipal responses to SEOs; literature on urban sustainability transitions; and rich empirical data from municipal governance of the sharing economy in its three domains (accommodation, mobility and physical goods sharing) in seven global cities: Amsterdam, Berlin, Gothenburg, London, Malmö, Toronto and San Francisco. We highlighted positive and negative interactions between municipalities and SEOs. We also discussed several cross-case observations.

Municipalities may govern SEOs through several mechanisms and roles simultaneously. They are more likely to prohibit or restrict those SEOs that, in their view, exacerbate social urban sustainability challenges, e.g. housing crisis, public safety, congestion or social exclusion. Most often, these are large disruptive commercial platforms for short-term accommodation rentals or ride-hailing, or free-floating bike- and e-scooter-sharing initiatives. Some municipalities remain neutral towards sharing start-ups to indirectly support innovation and entrepreneurship (e.g. San Francisco, Amsterdam), but rarely provide financial or infrastructural support to sharing businesses, to avoid breaching rules of free market competition. Sometimes municipalities find ways to engage with sharing start-ups through pilot or experimental projects (e.g. Malmö, Gothenburg, and Amsterdam). However, the collaborative governance mechanism towards SEOs was not found to be as popular as expected. Finally, we observed that some municipalities encourage and strategically support mainly non-commercial SEOs for social and environmental reasons (e.g. Malmö, Gothenburg, and Amsterdam).

Explaining why municipalities differ in their governance approaches towards SEOs is an important area of future research. In this article, we highlight several possible avenues for such comparative analyses. We suggest that these could involve in-depth investigations of starting conditions, political-economic factors and politics around the sharing economy, its specific segment or even a single SEO, in terms of actor mobilisation, formation of coalitions and framing of the issues behind public policy actions.

Our comprehensive analytical framework is novel in that it offers a balanced view and an entire spectrum of mechanisms and roles for how municipalities (may) govern the sharing economy, from restricting, through hands off, and towards strategic support approaches. We see the potential use of this framework and knowledge as two-fold. First, it is intended to help scholars obtain a comprehensive picture of the municipal governance phenomenon in relation to the rapidly developing and innovative field of the sharing economy. One scholarly application of our framework can be for structuring data to compare municipal governance approaches of the sharing economy and the development of various SEOs in different cities. Second, it seeks to capture nuances of municipal engagement with SEOs, and thereby become a navigation, communication, and inspiration tool for municipal leaders, urban planners, policy makers and other practitioners. This tool could also help municipalities navigate the complexity of the governance processes, decide upon the most suitable approach, and help them become more agile and proactive in the ways they engage with the sharing economy.

This article could be of interest to researchers and experts on the

sharing economy and urban policy and planning scholars. It could also be useful for municipalities that are in the process of exploring different ways to become involved with the sharing economy or who are compelled to do so, as well as for SEOs. The framework may also be of interest to policy makers at national and potentially international level, who are working with developing policy frameworks, standards and specific policy mechanisms to govern SEOs.

7.2. Future research directions

Future research should explore the differences in the governance approaches, strategies, instruments, mechanisms and roles chosen by various municipalities in relation to the sharing economy in general, its specific segments (e.g. sharing of accommodation, mobility or physical goods), and different types of SEOs.

During our research, we encountered discussions on standardisation and certification of sharing services. In London, the industry association Sharing Economy UK, in partnership with Oxford University SAID Business School, created a TrustSeal to certify SEOs that “act with integrity and maintain professional standards” (SEUK, 2015). The City of Seoul certified 97 SEOs and groups in November 2017 according to its standards (WEF, 2017). The Mowat Center at the University of Toronto prepared a study for Canadian Standards Association that identified best sharing practices and ten fundamental principles (Alwani & Crawford Urban, 2019). In the framework, voluntary certification schemes by municipalities are included under the communicator role. However, it could potentially be separated as another role of ‘auditor/certifier’ under the regulating governance mechanism. This area needs further research.

Future research could also test the analytical municipal governance framework in other cities. This paper provides largely a Western and Global North perspective on governing the sharing economy, according to which the main motivations for sharing are convenience, speed, and efficiency. Views from the Global South will therefore be important to study in order to gain deeper and more nuanced understanding about the nature of sharing in different cultural contexts, as well as how municipalities can engage with the sharing economy.

A final suggestion for future research could involve developing the framework further by including the degrees of municipal agility (i.e. proactive, hands-off and reactive governance approaches), a spectrum of municipal responses from restriction to strategic support of SEOs, and specifying mechanisms and roles according to SEO type.

CRedit authorship contribution statement

Yuliya Voytenko Palgan: conceptualisation, methodology, formal analysis, investigation, writing - original draft, writing - review & editing, visualisation, supervision, project administration, funding acquisition

Oksana Mont: conceptualisation, methodology, investigation, writing - original draft, writing - review & editing, project administration, funding acquisition

Simo Sulkakoski: conceptualisation, investigation, writing - original draft.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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