LABOUR IN LOGISTICS: THE CASE OF INTRACITY TRANSPORTATION WORKERS IN TÜRKİYE

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ABSTRACT

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The essential role logistics plays in the global economy and the primary position of transportation in global logistics have become conspicuously visible. Hence, this study aims to examine the conditions of labour in the logistics sector in Türkiye. By first examining the trajectory of logistics, the thesis places itself into the context of global developments and their reflections on Türkiye. Building on the claims that the efforts to ensure the continuity of seamless circulation created similar strategies in different countries, homogenizing the effects of the transformation of logistics on labour, this study scrutinises the Turkish case by studying the condition of labour in logistics in Türkiye. To question the veracity of these claims, field research is conducted based on in-depth semi-structured interviews with different actors in the intracity highway transportation sector in three cities in Türkiye is conducted. The research analyses the conditions of labour in the intracity highway transportation sector based on three dimensions: the legal dimension, the socio-spatial dimension and the technological dimension. First of all, the thesis identifies three types of employment relations in the sector. The study further underlines the significance of social relations among workers and between workers and managers/employers for determining the conditions of work as well as the importance of labour's agency over work. Lastly, the study points out

that while technological equipments are not used as widely as they are used in other countries, the ones in use are not used for surveillance and control in the way the literature indicates.

Keywords: Logistics, Transportation, Labour Process, Türkiye

ÖZ

LOJİSTİKTE EMEK: TÜRKİYE'DE ŞEHİR İÇİ TAŞIMA İŞÇİLERİ ÖRNEĞİ

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Lojistiğin küresel ekonomide oynadığı temel rol ve taşımacılığın küresel lojistikteki birincil konumu belirgin bir şekilde görünür hale geldi. Bu sebeple, bu çalışma, Türkiye'de lojistik sektöründeki çalışma koşullarını incelemeyi amaçlamaktadır. Tez, ilk olarak lojistiğin tarihsel gelişimini inceleyerek çalışmayı, küresel gelişmeler ve onların Türkiye'deki yansımaları bağlamına oturtmaktadır. Kesintisiz dolaşımın devamlılığını sağlama çabalarının farklı ülkelerde benzer stratejileri yarattığı, böylece lojistikte emeğin dönüşümünün etkilerini homojenleştirdiği iddialarına dayanarak bu çalışma, Türkiye örneğini, Türkiye'de lojistikte emeğin durumunu çalışarak irdelemektedir. Bu iddiaların doğruluğunu sorgulamak amacıyla, Türkiye'nin üç şehrinde şehir içi karayolu taşımacılığı sektöründeki farklı aktörler ile yapılmış yarı yapılandırılmış derinlemesine görüşmelere dayanan bir alan çalışması yapılmıştır. Araştırma, şehir içi karayolu taşımacılığı sektöründeki çalışma koşullarını, hukuki, sosyo-mekansal ve teknolojik boyutlar olmak üzere, üç boyutta incelemektedir. İlk olarak tez, üç farklı istihtam ilişkisi tespit etmektedir. Devamında, hem işçiler arası ve işçiler ile işveren/yöneticiler arasındaki sosyal ilişkilerin çalışma konuşllarını belirlemedeki öneminin hem de işçilerin işleri üzerindeki otonomilerinin öneminin altını çizmektedir çalışma. Son olarak, çalışma, teknolojik ekipmanların diğer ülkelerde olduğu kadar yaygın kullanılmadığına ve kullanımda olan ekipmanlarınsa

literatürün ifade ettiği gibi gözetim ve kontrol amacıyla kullanılmadığına işaret etmektedir.

Anahtar Kelimeler: Lojistik, Ulaştırma, Emek Süreci, Türkiye

TABLE OF CONTENTS

PLAGIARISM iii
ABSTRACT iv
ÖZ vi
TABLE OF CONTENTS viii
LIST OF TABLES x
LIST OF FIGURES xi
CHAPTERS
INTRODUCTION 1
HISTORICAL DEVELOPMENT OF LOGISTICS: LITERATURE REVIEW 8
2. 1. Early Developments: 1950s – 1960s 11
2. 2. Consolidation and Institutionalisation: 1970s – 1980s 17
2. 3. Global Networks and Security: 1990s – 2000s 23
2. 4. Critical Logistics 27
2. 5. Conclusion 35
CONCEPTUAL FRAMEWORK: LABOUR IN LOGISTICS SECTOR 38
3. 1. Legal Dimension 39
3. 2. Socio-Spatial Dimension 44
3. 3. Technological Dimension 48
3. 4. Concluding Remarks 54
LOGISTICS IN TÜRKİYE 57
4. 1. Development of Logistics Sector in Türkiye: Historical Background 59
4. 2. The Outlook of the Logistics Sector in Türkiye After 2007 64
LABOUR IN LOGISTICS IN TÜRKİYE: THE CASE OF INTRACITY TRANSPORTATION WORKERS 73
5. 1. Research Sample and Research Methods 73
5. 2. The Research Field 75
5. 3. Legal Dimension of Labour in Logistics 79
5. 4. Socio-Spatial Dimension of Labour in Logistics 87
5. 5. Technological Dimension of Labour in Logistics 93

CONCLUSION 99
REFERENCES 108
APPENDICES
A. APPROVAL OF THE METU HUMAN SUBJECTS ETHICS COMMITTEE 119
B. INTERVIEW QUESTIONS 120
C. TURKISH SUMMARY / TÜRKÇE ÖZET 122
D. THESIS PERMISSION FORM / TEZ İZİN FORMU 133

LIST OF TABLES

Table 1: Türkiye Logistics Index Performance Across Years* 66

Table 2: List of Interviewees* 76

LIST OF FIGURES

Figure 1: From Logistics to Urban Transportation 74

CHAPTER 1

INTRODUCTION

In the past 150 years, transportation systems in the world have tremendously developed, accompanied by dramatic changes for workers in the field. Rapid urbanisation, the emergence and rise of e-commerce, changing consumer behaviour, emerging technologies and interest in sustainability contributed to these developments. Consequently, academic interest in transportation systems and, more broadly, in logistics has also significantly increased. Since the 1960s, a significant amount of ink has been spilt on the concept of logistics, a rising industry, logic and approach focused on the circulation of people, materials, and information. By the 1970s, it came to be defined as "a total approach to the management of all activities involved in physically acquiring, moving and storing raw materials, in-process inventory, and finished goods inventory from the point of origin to the point of use or consumption" (Lalonde et al., 1970, p. 44). With this shift that labelled as the "logistics revolution," as the comprehensive definition indicates, a range of activities were brought together under the rubric of "business logistics as a science" (Allen, 1997; Bonacich & Wilson, 2008). This dramatically changed production and consumption, and the circulation of goods and services began to be the basis of competition and the benchmark of production (Allen, 1997; Bonacich & Wilson, 2008; Chua et al., 2018; Cowen, 2014). As Bonacich and Wilson (2008, p. 249) highlight, the global transportation and warehousing sector has become vital to the successful functioning of global capitalism as we know it. This growth and developments in the logistics sector have dramatically changed the conditions of labour in logistics, now both in a more strategic and precarious position.

For a long time, logistics have been accounted for from the so-called neutral-scientific, technical perspective of business management and engineering, unproblematically

setting the reorganisation of flows as the goal and claiming to be apolitical as well as ignoring the impacts of this reorganisation on workers. It was during the period between the mid-1950s and the mid-1960s when then insignificant part of business, i.e. transportation, what management guru Peter Drucker (1962) called the "economy's dark continent," transformed into logistics (Cowen, 2014, pp. 32-33). It became so crucial that the U.S. Secretary of Defence, Robert McNamara, advised a federal institute for logistics studies (Cowen, 2014, pp. 32-33). Today, the Council of Supply Chain Management Professionals (n.d.) defines logistics as planning, controlling, and implementing "the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers' requirements." Likewise, in the World Development Report 2020, titled "Trading for Development in the Age of Global Value Chains", the World Bank also considers logistics as a neutral, technical function and infrastructure, an input or simply a matter of calculation. The main goal is again to ensure seamless circulation because "supply chains go where the logistics are smooth" (the World Bank, 2020, p. 168). Although the tools and techniques have changed over the years, and approaches have developed further, the perspective or logic of calculation for profit maximisation has continued to dominate the field even today. The logic of logistics penetrated all aspects of life. One vital and overlooked component of this process is the labour in logistics. Although the workers play a critical role in the functioning of the sector, they are not given due attention within this technical perspective.

Recently, however, emerging critical approaches to logistics complicated this story of technicality and neutral consequences, elucidating the constellation of social and political implications of the logistics revolution, rendering visible the structures of domination, governance, dispossession, and exploitation underpinning the logistical reorganisation of the global economy (Bonacich & Wilson, 2008; Toscano, 2011; Kanngieser, 2013; Cowen, 2014; Danyluk, 2018; Chua et al., 2018; Benvegnu et al., 2019; Chua, 2021). Since the late 2000s, the research interest in logistics has expanded beyond technical-managerial issues and approaches to include various disciplines and approaches, from political philosophy to anthropology, history to geography, economy to international relations. This change was mainly triggered by the apparent "non-

neutral consequences," such as the reduction of labour force to algorithmic variables and efficiency factors, and disruptive events such as strikes and blockades (Benvegnu et al., 2019; Chua, 2021). Accordingly, "logistics is not reducible to a mundane science of cargo movement or a discrete industry among others" (Chua et al., 2018, p. 618) or the material practice of supply chain management.

This study, henceforth, problematises labour in logistics, specifically asking questions about the Turkish case. Whether as a calculative rationality, a political project and/or a practice of spatial ordering, logistics is increasingly the principal logic shaping everyday life. Logistics, in this process, builds its justification on the claim that seamless circulation is crucial for the welfare of the economy, the state and the people. However, its mainstream iterations and idealized imagination both exacerbate existing inequalities and create new ones, further initiating tensions, struggles and conflicts. In this context, this thesis aims to contribute to the critical literature on logistics, studying "multiple, varied, and contested lives of logistics" (Chua et al., 2018, p. 624). Building on the literature on labour in logistics, this study examines the experiences of workers in logistics in Türkiye to elucidate the different forms the pursuit of continuous and seamless circulation, i.e. the primary concern of logistics, assumes. Focusing on the intracity highway transportation sector, the thesis further questions the similarities and differences between the experiences of workers within the sector in Türkiye to that of the workers in different country cases. I expect that interrogating these questions by tackling logistics will draw attention to the implications of the development of logistics for labour and their conditions today. Lastly, this study uses global supply chains and contemporary supply chain capitalism as a background. That is first because the empirical focus of this research is a part of global logistics networks, the backbone of global supply chains. Furthermore, the literature this study built on problematises logistics in relation to global supply chains as well as studying these concepts separately.

In this context, the first step will be drawing a picture of the logistics sector, its development in the world, and subsequently, in Türkiye, from a critical perspective as the literature seems to be limited in providing such a review as a sound basis for further

analysis of labour in logistics. Therefore, in Chapter 2, the trajectory of the logistics sector from the late 1950s to today and the corresponding trajectory of academic interest in and approaches to logistics are outlined. In other words, Chapter 2 does not only establish the theoretical framework for this study but also places it in the literature as a thesis studying labour in logistics from a critical logistics approach. Here, the definition of logistics and the meaning of adopting a critical approach to logistics should be clarified.

Marx (1973, pp. 533-534) emphasised that the "spatial condition of circulation" is part of the production process itself and that any "threat" to the circulation process is a "threat" to capitalism's stability a long time ago. However, logistics has relatively recently begun to play a central role in the global economy, spreading its logic and calculative forms of management (Loewen, 2018; Chua et al., 2018; Cowen, 2014), producing its own spatiality, transforming geographies (Benvegnu et al., 2019), marking a shift from "cost minimization *after production*" to "value added *across circulatory systems*" (Cowen, 2014, p. 24, emphasis original). This was possible not only because of technological developments, such as the development of computers or standard shipping containers, but also because of the conceptual transformation of the field of logistics (see Chapter 2). By the end of the 1960s, logistics came to be identified as "the whole process of business" (Cowen, 2014, p. 3).

Significantly, different scholars understand the concept or the phenomenon of logistics differently. Two particular definitions provide the framework for this study. While Chua et al. (2018, p. 618) remark that logistics is "a calculative rationality and a suite of spatial practices aimed at facilitating circulation – including, in its mainstream incarnations, the circulatory imperatives of capital and war," Benvegnu et al. (2019, p. 9) consider logistics as an emerging key paradigm "for interpreting the changes that distinguish contemporary capitalism." Furthermore, Benvegnu et al. (2019, p. 10) highlight that the logistics revolution is to be understood as "a capitalist transformation that produces new subjectivities and power relations in response to labour resistance and struggles in the Fordist factory." On the other hand, Chua et al. (2018, p. 621) consider it "a mutation in the overall structure of capitalism, according to which every

aspect of the production process is now subordinated to the logic of circulation." Despite their differences, the increasing significance of logistics is acknowledged by all.

Meanwhile, logistics professionals adopting the technical-managerial approaches increasingly aim to influence "the spatial disposition of bodies, information, and infrastructure" in order to encourage the construction of global supply chains and to apply "the principles of calculative efficiency beyond the factory walls" (Chua et al., 2018, p. 622). These developments brought about a reorganization of labour along the global supply chains, with significant consequences for logistics workers (see Loewen, 2018; Cowen, 2014; Bonacich & Wilson, 2008; Chua et al., 2018). To understand these consequences and the conditions of labour in logistics, which is the aim of this research, a critical engagement with logistics and labour in the logistics sector is required.

Over the last decade, scholars developed several critical approaches to logistics. On the one hand, Chua et al. (2018, pp. 625-626) propose three commitments to characterize a critical engagement with logistics: (1) "a rejection of the field's self-depiction as an apolitical science of circulation," (2) "an interest in exposing the flaws, irrationalities, and vulnerabilities of circulatory regimes," and (3) being "attentive to moments of struggle within logistical networks." Accordingly, because the work of logistical networks has uneven and profound effects, a critical approach to logistics should underline the power relations and the acts of violence underpinning it. On the other hand, Benvegnu et al. (2019) also developed a critical approach to logistics, which they term "a logistical gaze." Considering logistics first of all "a capacity for articulation and governance" but also as "a more all-encompassing bio-political apparatus that produces spaces as well as subjectivities, norms and relations, they argue that a logistical gaze focuses on "flows, mobility regimes, points of condensation and different distribution of power and roles" (Benvegnu et al., 2019, p. 12). Accordingly, logistics is to be recognized not as "a neutral technique of management or a simple device to organise mobility in the most efficient way" but as "a site of power and struggle" (Benvegnu et al., 2019, p. 12; also see Neilson, 2012). Most

importantly, Benvegnu et al. (2019, p. 12) underlined that labour force organisation and struggles are crucial to account for today's "logistic-driven capitalist mode of production and distribution," built on new rationalities, regional systems, and new global infrastructure.

Although the number of studies in the field of logistics has been increasing since the 2000s (Korkmaz & Çetinkaya, 2019; Acar & Gürol, 2013), when we look at the literature on logistics in Türkiye, be it focused on Türkiye or not, we see that critical approaches are rare. Existing studies mostly consider logistics as a neutral technique of management. See, for instance, theses like Çatıkkaş (2019), Şenel (2019) and even İpekçi (2019) which is focused on the working conditions in the sector. This can also be seen in the distribution of the institutions in which these academic studies were conducted, with natural and applied sciences, defence sciences, engineering, and management institutes having most of the studies (Korkmaz & Çetinkaya, 2019; Acar & Gürol, 2013, p. 298). Even the studies conducted in social sciences institutes adopt a technical-managerial approach (Acar & Gürol, 2013; Korkmaz & Çetinkaya, 2019). They also aim to improve this "neutral technique of management" called logistics. This aim is in line with the declared main objectives of the Ministries, as can be seen in development plans, like the Tenth Five Year Development Plan (Ministry of Development, 2013), which aimed to transform Türkiye into "a regional power in logistics." These again underpins the aforementioned need to study the conditions of labour in logistics from a critical approach. Henceforth, this study aims to scrutinise the conditions of labour in the logistics sector. Considering the studies of Ceylan (2022), focusing on motor couriers of digital food delivery platforms, and of Kıdak (2021), focusing on artisan couriers (*esnaf kurye*) in the cargo firms, this research focuses on another group of transportation workers.

The literature review of available different country case studies in Chapter 3 highlights three dimensions of labour in logistics: (1) the legal dimension, (2) the socio-spatial dimension, and (3) the technological dimension. Chapter 4, on the other hand, provides a background about the general outlook of and developments in the logistics sector in Türkiye in order to contextualise the case study. Building on these three chapters,

Chapter 5 introduces and deliberates on the empirical research on the working conditions in the logistics sector in Türkiye. This research focuses particularly on the workers in the highway transportation sector within cities because of its significance for the overall logistics sector in Türkiye. Moreover, being either on the road for most of their work or in the warehouses, studying the working conditions of highway transportation workers provides a unique opportunity to elucidate these workplaces.

The empirical analysis is based on 14 semi-structured, in-depth interviews conducted between March and April 2023 with workers, trade union representatives, and managers working in the intracity transportation sector in Ankara, Mersin and İstanbul. In addition to interviews, spending one working day in a warehouse helped me gather non-participant observations. Overall, all the interviews aimed to elucidate the conditions of work in logistics, not only to provide an account but also a starting point and basis for further research on the logistics sector in Türkiye.

CHAPTER 2

HISTORICAL DEVELOPMENT OF LOGISTICS: LITERATURE REVIEW

It is easy to overlook the pivotal role logistics has been playing in the reorganization of the global economy, warfare and everyday life, especially in the last seventy years. For a long time, logistics has been considered insignificant, merely as the management of transportation/circulation of stuff even though today it seems common sense to take logistics into consideration when making strategic decisions. Nevertheless, the history of logistics, both in theory and practice, is characterized by profound transformations (Cowen, 2014a; Neilson, 2012; Bonacich & Wilson, 2008; Levinson, 2006). It took astounding, and violently forged, changes in technologies, infrastructures, landscapes, labour and, more importantly, in the meaning of the term, for logistics to grow into a sector in its own right, a multitrillion-dollar business, and "the world's largest employer," playing a critical role in the global economy (Hildyard, 2020, p. 5; Cowen, 2014a & 2014b; Neilson, 2012; Sealey, 2010; Danyluk, 2018). The term logistics came to encompass "abroad constellation of technological, organizational, and political phenomena" (Chua et al., 2018, p. 621). Developments turning logistics into "the vascular system of global trade" (Hildyard, 2020, p. 5) and affecting all aspects of the economy, now called the logistics revolution (Danyluk, 2018; Bonacich & Wilson, 2008; Neilson, 2012), are of critical importance for logistics' decisive role in the globalisation of production (Sealey, 2010, p. 27). These developments, without a doubt, benefitted the capital and business companies in (almost) every sector. The question which was not asked until very recently (most significantly, see Bonacich & Wilson, 2008) is, however, the implications of the logistics revolution for labour. Hence, this research, building on a stream of critical logistics studies, examines the conditions of labour in logistics today. As historical background, this chapter chronicles the development of logistics in the world and the literature on it.

The etymology of the term logistics can be traced back to "the Greek *logistikos*, meaning 'skilled in calculating'" (Cowen, 2014, p. 26, emphasis original). Nevertheless, the Greeks were not the first ones, nor the only ones concerned with supplying wars. The term comes from the military, concerned with "procurement, maintenance, and transportation of military facilities, material and personnel" (Ballou, 2007, p. 333), i.e. the military art of providing armies with the means of waging war as well as living (Chua et al., 2018, p. 618; Bonacich & Wilson, 2008, p. 3). Even though logistics' growing importance was highlighted as early as the early 19th century (e. g. Jomini (1836)), logistics was shadowed by "the art of strategy" until the rise of the use of petrol, oil, and lubricants (POL), i.e. the rise of industrial warfare, when it assumed a commanding role rather than a residual one (Cowen, 2014, pp. 187-188; Cowen, 2014a). With the increasing distances and growing dependence on POL, logistics emerged as not only unavoidable but also a crucial part of modern warfare (Neilson, 2012, pp. 322-323). While the First World War was the beginning of the large-scale use of POL warfare, the Second World War was reported as "a war of logistics" by the Secretary of the U.S. Navy, Fleet Admiral Ernest King, in 1946 (Cowen, 2014b, p. 188). The post-WWII period has seen increasing business interest in logistics as a solution to the problems since the war demonstrated an extraordinary capacity for circulating vast quantities of goods and people (Cowen, 2014b, p. 189; Neilson, 2012). However, the adoption of logistics into the world of business management took more than two decades, though both military and market dynamics were of significant importance for the transformation of the field. Despite the critical and reiterated importance of logistics, it has been overlooked (Cowen, 2014a, p. 26) as well as remaining a technical story for a long time.

Cowen (2014b, p. 187; 2014a) underlines how "logistics has taken on a whole new civilian life without shedding its military identity and authority." Likewise, Neilson (2012, p. 323) argues that the rise of logistics as the logic governing the circulation across production, consumption and destruction, adoption of the calculation and standardization practices created in the military sphere, "appears as an instance of the militarization of society," not civilianization of logistics. After the WWII, logistics, as Peter Drucker remarked (quoted in Allen, 1997, p. 109), still "was like Africa – the last great unexplored continent (of business)." However, the idea and the practice of

logistics have undergone an astounding transformation. Though for a long time, the term was used to mean limited functions of transportation and warehousing, not the management of entire supply chains, from design to final delivery to consumers, as it is now (Bonacich & Wilson, 2008; Allen, 1997; Cowen, 2010; Cowen, 2014a). As will be discussed in detail later, before the said transformations, activities now regarded as part of logistics were fragmented, leading to conflicts among them, which in turn led to higher costs until both scholars and practitioners realised that eliminating these fragmentations would result in benefits (Ballou, 2007, pp. 333-334). Corresponding to changes in the world capitalism unfolding in the 1960s and the 1970s, and the challenges facing businesses, the concept and practices of (military) logistics have been borrowed by commercial enterprises in order to reorganise the economy, transforming methods of production, distribution, consumption and destruction (Danyluk, 2018; Cowen, 2014a; Chua et al., 2018; Bonacich & Wilson, 2008; Neilson, 2012). Although logistics' importance for the course of human history had been accepted while it was a military affair as it was playing a decisive role in warfare (Neilson, 2012, p. 324), gradually, logistics became the centre of the global economy, both managing and underpinning organisation of the global trade (Cowen, 2014a; Allen, 1997). It turned into "a broad and interconnected system that imposed itself as an overall logic of governmentality" (Benvegnu et al., 2019, p. 10; Cowen, 2014a; Allen, 1997; Bonacich & Wilson, 2008).

Like the practitioners, scholars and educational programs of what we now call logistics were not focused on the concept but on separate activities such as transportation, purchasing or warehousing (Ballou, 2007, p. 334). Moreover, until the late 2000s, most of the existing literature on logistics followed the business/management studies or policy-oriented transportation studies, although the faculty could reside in departments as different as the departments of economics, sociology, marketing, business management, urban planning, civil engineering, industrial engineering or history (Allen, 1997, p. 109). Critical studies, on the other hand, are both recent and scarce (Coe, 2014, p. 227). Even textbooks on the logistics revolution of the 1960s and the 1970s were published in the early 2000s (e. g. Hugos, 2003; Bolstroff & Rosenbaum, 2003; Schechter, 2002; Handfield & Nichols, 2002; Bowersox et al., 2002; Christopher, 2011). Nevertheless, the logistics industry and "its role in shaping the

conditions of contemporary political, economic and social life" (Danyluk, 2018, p. 631) has been at the centre of increasing attention (e. g. Cowen, 2014a; Bonacich & Wilson, 2008; Mezzandre & Neilson, 2013; Levinson, 2006; Chua, 2021; Sealey, 2010; Gereffi, 2018) as the late 20th and the early 21st century have been marked by logistics giants such as Amazon and Walmart. These companies not only improved logistics services by developing new technologies to increase efficiency and profits but also created novel work and labour management practices. As remarked repeatedly, the consequences of these developments for labour and capital were considerably different. Workers were losing their jobs, job security, social rights and more, as well as being reduced to being considered as mere costs and/or obstacles in the way to increased profits. While the changes in the conditions of labour in production as a result of the logistics revolution attracted attention, its effects on logistics labour and their working conditions went unnoticed until the 2000s. Even though the critical literature on logistics developed since then, with a number of studies interrogating the conditions of labour in logistics in different parts of the world, there is still a considerable gap in the literature, particularly in Türkiye. This study aims to contribute to this critical literature by scrutinizing the conditions of labour in logistics in Türkiye. Henceforth, in this chapter, starting from the 1950s onwards, the main developments in the logistics sector and the literature will be presented, in order to give background, and to place this study in the existing literature.

2. 1. Early Developments: 1950s – 1960s

Even though Smykay and LaLonde (1967) record that the first recognition of the "logistics problem" of business firms is not known, it is now accepted that logistics began to change (or emerger as a field in its own right) in the 1950s, or because of the events and conditions in the 1950s. Most importantly, Bonacich and Wilson (2008, p. 4) argue that the logistics revolution was an answer to "a chronic problem of the capitalist system," "an attempt to bridge the gap between supply and demand more effectively." As mentioned, it was the WWII that drew commercial firms' attention to logistics, while the concerns with the value of logistics intensified during the 1950s and the 1960s (Cowen, 2010, p. 613). The meaning(s) and practices of logistics have changed, especially since the beginning of the 1960s, as studies and new institutions

have emerged (Ballou, 2007; Cowen, 2010). As Peter Drucker (1962) famously identified logistics as "America's 'Last Dark Continent'" (also see Cowen, 2014a) since production and marketing were established functions of business, and they did not pay attention to logistics issues (Ballou, 2007, pp. 335-336). Henceforth, building on the studies conducted and the innovations made during the 1950s and before, business logistics emerged, grew, and changed through the experimentations – with technologies as well as forms of management and labour – of the 1960s and the 1970s (Neilson, 2012, p. 323; Danyluk, 2018, p. 632).

First of all, the two most important features of logistics before the logistics revolution were: (1) the overall process of logistics was fragmented, and (2) often secondary to production and marketing functions as it was thought that both production and marketing required skills while logistics did not (Allen, 1997, p. 107; Bowersox, 1969, p. 63; Chua et al., 2018, p. 619). In his speech in 1954, noted Professor Paul Converse highlighted how problems of physical handling and distribution of goods were considered to be matters of little importance by businesspeople (Bowersox, 1969, p. 63; Ballou, 2007, p. 334; Cowen, 2014a, p. 31). Additionally, many managers considered physical distribution a necessary evil when transportation was heavily regulated (Allen, 1997, p. 107). However, business success no longer depended upon "the capacity to efficiently produce scarce goods," instead, the activities of transportation and warehousing, which became the core of logistics, started to gain more importance (Klaus, 2009, pp. 56-57). Economic recessions in the 1950s (and later in the 1970s), suburbanisation (in the US) and changing consumer behaviours, and technological developments prompted businesses, first in the US, to search for cost savings and better ways to solve their complex problems (Cowen, 2014a, p. 33; Cowen, 2010, p. 614; Allen 1997, p. 108; Bowersox, 1969, p. 64). As remarked, the U.S. military was instrumental in developing and adopting several social and industrial technologies essential to developing business logistics, from forms of management to Just-in-Time techniques to standard shipping containers (Cowen, 2014a & 2014b). As businesses began to learn from the military and to realise that applying new methods would save considerable cost and increase efficiency, what followed, especially in the period between 1956 to 1965, was a period of experimentation leading to the

conceptual and practical development of business logistics (Cowen, 2010; Cowen, 2014a; Bowersox, 1969).

The first generation of logisticians had been significantly influenced by the fields or institutions they were coming from, as logistics was not there yet (Klaus, 2009, p. 56). Although there were earlier efforts, it was Peter Drucker's (1962) article in Fortune, "The Economy's Dark Continent," that drew much-needed wide-ranging attention to logistics and the need for systematically studying the logistics of distribution (Klaus, 2009, p. 57; Cowen, 2014a; Bowersox, 1969, p. 65). However, two important studies brought about, theoretically and practically, the first significant change for the emergence of business logistics: the shift to the total cost perspective. The others are the systems approach and the shift from cost minimization to profit maximization. The first one is Lewis, Culliton and Steel's study of air freight in 1956, encouraging the use of air transport by providing economic justification (Ballou, 2007, p. 334; Allen, 1997, pp. 112-113; Bowersox, 1969, p. 64). Before this study, businesses were looking at distribution from a transportation cost perspective. However, the authors pointed out the necessity for a total cost perspective, suggesting that "all shippers should evaluate their modal choices based on several logistics variables, not only transport rates" (Allen, 1997, p. 113; Ballou, 2007; Cowen, 2014b, p. 189), influencing the scholars and practitioners for the next decades. The second influential study underlining other logistics costs was Meyer, Peck, Stenason and Zwick's 1959 study of modal comparison, in which they argued that inventory cost should be included in the bill that previously was based on transportation rate versus distance (Allen, 1997, p. 113). Even though it seems simple, the introduction of "total cost" as a measure of all expenditures, the actual cost of distribution, immediately drew attention to problems of distribution because of the economic climate of the time (Bowersox, 1969, p. 64; Cowen, 2014b, p. 189). Through the total cost analysis, functions (or costs) that were previously isolated were brought together under distribution, logistics function, from inventory to warehousing, from communicating and data processing to production alternatives, from customer services to channels of distribution, hence, beginning to break distinctions between production and distribution (Cowen, 2014a, p. 36). Total cost analysis "widened the scope of corporate accounting practices" (Chua et al., 2018, p. 619). Nevertheless, the shift from cost minimization to profit

maximization approach, emphasising value-added, did not occur until the introduction of the systems approach into the field of distribution in the 1960s (Allen, 199, p. 114; Cowen, 2014a, p. 34).

When the systems approach eventually found its way into the distribution analysis, "the notion of total integrated effort toward the accomplishment of predetermined goals" that it brought about rapidly changed both theory and practice of distribution function since it showed the deficiencies of the previously prevailing practice (Bowersox, 1969, p. 64). Hence, "business logistics," with a radically different management approach bringing together activities that had been handled separately, such as manufacturing, transportation, purchasing or warehousing, "was born as a science of systems" (Chua et al., 2018, p. 619). The systems approach also replaced the idea that "physical distribution" (which later evolved ©nto logistics) simply meant the transportation of finished products to consumers after production with the idea that distribution was "an element of the overall 'system' of production" (Cowen, 2014b, p. 189), an approach came to be known as "integrated distribution" (Cowen, 2014a). Combined with the total cost approach, the adoption of systems thinking increased logistics place in firms dramatically, making it an "umbrella science" (Cowen, 2014b, p. 189) in a way that by 1965, Drucker could confidently remark logistics ("physical distribution") meant "the whole process of business" (Cowen, 2014a, p. 32). Another important change was that as the systems approach challenged the border between production and distribution, "managers found that *greater distance* between production and consumption could actually add value," shifting attention away from the cost of transportation to value added across the systems of production and distribution and leading them to expand the distance to increase profits (Cowen, 2014b, p. 189). All these developments radically reshaped the ways businesses calculate and organize spaces of production and distribution, eventually transforming the global economy (Cowen, 2014a).

Apart from the economic conditions of the time, especially the recession of the 1950s, available technology was an important reason for the lack of attention to and the late development of logistics (Bowersox, 1969, pp. 63-64). Before the emergence and the

use of computers, it was not possible for businesses to realise the need for a new approach to logistics or for the logistics revolution to begin (Cowen, 2014a, 2014b; Bonacich & Wilson, 2008). Neither was it possible for the speed and volume of the global cargo circulation to increase to such an extent before the development and the widespread use of standard shipping containers (Cowen, 2014a, 2014b; Levinson, 2006; Bonacich & Wilson, 2008). It was only possible to reform, organize and coordinate this emerging global economic system after the development of information and communication technologies, the satellite and telecommunications networks developed by the Pentagon (Cowen, 2014b, p. 190). Similarly to the ideas, the military had an important role and influence on the development and adoption of technologies underpinning logistics as well (Cowen, 2014a, 2014b). Among these new technologies, the standard shipping container is the single most important technical innovation underpinning logistics and subsequent globalisation, to the extent that it is named as the prerequisite to global production (Levinson, 2006; Cowen, 2014a, 2014b; Rodrigue & Notteboom, 2009). Before containerisation, transportation, particularly the ocean transportation of freight, was too expensive and lengthy, making long-distance trade not worthwhile for many goods (Bonacich & Wilson, 2008; Levinson, 2006). Making moving goods cheap (94 % cheaper (Levinson, 2006, p. 48)) and fast, revolutionising the way freight is handled, reducing the cost of inventories and raising the productivity of ports, labour and modes of transportation, the standard shipping container changed the main logic behind transportation, subsequently changing the global economy (e. g. Bonacich & Wilson, 2008; Cowen, 2014a). None of these could happen without standardization and massive participation by many parties. In particular, it was the U.S. Army's adoption of shipping containers during the Vietnam War that ensured both the standardization and collaboration of different parties and the inclusion of Asian countries, beginning with Japan, into the global economy (Levinson, 2006; Bonacich & Wilson, 2008; Cowen, 2014a). With these developments, containers could easily be shifted between ships, trains, and trucks and handled with less cost and labour, with which began the never-ending stream of goods, now from Asian countries to North America and Europe, as well as the reorganisation of global production and trade (see Levinson, 2006). Therefore, containerisation was critical for the rise of just-in-time production, globalisation of production and longer supply chains, as well as the decrease of the strength of labour and the worsening of

working conditions for transport workers, particularly in North America and Europe (Cowen, 2014a; Levinson, 2006; Bonacich & Wilson, 2008).

The 1950s and the 1960s were the years logistics we know today emerged and evolved, which was considered a prerequisite for the globalisation observed since the 1980s. During these early decades, the emerging field did not even have a name since practitioners and scholars could not agree on one (Ballou, 2007, pp. 336-337). The decades saw the emergence of a more comprehensive approach to the previously overlooked and isolated functions of business firms. With (1) the emergence of total cost perspective and the diffusion of the systems approach to transportation and communication, (2) the shift from a cost minimization approach to a profit maximisation approach, (3) the introduction of the standard shipping container, (4) the use of computers in transportation and communication, (5) the emergence of new information and communication technologies and techniques, and (6) the institutionalisation of logistics in professional business organisation and academic institutions – new journals, conferences, degree programmes –, the idea and practice of logistics have transformed, its meaning expanding to the management of entire supply chains, (Neilson, 2012; Bonacich & Wilson, 2008; Cowen, 2014a; Levinson, 2006; Klaus, 2009; Ballou, 2007; Allen, 1997). The entire cycle of production, distribution and consumption became a single integrated unit. These changes during these years had been a highly American affair. The most defining events of the decade were the first voyage of a container ship, belonging to Malcom McLean, on 26 April 1956, the first international voyage in 1966, the beginning of the use of fully containerized ships in 1968, the publication of the first textbook (Symkay et al., 1961) and foundation of several scientific journals, the first college course in Michigan State University in 1957, the foundation of the Logistics Management Institute in 1961 – highlight influenced by the Secretary of Defence, Robert S. McNamara –, foundation of active professional associations in the early 1960s, and the acceptance of an international standard for shipping containers in 1963 (Levinson, 2006; Bonacich & Wilson, 2008; Rodrigue & Notteboom, 2009; Klaus, 2009; Ballou, 2007; Bowersox, 1969; Cowen, 2014a). Malcom McLean was the man credited with bringing about the radical idea "that the shipping industry's business was moving cargo, not sailing ships" and reshaping the business of shipping, as well as the whole world economy, changing

"every part of the system – ports, ships, cranes, storage facilities, trucks, trains, and the operations of the shippers themselves" (Levinson, 2006, p. 53). With his efforts, the first stage of containerization, and the logistics revolution, took place on the North Atlantic, while the second, with the Vietnam War, took place in the Pacific (Levinson, 2006, p. 217). However, the transport sector was heavily regulated in many countries, most notably in the US, and further development of the field had to wait for the deregulation of the sector(s) in the early 1980s, though lobbying for the same began in the 1950s and was bi-partisan, efforts stepping up after the oil crisis in the 1970s (Cowen, 2014a, p. 191; Rodrigue & Notteboom, 2009, p. 3).

2. 2. Consolidation and Institutionalisation: 1970s – 1980s

The 1970s were the years of further transformation of the field of logistics, with the consequences of the developments of the previous decade becoming more apparent, as well as with new social and technological developments and the crisis of the decade. In comparison, the 1980s saw major institutional changes and reorganisation of the global economy. The development and spread of the logistics revolution are closely related to the 1970s' economic crisis and the global restructuring of production as well as attacks on the welfare state, increasing international free trade and deregulation that began in the 1970s (Allen, 1997; Cowen, 2014a; Danyluk, 2018; Bonacich & Wilson, 2008). The decade began with a strongly growing economy, especially in the US, evident in the growing international trade – strong enough to double container tonnage from 1971 to 1973 and create a container shipping shortage "despite the launch of 143 containerships in just two years" (Levinson, 2006, pp. 227-228). However, this period did not last long, with the oil crisis of 1973 leading the world economy into recession. Initially, increasing oil prices and subsequent freight charges seemed to help the development of the logistics revolution, most notably the containerized shipping industry, as they made container shipping – with shipping costs declining from 1968 to 1973 – more profitable than the previously-used breakbulk ships and created pressure to control transportation costs (Allen, 1997; Danyluk, 2018; Cowen, 2014a; Levinson, 2006). Yet, the oil crisis and the following recessions ended up devastating the logistics sector, collapsing production and, with it, the international trade, evident in that "world exports of manufactured goods fell in 1975 for the first time since the

war" (Levinson, 2006, p. 228). In addition to the rising logistics costs that continued to rise until the 1980s, interest rates had been increasing too, giving more reasons to business managers to seek out ways to control inventories which had become more important because of new marketing practices (Levinson, 2006, p. 252; Allen, 1997; Danyluk, 2018, p. 634). Even though international trade decreased, the competition in the shipping industry continued to increase, especially with the Soviet Union containerships joining the Pacific and the Atlantic (Levinson, 2006, pp. 228-229), pressuring businesses even further. On the other hand, the 1970s also saw an increase in the offshoring of production, which began in the late 1960s, primarily to Asia (Danyluk, 2018, p. 634). These factors/circumstances led businesses to pay more attention to distribution, i.e. logistics, as "one of the last remaining frontiers for significant cost savings" (LaLonde et al., 1970, p. 45; Danyluk, 2018, p. 634), and subsequent transformation of the field in the 1970s and the 1980s, most importantly deregulation, development of intermodal transportation, shift from "push system" to "pull system," spread of just-in-time production, shift in power from producers to retailers and further economic integration of global economy.

Before the 1970s, sectors that are now considered to be a part of logistics were strictly regulated in many countries despite the fact that deregulation had been advocated since the 1950s (Allen, 1997, p. 108; Cowen, 2014a, p. 42). The recession of the 1970s, rising inflation, the oil embargo, and competition gave strength to advocates of deregulation. In the US, advocacy for transportation deregulation had been bipartisan, and throughout the 1970s – named "the decade of deregulation" (Bonacich & Wilson, 2008, p. 98) – all three different administrations, that of Nixon, Ford, and Carter, pushed for transportation deregulation "as a way to control inflation" (Allen, 1997, p. 108), which gave logistics a significant push. Finally, in 1980, the transportation industry in the US was deregulated, a significant change not only for the country but also for the world economy. Deregulation was "a social technology" that transformed both the social and spatial organisation of production and trade, as well as changing the conditions for labour (Cowen, 2014a, p. 42). It was an essential precondition for the development of global production and a complete logistics revolution, changing everything and enabling greater integration and cooperation among different sectors and places. As will be briefly discussed, deregulation of the sector was intimately

related to technological and social developments of the 1970s as well as the following decades, from computers to new approaches to management, containerization to just-in-time production, location of production facilities to oil prices, the rise of retailers to communication technologies. Nevertheless, much of the discussions during the 1970s (and the 1980s) focused on technical and policy-oriented aspects of the deregulation of the logistics sector/s. One of the most critical aspects that did not receive the attention it deserved was the attack on labour regulations, particularly the deregulation of the domestic transportation sector of the US, brought about (Cowen, 2014a; Bonacich & Wilson, 2008).

A critical component of the logistics revolution of the time and the globalisation of the 1980s was the rapid rise of intermodal transportation/intermodalism – "the organisation of transportation across more than one mode" (Cowen, 2014a, p. 44) – which was discouraged before the deregulations. In fact, intermodalism was not possible before the advent and widespread adoption of the standard shipping container and (related) logistics infrastructure, although, as Rodrigue and Notteboom (2009) highlight, intermodalism was not a new concept. By the 1980s, i.e. the decade of intermodalism (Bonacich & Wilson, 2008, p. 98), however, the standard shipping container broke the walls between different modes of transportation, making them more interdependent. Intermodalism brought about the basic door-to-door delivery under a single bill of lading, dramatically simplifying trade and subsequently making international trade easier (Bonacich & Wilson, 2008). It was made possible by the development of information and communication technologies, allowing data processing and cooperation that was not possible before, as well as physical transportation/handling techniques and technologies. Moreover, this was when just-in-time production, flexible production, and offshoring were rising, increasing concerns over the transportation of goods, which not only depended upon intermodalism but also influenced its development.

In 1978, Taiichi Ohno published a book on "the Toyota Production System", or "just-in-time production," as it came to be known. Although unheard-of outside Japan before 1981, by the mid-1980s, this new idea and production techniques became the new

centre of interest and the new pillar of logistics in the U.S. and Europe. There was a proliferation of publications on just-in-time production, and companies around the world were trying to emulate Toyota's innovations (Levinson, 2006, p. 265; Bonacich & Wilson, 2008). Conceptualizing industrial production as "a flow system" (Klaus, 2009, p. 60), the just-in-time production system increased productivity, efficiency, and the degree of product variety dramatically by reducing inventory to a minimum, which disciplined the entire production process but also leaving less room for error (Klaus, 2009, p. 60; Levinson, 2006, pp. 265-267; Bonacich & Wilson, 2008). At the centre of this change was "the powerful idea of organizing industrial production logistics as demand-driven flow systems" (Klaus, 2009, p. 60), a shift from the "push system" of production and distribution – "dominated by large consumer goods manufacturers" – to the "pull system" – dominated by consumer preferences tracked by retailers and sent up to producers – (Bonacich & Wilson, 2008, pp. 4-5). Moreover, an essential part of this transformation was 20lexibilization production, both in terms of "the ability to respond shifting demand," and production schedules, contingency and labour relations (Bonacich & Wilson, 2008). Further, flexible production is critically linked to outsourcing and subsequent offshoring of industrial production, mainly to Asian countries – looking for the lowest costs (the cheapest labour) (Bonacich & Wilson, 2008). These shifts changed the power dynamics between manufacturers and retailers and led to the integration of processes along supply chains among independent and competitive businesses (Bonacich & Wilson, 2008). With controlling flow dynamics becoming a key concern of logistics and increasingly more complex global supply chains, raising new research questions, the concepts and practices of just-in-time production became the norm. There emerged influential retailers, such as Walmart, "designing their entire business strategies around moving goods from factory floor to customer with minimal time in between" (Levinson, 2006, pp. 266-267).

The rising importance of logistics, especially during the 1980s, is critically linked to a major historical shift in power from manufacturers to retailers (Sealey, 2010, p. 32). With the developments of the 1970s and the 1980s, POS (point of sale) data became the main driver of production, making producers – particularly the ones in Asian countries – dependent on retailers, increasing (giant) retailers' power and influence in international production and trade as well as the logistics sector (Bonacich & Wilson,

2008; Klaus, 2009). Retailers began creating and managing their own supply chains, establishing a direct relationship between manufacturers and consumers, and taking pioneering roles, with international transport companies, in further development, "industrialisation," of the logistics sector (Levinson, 2006; Klaus, 2009; Bonacich & Wilson, 2008). Even though there were other drivers, technology played a crucial part in enabling the rise of retailers' power (Sealey, 2010, p. 32; Cowen, 2014b). The most significant example is Walmart, who, playing a leading role in the development of logistics and new production and distribution practices, invested in information and communication technologies as well as transportation and introduced and spread several technologies (Bonacich & Wilson, 2008; Sealey, 2010). For example, Electronic Data Interchange, which was "crucial to the rise of a "pull" system of production and distribution" (Cowen, 2014b, p. 190), was introduced by Walmart. Another technology crucial both for the management of more complex sales and increased retailers' buying power against manufacturers was the barcode technology, which helped producers process crucial information about demand and sales trends (Sealey, 2010, pp. 32-33). Walmart had spread it by demanding that suppliers use it (Bonacich & Wilson, 2008, p. 9). The strategy of expanding around distribution centres, the big box store format, and driving out unnecessary intermediaries were other important strategies introduced by Walmart, which enabled them to maintain lower inventory levels, spend the lowest rates for distribution and offer the lowest prices to customers (Bonacich & Wilson, 2008). Walmart, nearly a monopsony in many industries, not only could impose its demands upon suppliers, most importantly price demands, but also could compel its competitors to follow its model (Bonacich & Wilson, 2008, pp. 7-11). Walmart's size increased its power as it did for the other giant retailers. By the end of the 1980s, factories, now moved from the U.S. and European countries to Asian countries, became part of retailer-dominated global supply networks. Global supply/commodity chains have become "some of the most powerful economic actors in the world" (Sealey, 2010, p. 33).

Retailers, particularly from the US, began to play a more influential role in the global economy since the late 1960s (Bonacich & Wilson, 2008, p. 27), which increased gradually with the development of logistics and globalisation since the 1980s. Although the economy has been distinctly international for centuries, the globalisation

of the late twentieth century has different characteristics, for which the logistics revolution has been crucial. The most important difference is argued to be that "international trade is no longer dominated by essential raw materials or finished products" but partially processed "intermediate good" to be further processed somewhere else (Levinson, 2006, pp. 267-269). Production has not only relocated from the U.S. and Europe to Asian countries but has also been broken into pieces. The managers of (emerging) supply chains search for the lowest cost, "the most economical place for each part of the process," which was not possible before due to the high transportation and other logistics costs and unreliability of transportation (Levinson, 2006, pp. 267-269). Consequently, the level of competition shifted to supply chains, instead of firms, creating complex networks of relationships as it was now ideal for retailers, suppliers, and logistics providers to share information, enhance communication and form strategic alliances, which later became the main focus of logistics specialists (Bonacich & Wilson, 2008). Even though these developments received significant attention, and critiques about different aspects, including labour, have emerged, conditions of logistics workers had mainly gone unnoticed until as late as the 2000s (Bonacich & Wilson, 2008; Chua et al., 2018). The logistics revolution and its consequences have been associated with lowered labour standards, the rise of the low-wage/-cost labour force, the break-up of stable patterns of employment, weakened labour unions and increased contingency, as well as the use of related technologies to control/discipline labour (Bonacich & Wilson, 2008; Sealey, 2010). In short, the logistics revolution has been related to essential shifts, such as the changes in the character of production, changes in retailers' power and role in the global economy, the shift to flexible production relations, the spread of just-in-time production, offshoring production, and subsequent worsening of labour standards (Bonacich & Wilson, 2008, pp. 6-21). The 1970s and the 1980s were when logistics in departments and "third party" logistics organisations went through consolidation and institutionalisation processes and faced the challenges and potentials (Klaus, 2009). There was increasing pressure on the management of firms and supply chains, and they wanted to see results, making the following decades good times for logistics (Allen, 1997, p. 109).

2. 3. Global Networks and Security: 1990s – 2000s

Although the rise of flexible production and globalisation of the late twentieth century are mainly discussed in relation to events like the fall of the Bretton Woods system and the oil crisis of the 1970s, from a logistics perspective, these changes were brought about by much slower and more nuanced changes. It was the logistical systems – physical distribution and information and communication systems – that transformed production, making it global and responsive to market changes as well as making exploitation of labour in the poorer countries more "efficient" (Neilson, 2012, pp. 323-324). It was the logistics revolution that brought the fact that "production never finished at the factory gates" into mainstream economic and management perspectives (Neilson, 2012, p. 323). Both the researchers and practitioners of logistics started to pay more attention to "the relationships in inter-organizational chains and distributed networks of suppliers, customers and other stakeholders" from the 1990s onwards, as well as to the development of solutions to raised issues, "seeking the joint optimization geographical, time, quantity and monetary aspects of planning" (Klaus, 2009, pp. 58-61). However, most of these studies were quantitative, mainly supported by mathematical methods, increasingly more advanced statistical and modelling techniques and Informatics, i.e. "the most rigorous and best documented stream of logistical research" (Klaus, 2009, p. 58). However, topics/issues of logistical research were expanding, with attention given to Intralogistics, E-Logistics, new solutions to problems, the issues of design and management of supply chains, reverse logistics, environmental problems, city logistics, and security. The concern with "seamless circulation" and integration in logistical chains and networks raised new issues as well as new ideas for solutions to be systematically addressed.

Although most intermediaries in global networks were expected to disappear, they did not. Instead, they found new value-adding strategies and new forms/types of intermediary services (Coe, 2014, p. 234). As new approaches, strategies and types of logistics service provision were developed, new regulations concerning safety, security and standards were also developed, both on international and national scales, despite the move to deregulation and privatisation (Coe, 2014, pp. 234-240). Likewise, full-fledged alliances and mergers between logistics companies emerged in the 1990s

(Bonacich & Wilson, 2008, p. 78) as global trade, especially in the Pacific, grew during this period, evident in the growth of world container ports, most significantly Chinese and Indian ports (Bonacich & Wilson, 2008, p. 46). The developing logistics sector brought about a new approach to management, a new concept called "supply chain management" (SCM), which took the field, both theory and practice, by storm as schools and managers embraced it, though there were also attempts to distinguish logistics from supply chain management, some considering logistics as a subset (Allen, 1997, p. 115; Ballou, 2007, pp. 337-338; Bair, 2014, p. 1; Klaus, 2009, p. 61). With the growing "interest in the "novel and/or intensified phase of globalisation," the interest in the concept and practices of supply chain management also grew since it has been one of the few analytical tools that could be utilised to study "the growing complexity of international production networks" (Bair, 2014, p. 1).

Even though the systems approach (to lower costs) backing supply chain management is not a new one, and SCM includes integration and coordination throughout the "chain," SCM practices were still limited (mostly to the firm and its first-tier suppliers) by the late 2000s (Ballou, 2007). Nevertheless, SCM was still considered to be more than logistics, as management of product circulation across multiple enterprises, while logistics referred only to activities within the firm (Ballou, 2007, pp. 339-341). With the addition of purchasing and production, SCM became responsible for many firms' 70-80 percent of the cost of sales, some considering that to be a danger for SCM to become broad enough to lose its focus and identity (Ballou, 2007, p. 341). With the aim of greater integration across supply chains, the aim was to "exploit economies of scale and to optimise and gain control over the entire chain" (Bottalico, 2019, p. 136) as logistics was now an industry "with value added and spin-off economic activity" (Cowen, 2014a, p. 72). Although the growth in international trade was not a surprise but was the aim, the increase in the cross-border movement of goods within companies was surprising, at least for the architects of the North American Free Trade Agreement (Cowen, 2014a, pp. 64-65). During this period, many shipping and logistics companies were involved in vertical integration movements to achieve greater control over the supply chain as well as over the costs to the extent that the sector came to take the form of an oligopoly (Bottalico, 2019, pp. 137-138; Bonacich & Wilson, 2008). Likewise, outsourcing elements and offshoring production have led to the consolidation of the

supplier base in the hands of global suppliers, accompanied by centralisation of production and distribution (Sealey, 2010, p. 34).

The late 1990s and the 2000s saw the emergence of new topics, new problems, and new approaches both in practice and theory. However, I would like to briefly mention only one of them: security. As highlighted by many researchers and practitioners of logistics, the problem of borders in international trade has resulted from two functions or desires attributed to borders: mobility and security (Cowen, 2014a). Although the systems of global supply chains created significant cost savings as well as more funds and space for productive investment, the interconnectedness and increasing complexity of these supply chains, with lean production practices and reduced inventories, also increased the vulnerability of these networks to disruption (Sealey, 2010, pp. 34-35). The belief that the competitiveness of firms, nations, and international regions depends upon their capacity to ensure the "seamless," timely and reliable circulation of goods is increasingly common now (Cowen, 2014a, p. 58). Therefore, the demand for supply chain security, aiming to protect circulation against disruptions like natural disasters, pirate attacks and labour actions, has become ubiquitous and important for political agenda from the early twenty-first century onwards, leading to the rapid growth of the logistics sector (Cowen, 2014a, p. 55; Danyluk, 2018, p. 637). The concept of supply chain security emerged with practices, experts, articles, and textbooks and was named at the beginning of the twenty-first century (Cowen, 2014a, p. 77). According to the World Bank, supply chain security includes "the programs, systems, procedures, technologies and solutions" utilised against "threats to the supply chain and the consequent threats to the economic, social and physical well-being of citizens and organized society" (quoted in Cowen, 2014a, p. 78). The crisis and responses following the events of September 11, the closure of the US border and its ©mpact on trade, were critical for the emergence of supply chain security as well as for the subsequent development of the argument that "the security of global trade is directly connected to the security of citizens and society" (Cowen, 2014a, p. 78). However, because the system was based on the speed of circulation as well as connectivity, and controlling cargo without reducing its speed was the key challenge, supply chain security became part of the problematization of territorial borders and border security (Stenmanns, 2019, p. 859; Cowen, 2014a, pp. 78-84).

Similarly, the contradiction between efforts to facilitate seamless cargo flows from and to the global South and to stop unwanted mobility towards the global North gained attention in the debates on supply chain security (Stenmanns, 2019, p. 859). The first global architecture for supply chain security began to be implemented in 2002, followed by mandatory global standardisation of securitisation across sites and jurisdictions by the International Maritime Organisation in 2004, the International Standards Organisation in 2005, and the World Customs Organisation in 2005 (Cowen, 2014a). All these were created under the direct or indirect influence of the US officials pressuring these organisations as well as other countries to develop new policies and ensure that noncompliance results in total isolation from global trade (Stenmanns, 2019, p. 860; Cowen, 2014a). In other words, "supply chain security recasts not only the object of security but its logics and spatial forms as well" (Cowen, 2014a, p. 55) because working of global logistics systems requires speed across global space to create and benefit from flexible but reliable labour supply to intermittent but intensive labour demands of global supply chains (Sealey, 2010, p. 29).

By the 2000s, the terminology changed, and different concepts were used interchangeably, such as commodity chain, supply chain or global production networks. However, one alternative was becoming more common and hegemonic: global value chains (GVCs). As these GVCs grew, logistics expanded as well; logistical hubs established in (nearly) every country were becoming "the backbone of the global logistics supply chain and global trade" (Hildyard, 2020, p. 2; Cowen, 2014a, p. 59). As highlighted by many scholars, like Bonacich and Wilson (2008) or Cowen (2014a), the logistics revolution has made businesses more efficient by reducing inventories, transportation costs and prices of goods and making goods flow faster. However, the way this efficiency was achieved and at what cost seem to go unnoticed for a long time, though this makes logistics "a terrain of struggle" (Cowen, 2014a, p. 98). The invention of global supply chains in the first place, Cowen argues (2014a, p. 124), was to "incorporate, in spatially precise and strategic ways, uneven modalities of labor into the production process," putting pressure on labour in the global north while increasing the hyper-exploitation of workers in the global south. In an effort to ensure aimed productivity and efficiency, the period saw the rise of aggressive and punitive approaches to labour management, with the introduction of

new managerial techniques as well as the introduction of new technologies (Cowen, 2014a, pp. 98-112; Bonacich & Wilson, 2008). Labour actions have been increasingly considered, from the security perspective, as a threat to "the security of (global) trade" and to "the security of supply" (Cowen, 2014a, pp. 117-118). From a supply chain security perspective, there is no difference between threats interrupting flows of goods and making the system vulnerable, be it natural disasters or labour action (Cowen, 2014a, p. 173). In other words, logistics workers, left in dangerous, precarious, highly racialized, and predominantly low-wage jobs by the logistics revolution, were increasingly securitized and criminalized (Cowen, 2014a; Bonacich & Wilson, 2008; Levinson, 2006). However, logistics labour issues were not given due importance and attention for a long time.

On the other hand, new corporate alliances in different sectors were emerging as companies were restructured to enhance their power over supply chains or capitalise on the opportunities of digitalized logistics, blurring the lines between sectors which were distinct and creating alliances able to shape production, distribution, and consumption (Hildyard, 2020, p. 19). These new alliances were argued to be part of a broader transformation towards "platform capitalism," while the subsequent tendency was towards increasing monopolisation of control, resulting in a winner-takes-all market (Hildyard, 2020, p. 19). During this period, logistics professionals and researchers paid more attention to various other aspects of logistics, such as sustainability, city logistics, reverse logistics, environmental aspects of logistics, e-logistics, measurement and modelling issues, and humanitarian logistics. Likewise, as will be seen, critical approaches to logistics were to emerge in the 2000s.

2. 4. Critical Logistics

As briefly introduced thus far, until recently, logistics issues were studied primarily within the disciplines of engineering, and business management, taking logistics as a technical issue and focusing on efficiency, competitiveness, and profitability (Benvegnu et al., 2019, p. 11; Chua et al., 2018, p. 619; Coe, 2014, p. 234). Although this literature helped us to understand a great deal, scholars and professionals were "unproblematically taking the expansion and reorganization of material flows as

desirable goals" (Chua et al., 2018, p. 619; Benvegnu et al., 2019, p. 11). Logistics as the operating system coordinating flows ©n the interest of capital remained largely unexplored, making the logistics revolution "arguably the most underinvestigated revolution in the twentieth century" (Cowen, 2014a, p. 23; Hildyard, 2020, p. 5). However, since the 2000s, researchers from different disciplines, and with new and critical approaches, which were different from existing technical and managerial approaches, began to pay increased attention to the growing logistics industry and its role in shaping the contemporary economic, social and political life in order to understand this industry better (Benvegnu et al., 2019; Bonacich & Wilson, 2008; Cowen, 2010, 2014a; Danyluk, 2018; Levinson, 2006; Stenmanns, 2019; Toscano, 2011; Tsing, 2009). The emerging critical scholarship complicated the previous story, highlighting the political and social implications of the restructuring and growth of logistics and studying logistical orders on different scales, from fulfilment centres to the politics of global geo-economy (Chua et al., 2018, p. 619; Benvegnu et al., 2011, p. 11; Stenmanns, 2019, p. 852). "A critical engagement with logistics attends to the struggles, social conflicts, and tensions…" and pays attention to the role of logistics in the global production systems, the reorganisation of state and capital, warfare and its restructuring, as well as vulnerabilities of "supply chain capitalism" to disruption and resistance (Chua et al., 2018, p. 624). That is because logistics is not "a purely technical or apolitical science" (Danyluk, 2018, p. 633) or "a mundane and technical task of moving goods in the right quantity and quality so that they are in the right place at the right time" but "a key political technology of contemporary capitalism that recalibrates the economy and shapes the world through connectivity" (Stenmanns, 2019, pp. 851-852; Cowen, 2014a). Henceforth, the growing interest in logistics inspired scholars in different research areas, from cargo mobilities to urban planning, from critical geography, transportation geography to global value chains, from national security to labour studies, from national borders and citizenship to environmental issues (Levinson, 2006; Cowen, 2010, 2014a, 2014b; Bonacich & Wilson, 2008; Danyluk, 2018).

Critical scholars highlight how crucial logistics is for contemporary capitalism, considering logistics to be an "often unexamined background to the ongoing 'neoliberalisation of space'" (Cowen, 2010, p. 602), which spatially 'fixes' its chronic

overaccumulation problem (Danyluk, 2018, p. 631), and significantly determines flows of information, goods, and labouring bodies as well as spaces these take place in (Stenmanns, 2019, p. 852). In one of the earliest articles studying the logistics revolution outside the discipline of business management, Allen (1997, p. 110) highlights a basic principle of the circulation of capital, writing that "finished goods and raw materials held in inventory, however, are just dollar bills in disguise being warehoused" (also Cowen, 2014a, p. 105), and opening a critical discussion with the sector's "simplified and sanitized account of the circulation of stuff" (Cowen, 2014a, p. 2; also see Stenmanns, 2019). In her book *Deadly Life of Logistics*, underlining the significance of logistics, Cowen (2014a, p. 5) insists that "any serious engagement with contemporary political life must think through the violent economies of space." She also remarks how crucial the rise of business logistics was to the neoliberalisation of spaces as well as highlighting its impact on the geographies of national security and the gap within the literature (2010, p. 602). On the other hand, Coe (2014) shortly highlights five areas within the literature that significantly progressed. First, the importance and effects of outsourcing for the independent logistics sector are clearly understood, with outsourcing trends driving the growth of transnational logistics providers (Coe, 2014, pp. 228-229). Secondly, there also is an understanding of the radical changes in the *nature* of logistics systems in recent decades, briefly indicated as the shift from inventory-based "push" logistics to replenishment-based "pull" logistics, the shift to "information-based supply chain flows" (Skjøtt-Larsen et al., 2007), and consequent changes in the nature of relationship between leading logistics providers and supply chain participants (Coe, 2014, pp. 229-231). Nevertheless, Coe (2014, p. 231) also remarks that "this narrative grossly simplifies highly variegated and uneven patterns of logistics development across different firms, sectors and geographies." While the third important concern is "how the nature of logistical requirements varies along GPNs in important ways," the fourth current concerns the categorisation and characterisation of the wide range of logistics providers (Coe, 2014, pp. 231-232). Lastly, Coe (2014, p. 233) underlines the focus on how technological developments transformed logistics provision, that is, not only transportation and communication technologies but also the shift to more customized and flexible production and the need for reliable, flexible, and fast logistics services. The discussion ends by pointing out the need for further studies on different aspects of

logistics, particularly in a political economic context, that were not thoroughly examined (Coe, 2014, p. 240). One of the most glaring gaps in the existing literature is the labour market issues in the logistics sector, which I would like to focus on here, briefly discussing some of the existing studies.

As highlighted, the logistics revolution brought about a transformation in the structure of capitalism by advancing the mobility of the production process as well as the capital, an essential condition of economic globalisation of the late twentieth century. However, there is still a lack of critical studies focusing on the industry as a complex of strategic actors, not as simple providers of a production function (Coe, 2014, p. 235; Danyluk, 2018, pp. 631-632). There emerged critical studies producing detailed empirical knowledge on disciplinary techniques, geographies, urban landscapes, and labour regimes as well as challenging the idea that logistics is a purely technical and apolitical science, highlighting the logistics roots in war and the repeated acts of violence (Danyluk, 2018; Bonacich & Wilson, 2008; Cowen, 2014a). Danyluk (2018, pp. 635-636) remarks how the capital developed a range of strategies to decrease the costs of circulation since the mid-twentieth century, at the centre of which has been "a wide-ranging assault on labour… who have been made to bear many of the real costs…" Hence, one of the most important aspects these critical approaches brought about was the discussions on the implication of the logistics revolution for workers as well as distinctive geographical approaches to logistics (Danyluk, 2018; Toscano, 2011; Bonacich & Wilson, 2008; Cowen, 2014a). On the other hand, speeding and cheapening the movement of goods through the development of technologies, like the standard shipping container and computers, or approaches, like the systems theory, were not the only objectives of or reasons behind the logistics revolution (Danyluk, 2018, pp. 635-643). Constantly growing volume of production, businesses' increasing interest in keeping the circulation uninterrupted and reliable, and lastly, increasing access to new markets, labour and resources were other important features and objectives of logistics (revolution). All these developments led to a shift of attention from the sites of production to sites realization of value (Danyluk, 2018, p. 642), break-down of the distinction between production and distribution (Neilson, 2012, p. 332; Hildyard, 2020, p. 7), the growth of the field of supply chain security (Cowen, 2014a; Danyluk, 2018), promotion of the commodity form, dispossession of communal

resources and dissolution of non-capitalist lifestyles, and to increasingly flexible, harsh, low-wage, and precarious forms of employment. In short, the search for low-waged, unorganized, cheap labour, and increasing flexibility, complexity, and geographical scope of industrial production created a "logistics problem," as Coe et al. (2008, p. 276) call it (Neilson, 2012, p. 332; Danyluk, 2018, pp. 641-642).

The multi-trillion dollar logistics industry "said to be the world's largest employer" (Hildyard, 2020, p. 5) has experienced massive growth since the mid-twentieth century, relying on a multi-modal global workforce (Sealey, 2010, pp. 25-26). However, not only did the workers not benefit from this growth, but the literature did not pay due attention to labour issues either (Sealey, 2010, pp. 25-26; Coe, 2014, p. 241). As both Bonacich and Wilson (2008) and Cowen (2014a) point out, the rise of logistics significantly depended on "extracting more value from transport workers" and the reorganization of regulations in the sector to create competition as well as the regulation of the rights of workers and maintenance of suppression of labour. Nevertheless, the primary benefit of the globalisation strategy of the late twentieth century has been that it allowed labour arbitrage on a global scale (Danyluk, 2018, p. 642). The production process has been first moved to lower-cost countries and then spread around the world, blurring the distinction between "making and moving," and the logistics workers have paid a heavy price for this (Sealey, 2010, p. 36; Hildyard, 2020, p. 7). The logistics revolution, as Bensman (2008, p. 2) underlines, not only provided access to global networks of cheap labour but also enabled employers to hire workers "in ways that reduce their responsibilities, their benefit obligations, their tax liabilities, their insurance costs, and their fixed costs for equipment and so on." In their book, *Getting the Goods* –, one of the most comprehensive studies of labour in the logistics sector available –, Bonacich and Wilson (2008) identify four dimensions of the impact of the logistics revolution on labour: (a) increased contingency, (b) weakened unions, (c) racialisation, and (d) lowered labour standards. Accordingly, contingency and racialization increased as a result of capital's search for cheap labour and the rising production practices. Attacks on organized labour accompanied the logistics revolution and the shifts in the production process. Deteriorating working conditions and decreased wages, as a defining characteristic of labour in logistics, are associated with the consequences of the logistics revolution.

Furthermore, workers in the logistics and related sectors had been hired through private employment agencies or as self-employed workers (Hildyard, 2020, p. 12). These hiring practices did not provide workers any protection but exacerbated the exploitation of race and gender differences and undermined the relationships between workers (Hildyard, 2020, p. 12). On the other hand, Loewen's study (2018) shows that even when workers have more secure contracts and regular work, they may not have benefits or higher wages. According to the study, with the emergence of e-commerce, some logistics companies began to offer more stable contracts to workers, instead of hiring through third-party agencies, as the volume of goods to be processed demands highly trained workers (Loewen, 2018). However, the reduced costs and other benefits do not turn into higher wages or better working conditions since the workers are labelled as "disposable" and "unskilled" (Loewen, 2018; also in Hildyard, 2020).

As creating a cheap labour force is critical for extracting value from the logistics sector, there have been various strategies to achieve that, which the emerging critical literature is trying to account for. One of the most important strategies is the creation of special economic zones and the construction of infrastructural corridors. Neilson (2012, pp. 332-333) defines them as "the spatial and temporal technologies that respond to" capital's search for cheap labour, whereas Danyluk (2018, p. 640) considers them as a "key infrastructural technology". Sometimes these special economic zones are located in corridor-connected to areas where pools of cheap labour and high unemployment already exist. These infrastructure corridors are designed not only to enable the physical distribution of material and people but also to enable capital "simply to bypass workers who demand higher wages and better conditions" (Hildyard, 2020, pp. 10-11). Furthermore, they adopt different and novel techniques of governance in order to establish proper conditions for capital accumulation (Neilson, 2012; Cowen, 2014a).

Technology has become another aspect of intensifying control of capital over labour, and another issue scrutinized by the critical literature. Advancing technologies, such as biometric monitoring devices, radio frequency identification tags or GPS tracking, are part of the routine and increasingly all-encompassing (Cowen, 2014b, p. 191; Hildyard, 2020, p. 12). The relationship between logistics labour and technology has

been shaped by the issues of "discipline, surveillance and security" (Cowen, 2014b, p. 191). Technological and infrastructural developments do not mean safer or better working conditions for workers. As Cowen (2014a, p. 96) highlights that logistics sector, with all different parts, is consistently ranked among the most dangerous industries in terms of health and safety. Importantly, the more logistics is highly automated, the more human labour and even bodies are automated, even though many facilities now operate with minimum human labour (Cowen, 2014b, p. 191). For instance, particular movements labour-intensive tasks like picking and packing involve are increasingly directed by computer programs minute by minute (Loewen, 2018; Cowen, 2014b). Performance measurements are also among the techniques adopted to control workers. Neilson (2012, pp. 329-330) remarks that real-time performance measurement techniques that logistics workers are subjected to contribute to the increasingly precarious nature of work in the industry. These technologies and techniques also have individualizing effects on workers (Neilson, 2012, p. 331).

As mentioned, the trans-nationalisation of supply chains and the decline of the power of organized labour have given more power to capital as well as the just-in-time employment contracts and practices that workers have been subjected to (Hildyard, 2020; Bonacich & Wilson, 2008; Cowen, 2014a; Levinson, 2006). Similarly, in the marine transportation sector, the increasing use of "flags of convenience" – "the practice of registering vessels in countries with weak environmental, labour, and safety regulations" – has given the capital more power over workers while decreasing the working conditions and incomes of the crew (Bonacich & Wilson, 2008, pp. 162-164; Danyluk, 2018, p. 636). However, nothing seems to be as influential as the deregulation of the transportation industry, first in the U.S. and then in other countries, which consequently was one of the first issues paid attention to, from a non-technical perspective, though studies are still limited. Although its effects in different sectors are different, there are also common consequences (LaLonde et al., 1970; Levinson, 2006; Bonacich & Wilson, 2008; Cowen, 2014a). Deterioration of the working conditions, the decline of organized labour, further racialized, the emergence of intermediary companies, and the shift in the focus from production to logistics can be counted as common results (Cowen, 2014b, p. 191; Bonacich & Wilson, 2008).

Logistics labour has been crucial for the reorganization of global trade since the 1960s, and the circulation of workers made the circulation of global cargo possible (Cowen, 2014a, p. 125). Moreover, what Sealey (2010, pp. 33-34) calls the "historical shift in power within the structures of world capitalism," shift of power from manufacturing to the retail sector also relied on the development of logistics (Cowen, 2014b, p. 192). The decrease in manufacturing jobs in the developed countries was not solely caused by cheap labour supply in the underdeveloped and developing countries but also the development in logistics. The rise of the retail sector also contributed significantly to the worsening of working standards, with Walmart being an important and thoroughly studied company example (Sealey, 2010, pp. 33-34; Cowen, 2014b, p. 192). Neoliberal forms of apolitical calculations and assumptions have also been influential (Cowen, 2010; Coe, 2014). Presumptively non-political cost-benefit and market efficiency analysis have been embedded into logistics principles and techniques (Cowen, 2010, 2014a) to the extent that Bonacich and Wilson (2008) argue that driving forces of the logistics revolution were neoliberalism and consequent regulations underpinning the significant increase of retailer power (also Coe, 2014, p. 240). Technological developments, automation, regulations, degradation of work and job losses in certain regions translated into increasing insecurity, erosion of labour rights, unemployment, and intensifying exploitation. As Hildyard (2020, p. 18) reminds us, "exploitation of labour is not an unintended consequence of logistics… it is built into every aspect of the logistics-as-production-line project – and it always has been". Hence, it is not a problem that can be solved once it is shown to employers in the sector. On the contrary, Hildyard (2020, p. 18) continuous that logistics enable extreme exploitation from the beginning, making it valuable for capital. Similarly, Neilson (2012, p. 336) and Tsing (2005) also highlight that inequality and instability are not only "empirical features" but also essential to the functioning of the industry as well as supply chains. Logistics workers found themselves caught between neoliberal deregulation, the fragmentation and globalisation of production, and new logistics technologies and were subjected to increasing precarious working conditions and terms of employment, racialisation, disciplining, surveillance, and more (Coe, 2014, p. 242; Hildyard, 2020, p. 10). These developments left logistics labour precarious, dangerous, predominantly low wage, and highly racialized, and after the 2000s, increasingly securitised networks, or supply chains (Cowen, 2014a). However, scholars are also quick to remark that this may be

changing, particularly due to the specific conditions of work within the logistics sector since workers may sabotage the system as much as they are essential and in strategic positions for the global production system (Cowen, 2014a, pp. 113-126; Neilson, 2012, pp. 329-336). Neilson (2012, pp. 329-330) states that labourers' collective understanding of these networks can be turned into influential political knowledge, which provides new opportunities.

2. 5. Conclusion

Selling a unique commodity, "a change in location" (Danyluk, 2018, p. 636), logistics is distinguished as "the art and science of managing the mobility of people and things" by Neilson (2012, p. 322) while Cowen (2014a, p. 204) remarks that logistics is no longer an art by "a highly standardized and mechanized management science organization by electronic and digital surveillance and heavy securitisation." As briefly discussed, the field has undergone dramatic changes since the 1960s, referred to as "the logistics revolution" (Bonacich & Wilson, 2008; Cowen, 2014a; Levinson, 2006; Neilson, 2012; Danyluk, 2018). Today, logistics has become so vital for the world economy that it has been defined as "the force that enables the modern economy" (Cowen, 2014a, p. 207). Notably, Hildyard (2020, p. 5) claims that logistical thinking is now second nature to business managers, which effectively dictates the organisation of production, locations of new infrastructure, calculation of costs and benefits, and how time and space are conceived. Cowen (2014a, p. 183) further points out that the logistics revolution, in turn, underpins the profound transformation of the global economy since the 1960s, not only in terms of the location of production, distribution, and consumption but also the ways they are organized through networks. Logistics and logistical thinking have recently spread over various areas, such as humanitarian aid, emergency response, and even organized labour action and protest movements (Cowen, 2014a, p. 231).

When it comes to the forces fostering the development of logistics and impelling the capital to invest, Marxist geographers' accounts are highlighted, underlining the spatial nature of the phenomenon. Bonacich and Wilson (2008, p. 4), for instance, indicate that they follow the lead of British critical geographers and view the logistics

revolution as a response to a chronic problem of the capitalist economy, that is, "the disjuncture between production and distribution, or supply and demand." Accordingly, it is an attempt to "bridge the gap between supply and demand" by having "exactly the inventory one needs, in terms of both quality and mix of goods" (Bonacich & Wilson, 2008, p. 4). On the other hand, Danyluk (2018, p. 631) argues that both the importance and the rise of logistics "hinge on its power to produce space in particular ways". The logistics revolution, Danyluk (2018, p. 631) remarks, provided a "logistical fix," "a multifaceted spatial fix," to capitalism's overaccumulation problem since the 1970s, which promoted the accumulation of capital in the twenty-first century.

Danyluk (2018, p. 636) articulates that the extraction of increasing amounts of surplus value from the logistics workers is an important structural force underpinning the development of logistics systems since the late 1960s (more details Bonacich & Wilson, 2008; Levinson, 2006). Hildyard (2020, pp. 2-6) furthers that capital seeks to speed up the circulation and production of commodities through the construction of logistical infrastructures and that the most significant contribution of logistics, "the means through which capital now squeezes labour at every stage in the production process," has brought to supply chains is that "one fix" through which capital is responding to the falling profits. Bonacich and Wilson (2008, p. 249), on the other hand, observe that "the success of global capitalism… depends on the constant and unfettered flow of commodities in a timely manner," which, they suggest, give workers in the sector a potential power to use.

Cowen (2014a, p. 116), likewise, observes the assumption of fast flows upon which global production and trade are built. According to Cowen (2014a, p. 116), disruption to supply chains exposes both "the vulnerability of just-in-time production systems" and "the centrality of logistics infrastructure." Moreover, she also recognises the role of intensified organized violence and capital circulation in producing logistical spaces and the difficult conditions of workers (Cowen, 2014a, p. 11; 2014b, p. 191). Following Bonacich and Wilson (2008), Cowen (2014b, p. 191) highlights that logistics workers cannot be offshored though they are crucial parts of the global production and distribution system. In addition to their importance and the highly

contested process of the production of labour forces, scholars also note the importance of disruption, sabotage, where logistics interfaces logistics labour, and the potential change workers may bring about (Cowen, 2014a; Neilson, 2012; Bonacich & Wilson, 2008). However, they also underline that any threat to global trade and supply chains is considered a threat to security, be it terrorists, natural disasters, labour action or even national border controls (Cowen, 2010, p. 602). Henceforth further studies of logistics labour, particularly focused on the interface between logistics spaces, labour, and dynamics of the sector, are needed. Building on this background and adopting a critical approach, this thesis will scrutinize the conditions of labour in logistics and question whether the Turkish case provides similar conditions for logistics workers to those studies observed in other countries.

CHAPTER 3

CONCEPTUAL FRAMEWORK: LABOUR IN LOGISTICS SECTOR

As shown in the previous chapter, logistics has emerged as a global industry since the mid-twentieth century. While early writings on this phenomenon were more technical and economic, in the twenty-first century, critical studies have emerged within a wide range of disciplines, "rendering visible the social and political implication" (Chua et al., 2018; Benvegnu et al., 2019). As the emerging critical scholarship pointed out, advances in the logistics sector also intensified exploitation, particularly that of transportation and warehouse/distribution centre workers (Chua et al., 2018, pp. 619-620), enabling capital to exploit differences among labourers around the globe (Tsing, 2009), and creating new patterns of socio-spatial inequality, new regimes of fragmentation and containment (Chua et al., 2018). Although the logistics workers ended up, both literally and figuratively, doing "the heavy lifting for global trade" (as quoted in Sealey, 2010, p. 28), they did not necessarily benefit from these developments. Furthermore, not only the literature on logistics was limited, as well as being technical, but also any attention to the workers was almost non-existent within the literature, although the number of studies accounting for labour has been increasing in the last decade (Gutelius, 2015; Coe, 2014).

There is little doubt that the logistics revolution, discussed in the previous chapter, is for the benefit of capital, but was it the same for workers? What are the implications of these developments for labour? At first, it seems contradictory, as scholars highlight different consequences and possibilities. While many critical studies show the deteriorating conditions for workers, there are also those arguing that, as the logistics revolution creates new vulnerabilities, the new position of logistics workers within the global economy creates new opportunities as well (Bonacich & Wilson, 2008; Sealey, 2010; Coe, 2014; Chua et al., 2018; Kıdak, 2021). As Hildyard (2020, p. 18) remarks,

the exploitation of labour is not an unintended consequence of logistics." On the contrary, it is "built into every aspect of the logistics-as-production-line project" since the minimisation of transportation and distribution cost was required for competition among retailers (Hildyard, 2020, p. 18; Jaffee & Bensman, 2016, p. 58). He continues that if unopposed, developments in logistics (and automation) will increase exploitation of workers, with "downward pressures on wages, increased micro-disciplining of work, increasing insecurity of employment, increasing marginalisation in decision-making and degradation of many skills" (Hildyard, 2020, p. 18). Although the author highlights the different particularities of exploitation for different groups of workers, he identifies common features as (a) union busting, (b) "996 Working" and surveillance, (c) precarious employment and disposability, (d) automation and the degradation of labour, and (e) digitalisation and the erasure of negotiating space (Hildyard, 2020). On the other hand, Bonacich and Wilson (2008, pp. 159-160), in one of the most significant studies of logistics, categorize the general impacts of the logistics revolution on labour as (a) increased contingency, (b) weakened unions, (c) racialisation, and (d) lowered labour standards. Henceforth, in this chapter, the aim is to discuss the three main dimensions, namely legal, socio-spatial, and technological dimensions, of labour in logistics that researchers focused on to understand conditions of labour in the logistics sector. As it is neither possible nor plausible to examine all different groups and dimensions, the focus will be on the drivers and warehouse workers with regard to legal, socio-spatial, and technological dimensions.

3. 1. Legal Dimension

The rising demand for instantaneity and moving goods (and people) as speedily as possible, together with other developments mentioned, brought about extremely flexible employment practices as the global logistics companies sought to create flexible but reliable labour supply systems for "the intermittent but intensive labour demands" (Sealey, 2010, pp. 28-29). As the key determinant of working conditions within the industry, contractual relationships with key clients, especially big retailers, are also critical for the flexibilization of labour and reductions in logistics costs (Coe, 2014; Sealey, 2010). These have been achieved, first, by *outsourcing logistics*, and second, by *changing workers' employment contracts* (Sealey, 2010, p. 36).

Increasingly flexible, short-term and contingent work and increasingly insecure employment contracts and production relations resulted in worsening conditions of labour (Hildyard, 2020, p. 11; Danyluk, 2018, p. 641). Worldwide, logistics workers are subjected to what Hildyard (2020, p. 12) calls "'just-in-time' labour contracts," "where 24-7 availability is expected of them even though they are paid only for the short periods," as well as to contingent employment relations. For firms, the more contingent the labour force, the better it is since it makes shifting production to another location easier (Hildyard, 2020, p. 12). After all, the value and importance of logistics for capital is foremost that it enables companies to seek out the most favourable tax, regulatory or wage conditions anywhere in the world (Hildyard, 2020, pp. 12-18).

Accounting for the implications of the logistics revolution on labour, Bonacich and Wilson (2008, p. 15; pp. 159-160) first highlight increased contingency, remarking that one of the consequences of flexible production and capital's demand of cheaper and more exploitable labour is rising temporary workers. Increasing numbers of temporary workers through outsourcing, independent contractors, and employment agencies, in turn, creates "layers of intermediaries between the parent company and its 'employees'" who are not legally employees of these companies although they are directly affected as if they were (Bonacich & Wilson, 2008, p. 15). The appeal of these contingent relations for the parent companies is that they can deny responsibility for labour and decrease their costs (Bonacich & Wilson, 2008, p. 20; Coe, 2014, p. 242). In other words, increased flexibility (contingency) seems to work well only for the parent companies, particularly for big retailers. These working conditions are not only physically demanding and psychologically stressful, but they also undermine labour organisation and solidarity – as labourers are constantly pitted against each other (Hildyard, 2020, p. 12). Jaffee and Bensman (2016, p. 58) describe these conditions as forms of "precarious work" "characterized by low wages, unstable work arrangements, temporary employment relationships, underemployment, economic insecurity, an absence of employer-provided benefits, and a lack of legal and regulatory protections." As mentioned, these conditions are facilitated by a shift towards an organizational form where the parent or leading companies are in control while having no legal responsibility as employers (Jaffee & Bensman, 2016, p. 59). In logistics, labour is

commonly supplied by employment agencies or self-employed contractors (Hildyard, 2020; Gutelius, 2015; Bonacich & Wilson, 2008).

Researchers point out that the growth of the temporary employment industry and agencies have been stimulated by the logistics sector since the 1970s, providing much-demanded flexibility, non-unionization, decreasing costs, and changing their recruitment and market strategies as laws change (Bonacich & Wilson, 2008, pp. 227-228; Jaffee & Bensman, 2016, pp. 63-64; Gutelius, 2015, pp. 55-56). The temporary employment/staffing industry has been one of the fastest-growing sectors since the 1970s (Gutelius, 2015, pp. 55-56). Bonacich and Wilson (2008, p. 230) state that at the time of their research, in the US, 75 percent of the warehouse/distribution centres used temporary agency workers. There are several reasons suggested for using temporary workers/agencies, with qualitative and quantitative flexibility demands of employers as the main reason. Researchers also highlighted the desire to deal with fluctuations, avoid hiring human resources support, lower wages, benefits, and other labour costs, have screening mechanisms for potential workers, avoid unionisation, and change employment relationships in a way to shift risk (Bonacich & Wilson, 2008, pp. 230-231; Gutelius, 2015, p. 56). On the other hand, Gutelius (2015, p. 56) points out some scholars who argue that workers' desire for the flexibility of being temporary workers is one of the reasons for using these agencies. Consequently, Bonacich and Wilson (2008, pp. 234-235) identify two types of temporary worker agencies: one specializes in temporary placement, i.e. sending workers for a limited period, while the other specializes in employee leasing, i.e. being the employer of record. This practice, while obscuring parent companies' legal responsibility for working conditions, though they are still the ones in charge, helps them keep wages low and access to benefits at a minimum (Struna et al., 2012, pp. 2-3; Bonacich & Wilson, 2008, p. 236). The resulting labour market conditions can be summarized as Gonos and Martino (2011, p. 500) describe: "erratic work schedules, poverty wages, hazardous conditions, demeaning treatment, and no voice or job control for workers" (also see Jaffee & Bensman, 2016, p. 65).

Gutelius's (2015, p. 56) study of temp agencies is an insightful one, focusing on the creation of competitive hierarchies, both between and within temp agencies, in an effort to examine the mechanisms of inclusion and exclusion. The survey, the first of its kind in the industry, reveals "patterns of insecurity, long-term temping, low pay, and churning," and the relationships within the industry (Gutelius, 2015, p. 56). As client firms prefer to minimize risks, several different temp agencies operate simultaneously within a single warehouse (Gutelius, 2015, p. 57). Furthermore, as these firms "encourage temp agencies to compete on price" and penalise them when they fail, the inter-agency competition to maintain and expand contracts is fierce, knowing that these contracts can be dissolved with minimal notice (Gutelius, 2015, p. 57). Gutelius (2015, p. 57) indicates that "the extent of temp agency turnover reveals aggressive competition" and unstable warehouse workplace dynamics. Moreover, Gutelius (2015, pp. 57-59) also identifies intra-agency hierarchies sorting workers into echelons shaped by social differences, including race, ethnicity, gender, and disability, and used as a disciplining mechanism. Workers' (informal) status is also used as a disciplining mechanism. For instance, when a group of permatemps demand workplace rights, they would be moved down to seasonals (Gutelius, 2015, p. 59). Overall, Gutelius (2015, p. 60) demonstrates that the mutual constitution of exclusion and inclusion is noticeable through the prevailing contingent work practices.

When we look at the trucking industry(s), we find "owner-operators" or "independent contractors," thus outside any union structure, not officially employed but paid by the trip, and competing for contracts instead of work being outsourced to temp agencies (Bonacich & Wilson, 2008, p. 212; Jaffee & Bensman, 2016, pp. 59-60). Although they legally appear self-employed, scholars point out that they are indeed contingent workers (Bonacich & Wilson, 2008, p. 213). Monaco and Grobar (2004) describe how the legal arrangements are misleading in practice and that these "owner-operators" are, in fact, "employees." These practices create poor working conditions for workers themselves while cutting down costs and responsibilities of parent companies (Bonacich & Wilson, 2008, p. 213; Jaffee & Bensman, 2016, p. 60). In one of the best studies on the trucking industry in the U.S., Belzer (2000) tells how the Motor Carrier Act of 1980 dramatically changed the trucking industry in the U.S. from a protected and regulated industry to an unprotected and deregulated one (also see Jaffee &

Bensman, 2016). Ernesto Nevarez, describing these developments, also highlights the change in the demographic configuration of drivers, from white union drivers to non-unionized second generation in the 1980s to immigrant Latino drivers (quoted in Bonacich & Wilson, 2008, p. 212). Bonacich and Wilson (2008, p. 223) conclude that the port truckers suffered the most from the logistics revolution, being made into contingent, deunionized, racialized workers with low wages and working conditions (Jaffee & Bensman, 2016, p. 60). Therefore, Jaffee & Bensman (2016, p. 61) deduce that "truckers are 'misclassified' as independent contractors" while being strictly controlled by the firms they work for.

Here, I believe it should be remarked that even when they have more secure contracts and status as directly employed permanent workers, workers in the logistics sector may remain as low paid and "disposable" (Loewen, 2018; Hildyard, 2020). The emergence of e-commerce markets meant new requirements for warehouse work, increasing demand for cheap labour as well as the expectations of their work. In order to address these new demands, warehouse managers adopted different strategies, one of which was to "reduce their reliance on labour market intermediaries and directly hire warehouse workers" (Loewen, 2018, p. 702). Although this brought workers closer to more secure and "standard" forms of employment, their disposability is reproduced through different practices in the process (Loewen, 2018, pp. 702-703). Loewen (2018, p. 702) identifies two mechanisms through which management keeps workers low-paid and disposable; in one case, "warehouse management mobilizes discourses of 'unskilled' labour to degrade the work," while in the second, management mobilizes mechanisms of retention focusing on "controlling workers' movement in and out of warehousing jobs at a systems rather than individual level". In the first case, the management ensures qualitative flexibility by cross-training directly hired workers on multiple tasks as well as improving productivity, efficiency, and quality of work by retaining workers (Loewen, 2018, pp. 708-709). Nevertheless, they also successfully keep costs low by devaluing and degrading warehouse work, and through this degradation, the owners capture much of the material benefits of this restructuring rather than sharing it with workers (Loewen, 2018, pp. 707-710). In the second case, the management was concerned about having enough workers in the warehouse whenever needed. They achieved this objective through a conception of retention,

seeking to control the warehouse workforce at a systems level and ensuring the maintenance of enough trained workers in the workplace (Loewen, 2018, pp. 711-714). Overall, the study complicates the discussions on legal dimensions of logistics labour issues, particularly those on employment contracts, status, temporary work, and wages.

A review of studies examining the legal dimension of labour in the logistics sector highlights the importance of employment contracts and provides us with different types of employment observed in different countries. They also elucidate management strategies and practices used to keep labour costs low and the labour force flexible. These studies show that although logistics workers are subjected to different treatments even within a single workplace, they are still co-located in their workplaces, especially the warehouse workers who work in the "contained and controlled production space of a warehouse" (Jordhus-Lier et al., 2019, p. 72). Social relations are still experienced within and shaped by material workspace. Jordhus-Lier et al. (2019, p. 87), for instance, show that temp agency workers "express a lack of attachment and loyalty to their direct employer." Although legal arrangements are important for workplace loyalty and a sense of inclusion (Jordhus-Lier et al., 2019, p. 84), the material space is also important.

3. 2. Socio-Spatial Dimension

The workplace, first and foremost, is the co-location of workers and the labour process, providing social capital and a basis for identity formation and collective action. It is where workers spend long hours, although modern workplaces are defined as "more heterogenous, segmented, fluid and complex than an ideal-type factory" (Jordhus-Lier et al., 2019, p. 72). Now, as briefly discussed above, there are a variety of employment relationships and employee categories, as well as different socio-cultural identities within workplaces in the logistics sector. On the other hand, the workplace is also the co-location which brings workers and capital together in different ways, disciplining both (Jordhus-Lier et al., 2019, p. 75). Considering the significance of the workplace for all the actors involved and "how concrete workplaces still represent the tangible, social and institutional boundaries of work for millions of workers" (Jordhus-Lier et

al., 2019, pp. 73-74), it is important to look at logistics labour from a socio-spatial perspective.

The effects of workspace on workers have been a subject of analyses since the 1920s (Heiland, 2021, p. 4). Considered to be "a source and medium of power" (Heiland, 2021, p. 13), space is essential for labour processes as well (Heiland, 2021, 2022; Warren, 2018; Gutelius, 2016). However, for a long time, capital was considered to be the dominant, or only, subject controlling space, while workers were simply subjected to the constructed space (Heiland, 2021, p. 4; Warren, 2018, p. 2). This understanding has changed with Herod's (1997) study of labour geography, which emphasise workers' ability to actively produce and shape economic spaces (Heiland, 2021, pp. 4-5; Warren, 2018, p. 2). Even though there is a power asymmetry between capital and labour, there is no "unilateral and uncontested" control of capital over the production of economic spaces (Heiland, 2021; Warren, 2018, pp. 2-4). However, Heiland (2021, p. 5) highlights that labour process and space had been analysed separately, with few exceptions.

In their article, Jordhus-Lier et al. (2019, p. 70) analyse workers' agency and management practices of control using concepts based on "the territory-place-scale-network (TPSN) framework". They examined "place embeddedness and the construction of workplace attachment; the networked recruitment of labour migrants; the territorial construction of legal boundaries in the workplace and, finally, the workplace as a scale of justice for trade unions" (Jordhus-Lier et al., 2019, p. 70). With this approach, the scholars emphasize "the social relations between different groups of workers and management, without losing sight of the multi-scalar nature of labour legislation and corporate structure" (Jordhus-Lier et al., 2019, p. 86), as well as showing the impact of changes of legal boundaries through labour hire on the workplace. In their study of different production regimes in warehouse work, Dörflinger et al. (2020) connect labour process theory to critical logistics studies. They point out that previous studies on labour control in the logistics sector were usually based on two approaches: one emphasising the sources of division among workers, while the other emphasising the technological systems utilised by firms to control the

labour force (Dörflinger et al., 2020, pp. 113-114). Studying different production regimes in distinct locales, the researchers (Dörflinger et al., 2020, pp. 114-119), on the other hand, introduce a typology of production regimes as well as identifying three forces of variation: "institutional, market-based, and organization forces." They conclude that although theorists highlighted organizational forces as a potential resource for workers, institutional conditions and market forces play more significant role in shaping production regimes (Dörflinger et al., 2020, p. 139).

Studying workers' ability to shape their material conditions and economic spaces, labour geographers often focus on the workplace as the venue of collective forms of power and resistance (Warren, 2018, pp. 2-4; Heiland, 2021, p. 3). With the emergence of more critical approaches, however, labour agency became an important issue, particularly in relation to the workspace (Warren, 2018; Heiland, 2021; Jordhus-Lier et al., 2019). Yet, even though labour agency is considered to be influential in shaping control, consent, and resistance, it is scarcely investigated (Jordhus-Lier et al., 2019, pp. 72-73; Heiland, 2021, p. 3). While Katz (2004) builds the study of children's experiences of economic restructuring on three categories of resistance, reworking, and resilience, Coe and Jordhus-Lier (2010), prioritising four institutional contexts (structures of the state, organisation of capital, labour market, and community), develop a "constrained labour agency" framework (also see Warren, 2018, pp. 4-5). Studying "a major restructuring episode at Australia's largest industrial workplace," Warren (2018, pp. 2-4) examines "intra-labour politics and power relationships within a workplace" with an *intra-labour agency* framework and spatio-temporal view. The author argues that "lived experiences within the everyday spaces and places of work" is critically important to understand labour's struggles, opportunities, limitations, and divisions (Warren, 2018, p. 22). Similarly, Jordhus-Lier et al. (2019, pp. 71-77) also point out the habitual, less-reflexive, and more-automated side of labour agency, particularly without confining it to collective strategic action. They found that workers' everyday behaviour and approaches were significantly important in shaping their experiences and workplaces (Jordhus-Lier et al., 2019, pp. 81-86). Nevertheless, they conclude that while collegial relations could balance insecurity and make competition more manageable, division between workers could prove to be challenging for solidarity (Jordhus-Lier et al., 2019, pp. 85-86; Jaffee & Bensman,

2016, p. 63). These studies, overall, identify different types or appearances of labour agencies. Most importantly, they do not limit labour agency to collective strategic actions or resistance but highlight everyday experiences and habitual behaviours.

Another issue scholars discussed in the context of workspace relates to workplace conditions, safety and health protection measures, intensity of work, and working hours. Bonacich and Wilson (2008, p. 19; p. 160) observe that workers in transnational corporations are generally subjected to poor workplace conditions, long working hours with low pay and lack of fundamental rights to form or join unions, both in the global North and the South. For instance, Hildyard (2020, p. 11) indicates that workers at an Amazon distribution centre in Poland record how the company prevented them from forming close relations with each other to prevent unionisation, reassigning them to different positions or even replacing them with temporary agency workers. Another Amazon employee underlines the existence of "a system" that workers log into which "identifies even the briefest moment when a worker may be doing something classified as 'time off task'", which can result in taking disciplinary action at times (Hildyard, 2020, p. 12). Similarly, Amazon workers in the UK reported a "points system" recording any action "off task" (Hildyard, 2020, p. 12). Unsurprisingly, Hildyard (2020, p. 12) reports a survey that "found that 74 percent of the company's warehouse workers were afraid to go to the toilet during a shift out of fear of being penalised". Making a comparison with the past, in Bonacich and Wilson (2008, p. 206), a worker highlights the "more work for less money" pattern as well as the lack of or less training. Similarly, Gutelius (2016, pp. 3-4) summarizes the conditions of the warehousing industry: stagnated wages, eroded labour protections, precarious employment, and insecurity. Struna et al. (2012, p. 3) also specify "the unfair and dangerous nature of warehouse working conditions," reporting workers "being denied proper pay and bathroom breaks, being asked to lift heavy objects even while pregnant, having fire exits blocked, working in dusty and dirty places, and suffering from heat exhaustion and all sorts of workplace injuries." They also report sexual harassment, especially against women (Struna et al., 2012, p. 3). Furthermore, Jaffee and Bensman (2016, p. 65) observe significant safety and health issues resulting from working conditions for both truckers and warehouse/distribution centre workers. They also cite a study by ProPublica (2013) reporting that "temporary workers are disproportionately

concentrated in the highest risk occupations" (Jaffee & Bensman, 2016, p. 65), bringing again the division between workers based on the type of employment into our attention. They continue observing that temporary workers were also paid by piece rate, intensifying their work and leading to a higher risk of injury (Jaffee & Bensman, 2016, pp. 65-66). Likewise, Jordhus-Lier et al. (2019, p. 85) observe not only that temporary agency workers were expected to produce more than permanent employees, but there also was a competition between agency workers themselves, encouraged by the management. Lastly, Bonacich and Wilson (2008, p. 204) draw attention to "gruelling schedules and dangerous fatigue" resulting from the drastic cutbacks in staff and intensification of work, dramatically worsening labour standards. Thus, several studies show that workers are subjected to long working hours, intense work, unsafe and unhealthy working conditions, constant intrusive disciplining, competition, and monitoring (Hildyard, 2020, p. 12).

Although researchers scrutinizing the socio-spatial dimension of logistics labour point out different issues, here, four of them draw more attention. These are (1) the social relationships among workers, and between workers and their managers/employers, (2) workers' attachment to (or perception of) the workplace, (3) labour agency over their work, and (4) physical conditions of a workplace, working hours, and intensity of work. Henceforth, these studies, henceforth, will not only provide a background for the following empirical analysis in this thesis to build upon but also provide the framework for the research, shaping the research questions and themes.

3. 3. Technological Dimension

There are two sides to the coin where the use of technology is concerned: on the one hand is the issue of mechanisation, automation or the replacement of human labour, while on the other hand is the issue of surveillance and control of labour. The introduction of different technologies made human labour redundant in several areas. The introduction of containers in the 1960s, for example, decreased the number of workers at docks as well as the need for portside warehouses, while the adoption of computers in the 1990s and of automated vehicles in the 2000s dramatically decreased the need for human labour at ports (Hildyard, 2020; Levinson, 2006; Bonacich &

Wilson, 2008). Similarly, Bonacich and Wilson (2008, p. 202) observe that the railroad industry's adoption of new technologies changed the landscape of the industry and decreased the railroad labour force. Now, "there are fewer freight trains, but they are longer and heavier" (Bonacich & Wilson, 2008, p. 202). The warehouse industry was not different in this regard either (Bonacich & Wilson, 2008, p. 226). The decreasing cost of transportation with mechanisation enabled capital to minimize labour costs in other ways, such as outsourcing production to countries where labour is cheaper. Moreover, mechanisation and automation have been used by capital to discipline labour and break unions, bringing about multiple oppressions, from unemployment, and increasing precariousness and insecurity of available work, to erosion of labour rights (Hildyard, 2020, p. 13). Hildyard (2020, p. 13) remarks that the appeal of mechanisation and automation for employers is that machines "can operate 24-7, never unionize, and can be deployed and re-deployed flexibly." Of course, replacing human labour with machines is not as easy as employers hoped, nor may human labour always be replaceable (Hildyard, 2020, p. 13). More often, human labour is displaced rather than being replaced or even expanded elsewhere (Hildyard, 2020, p. 14). However, although mechanisation and automation do not seem to threaten workers, digitalisation is considered to create new forms of oppression and exploitation for them (Hildyard, 2020, p. 16).

In order to examine digitalisation, its implementations, and its effects, we need to define the concept. Heilig et al. (2017, p. 230) define digitalization as "a sociotechnical process," applying the tools in a broader institutional and social context as well as specifying five levels – three within the company and two at broader supply chain level – and three dimensions – scope, scale, and speed – (also see Paardenkooper, 2023, p. 70). Listing what they call "enablers," they also define digital transformation as "a broader process of transforming an organization or a network of organizations on different levels by making use of digital technologies and concepts" (Heilig et al., 2017, p. 230). While "strategy, governance, leadership, culture, people, technology" are examples of different levels of transformation, examples of enablers are cloud computing and infrastructure, artificial intelligence, internet of things, blockchain, cyber-physical systems, nano-technology, 3D printing, advanced robotics and robotic process automation, augmented reality, real-time data science, big data analytics, and

quantum computing (Heilig et al., 2017, p. 230; also see Paardenkooper, 2023, p. 70; Davis et al., 2020). Similarly, Mathauer and Hofmann (2019, p. 417) highlight the importance of willingness and motivation to adopt or accept technological transformation, i.e. "technology acceptance" (also see Paardenkooper, 2023, p. 71). The significance of acceptance seems clearer in Herold et al.'s (2021) study of logistics service provider companies. Although digitalisation is critical for companies to survive during the COVID-19 pandemic, numerous companies are unwilling to change (also see Paardenkooper, 2023).

On the other hand, as Cattero and D'Onofrio (2018, pp. 141-142) point out, discussions on the use of technology and digitalisation in the logistics sector often lead to optimistic and techno-centric interpretations while overlooking limitations as well as effects on workers in the sector. They argue that the results of technological innovations and transformations are not "determined by technology itself but by the interaction between technical features (both constraints and purposefully planning decisions), organizational choices – or no choices – and intervening rationalities" (Cattero & D'Onofrio, 2018, p. 142). Several studies (for example, Briken & Taylor, 2018; Cattero & D'Onofrio, 2018; Delfanti, 2021; Heiland, 2021, 2022) provide empirical support for the argument that it is not technology per se, but its combination with social, institutional, and organizational conditions and decisions is what creates the results we observe. Similarly, studying platform labour, Heiland (2022, p. 1825) states that the literature, focusing on technology, overlooks the organisational aspects complementing the use of technology, particularly in control of labour. Likewise, Cant (2020, p. 132) argues that studies into platform capitalism are often from a managerial perspective, which might explain some of the interpretations. He considers studies from a working class perspective as necessary in order to understand the phenomena thoroughly (Cant, 2020, p. 132). Despite the number of recent studies, Kanngieser's (2013) observation that "accounts of mobile and digital technologies to manage workers within logistics industries" and their effects "on the everyday experiences, bodies, and velocities of workers" are lacking still seems to be true. Lastly, Gutelius (2016, pp. 3-4) observes that although "the geography of economic activity, the ways in which work is organized and carried out, and the experience on shop floors … changed significantly", the use of technology and automation is "much lower than one

might expect from reading." Henceforth, a comprehensive understanding necessitates further studies, particularly multidimensional ones.

Sealey (2010, p. 26) states that the specific role of ICT in the logistics industry is "to control the work of logistics workers." Technology plays a central role in disciplining labour in such a way that does not even give the workers discretion over their working patterns. Now, labourers are constantly scanned, and their activities are collected as data for organisations (Sealey, 2010, p. 33). With technological advances, the surveillance and control of workers' routines are becoming increasingly all-encompassing (Hildyard, 2020, p. 12). All these devices, applications and mechanisms used to track and trace workers are said to be utilized to "identify inefficiencies" and "maximize productivity" (Hildyard, 2020, p. 12). Cameras in vehicles are used to "monitor driver fatigue 'by tracing pupil size and blink frequency'" whereas data collected through the Internet of Things in different workplaces are to predict possible strikes in order to prevent disruption of flows (Hildyard, 2020, p. 12). Moreover, these technologies of control and surveillance are also tools managers use to enforce workplace territoriality (Jordhus-Lier et al., 2019, p. 74). As Kanngieser (2013, p. 594) observes, the employers' "ability to govern the movements of workers", which has long been their prerogative, "has grown more acute" with the advances in technology. Even though the surveillance and control of labour have always been an objective of employers and managers, the emergence of and advances in digital technologies dramatically increased and intensified the available tools. These are particularly important in the logistics sector in order to ensure smooth and continuous circulation of goods and people.

Kanngieser (2013) studies three of the most ubiquitous technologies of surveillance and control within the logistics industry: (1) Radio Frequency Identification (RFID), (2) voice-directed order picking or voice-picking systems, and (3) GPS. While RFID is used to "identify and trace animate and inanimate objects and beings, and store information", and GPS is used to pinpoint temporal and spatial location, "to increase productivity and to maintain environmental standards", voice picking is adopted "to maximise speed and minimise error" (Kanngieser, 2013, pp. 598-604). RFID and voice

picking systems are commonly used within warehouses, while GPS is particularly used in freight and fleet management in inland vehicle-tracking systems. The use of RFID tags and real-time location systems significantly affected workplaces to the extent that some employers demanded workers embed tags under their skin (Kanngieser, 2013, p. 599). Likewise, employers and technology corporations celebrate voice-picking systems as they increased "the accuracy of item picking from 99.3 to 99.8% or higher", eliminated paper labels, made real-time inventory possible, speed up training, and overall, increased productivity (Kanngieser, 2013, pp. 602-603). On the other hand, the use of these technologies does not go unopposed – there are already calls for regulation and banning in different countries "on the basis that it is dehumanising" as well as on the basis of concerns about surveillance, profiling, deterioration of security of labour, alienation, and threats to workers' physical and mental health (Kanngieser, 2013, pp. 599-605).

Cattero and D'Onofrio's case study is on Amazon since they believe that examining the company "allows one to emphasize, on the one hand, the important innovations fostered by technologies and, on the other hand, the negative impact that the workers experienced because of the same technologies" (Cattero & D'Onofrio, 2018, p. 142). According to the researchers, managers constantly monitor workers. They can follow "all the details of the activities" of each worker (e.g. location, tasks, "productivity") using barcode scanners, badges, workstations, and Wi-Fi technology, the very same technological tools which make tasks clearer and simpler for workers (Cattero & D'Onofrio, 2018, pp. 144-145). This control over work is performed in "a depersonalized way by the technology used and its mode of operation" (Cattero & D'Onofrio, 2018, p. 145). This depersonalized control, in turn, makes workers "assume that their working tools are not used for monitoring operations but rather to indicate the most efficient way to carry out the tasks" despite being aware of the control they are subjected to (Cattero & D'Onofrio, 2018, pp. 146-147). Consequently, this assumption/approach decreases conflict, particularly between the management and the workers. Furthermore, the tasks are performed in ways that "leave the workers with extremely low margins of autonomy and discretion", making them mere "working tools" executing management's decisions (Cattero & D'Onofrio, 2018, p. 146). At the same time, technological equipment is also used to establish social control among

workers by creating “a rather hostile and competitive work environment” (Cattero & D’Onofrio, 2018, p. 147). Finally, Cattero and D’Onofrio (2018, pp. 145-146) underline that certain features of the work organization in Amazon warehouses or fulfilment centres remind the principles of Scientific Management, the only difference being the technologies used, to the extent that scholars have begun to call it “Digital Taylorism” (for example, Staab & Nachtwey, 2016; Chesta, 2021; Henaway, 2023).

Delfanti (2021) is another researcher studying the use of technology to control and discipline workers in Amazon, relying upon Italian workerism thinkers and discussing three activities within warehouses. First of all, he claims, “technology dictates the pace of work at Amazon” as technology is used to standardize tasks, increase productivity, control the workforce, and facilitate worker turnover (Delfanti, 2021, p. 40). Although other studies focus “on ‘soft’ and remote forms of control that incentivize and constraint workers’ choices”, he concludes that the control regime at Amazon fulfilment centres/warehouses is different “as the balance between autonomy and control in the FC is heavily skewed toward the latter” (Delfanti, 2021, p. 43). Significantly, workers are “aware of the uneven nature of their relation with machinery” but also know the need for their labour (Delfanti, 2021, p. 40). This observation is in contrast to the scholars, such as Zuboff (2019) or Sadowski (2019), who overlook the active role of workers and the forces influencing them, conceptualizing surveillance and control based on data collection from passive users (also see Delfanti, 2021). Delfanti (2021, p. 42) highlights, however, that “digital labour is based on ‘information asymmetries’” since workers cannot know but only guess “the procedures of data extraction and analytics that organize and surveil their activities.” He concludes that “the incorporation of worker knowledge in software systems does not eliminate the need for the control of living labour,” but, on the contrary, control increases with the increased use of technology in the labour process (Delfanti, 2021, p. 51).

Lastly, Heiland (2021 & 2022) also examines technological control of labour and production of space, particularly couriers in food delivery platforms. As drivers are dispersed in space, the influence and production of this space are critical for control

(Heiland, 2021, p. 9). He observes that digital technologies are utilised by platforms in order to expand "the territoriality of workplaces" and increase control over labour (Heiland, 2021, p. 2). By creating spatial corridors, "geo-fences," and using technologies like GPS, platforms limit couriers' movements (Heiland, 2021, p. 9). Heiland (2021, p. 10) underlines that although the geolocalisation of couriers was initially used to increase efficiency, it became an instrument of control.

Studying the technological dimension of labour in logistics, scholars underline the issues of surveillance and control of labour as well as the issue of automation and replacement of human labour. In this context, they also examine workers' perceptions of and interactions with different technologies used in the sector. Building on these discussions and observations in the literature, this study will also question the use of technology in the logistics industry and workers' relationship with these technological tools.

3. 4. Concluding Remarks

Overall, workers in different parts of the (global) logistics industry are caught in "a perfect storm" (Coe, 2014, p. 242) of neoliberal regulations and deregulations, fragmentation of production, offshoring and globalisation, and new technologies, all ensuring continuous low labour costs. As scholars observe, surplus value is extracted from logistics labour in the same way it is extracted from workers in factories: "by paying less than the value they create for their employer" (Hildyard, 2020, p. 10). Creating pools of cheap labour so that costs could be kept low through competition between workers and the construction of infrastructure and locating logistical hubs or "special economic zones" in well-connected areas where a low-cost labour force already exists are critical strategies for the process of extracting value from logistics (Hildyard, 2020, p. 10). As Bonacich and Wilson (2008, p. 242) put it, workers are among "the major 'losers' in the logistics revolution," some losing their jobs while others working under pressure to increase productivity, for continually decreasing wages, under deteriorating and precarious working conditions, and are subject to control, disciplining, surveillance, and racialized (and gendered) forms of exploitation and more (for example, Hildyard, 2020). Hence, as Coe underlines (2014, p. 243),

having “a solid base of research into logistics labour market conditions” is essential to understand other dynamics and changes mentioned.

Although the literature on logistics labour and the human factor in logistics is relatively new and hence limited, researchers did look at different aspects of the phenomenon, drawing attention to specific characteristics of logistics labour as well as identifying different elements/dimensions of the issue. For instance, in one of the earliest and the most comprehensive studies on labour in logistics, albeit limited to the US case, Bonacich and Wilson (2008, p. 21) identify four main impacts of the logistics revolution on labour as an increased contingency, weakened labour unions, racialisation, and decline in labour standards. Likewise, more recently, Hildyard (2020) lists the common features of exploitation of labour in logistics, and across the supply chain, as union busting, the erasure of negotiating space, “996 Working”, surveillance, precarious employment and disposability, automation, digitalisation, and degradation of labour while adding that race and gender differences are also integral to the exploitation of labour. Struna et al. (2012) also highlight low wages, job security, precarious employment, and dangerous working conditions as typical characteristics of warehouse work, while Bottalico (2019, p. 132) focuses on port labour in Europe and singles out six different dimensions of the issue; local juridical factors, supranational juridical factors, economic factors, competitiveness of services and ports, social factors, and institutional factors. Many authors emphasised different strategies employers and managers use, which are both influenced by these characteristics of logistics labour markets and produce them as consequences. For example, Jaffee and Bensman (2016, pp. 73-74) analyse the drayage and warehouse/distribution centre segments of logistics and highlight the misclassification of port truck drivers and outsourcing/subcontracting in warehouse/distribution centres as effective strategies used by employers to enhance flexibility and reduce costs. In short, the issue of logistics labour is a multidimensional one, and understanding necessitates a multidimensional approach.

In this chapter, three dimensions discussed in the literature on logistics labour are highlighted: the legal, socio-spatial, and technological dimensions. These dimensions

provide a framework for the empirical analysis in the following chapters of this study as well as questions to be inquired. The discussions on the legal dimension bring about questions regarding labour contracts. What kinds of contracts are common within the logistics sector? How are the workers classified? Are there temporary work agencies or subcontractors? Which kinds of tasks and jobs are outsourced? Most importantly, how do they affect the conditions of workers? Moving on to the socio-spatial dimension requires more focus on detail. What kind of a relationship do workers have with each other? What kind of a relationship do workers have with their employers or supervisors/managers? How do their legal contracts or status affect their position among their colleagues? How much autonomy do workers have? How does the nature of delivery work affect drivers' everyday work experiences? How do drivers perceive their jobs? And lastly, when we look at the technological dimension, the first question is if they use any technological tools. If they do, which tools are workers obliged to use? What kind of an approach companies have regarding the use of technology? How do workers perceive the technological tools they use? How does the use of technology affect working conditions? Henceforth, in this study, I will try to answer these questions analytically by looking at different kinds of delivery and warehousing services provided by logistics companies within cities in Türkiye.

CHAPTER 4

LOGISTICS IN TÜRKİYE

Different disciplines discussed the meaning of logistics. It been changing throughout time due to technological and economic changes. In addition to the technical and official definitions of the term, more critical approaches and definitions have emerged, introducing new layers to both the discussions and the term itself. The structures of dispossession, exploitation, and domination underpinning the logistical reorganisation, for instance, are now added to the discussions as well as critical discussions on international law, border regimes, and labour regimes. Before analysing the findings of the field research of this study, clarifying the focus of the study as a background, i.e. what and who will be examined, becomes important. Therefore, this chapter intends to clarify the meaning of the term "logistics" as well as the context of the study, i.e. logistics sector in Türkiye. In other words, the chapter will clarify the sectors and economic activities which are included in the definition; definitions of logistics influential in the sector, adopted by the state, firms and different organizations; the actual outlook of the logistics sector in Türkiye today; and the main characteristics of the sub-sector, namely transportation and warehousing services within cities that the study examines.

Researchers and logistics professionals considering logistics as a "technical" issue base their discussions on a number of similar definitions, although they also highlight that there is no common definition. To begin with, several researchers and professionals (e.g. Duran & Türkoğlu, 2019, p. 87; İpekçi, 2019, p. 8; Çatıkkaş, 2019, p. 2; Görgün, 2021, p. 4) refer to the definition provided by the Council of Supply Chain Management Professionals (CSCMP). The CSCMP (n.d.) defines logistics as

> *The process of planning, implementing, and controlling procedures for the efficient and effective transportation and*

> *storage of goods including services, and related information from the point of origin to the point of consumption for the purpose of conforming to customer requirements.*

Similarly, Ülengin and Uray (1999, p. 25), in their preliminary study on logistics in Türkiye, define logistics as activities "involving the storage of good, the movement of the goods from the source to the customer, information to support these operations, and management of the logistics process to achieve the required level of customer service." Another common definition states that logistics covers all the services, from transportation to warehousing, from customs to information services, required for goods to be transferred from the place of production to the place of consumption while highlighting being in the right place, in the right time and in the right condition/way (İpekçi, 2019, pp. 5-8; Şenel, 2019, pp. 1-4; Yapraklı & Ünalan, 2017, p. 590; Görgün, 2021, p. 1; Orhan, 2014, pp. 7-9). Lastly, the Turkish Language Association's definition of logistics, that is, effective and efficient planning and implementation of transportation of goods, services and information from the beginning to the end to fulfil the needs of individuals, is also indicated (Çatıkkaş, 2019, p. 2; Yapraklı & Ünalan, 2017, p. 592). As can be seen, the transportation of goods from the point of production to consumption, the way of transportation, i.e. efficiency and effectiveness, and the requirements of this process are highlighted in these definitions. Logistics is considered to be a technical issue of calculation and planning. Many studies overlook issues pointed out by critical scholars/definitions, such as exploitation, domination, violence, or labour. They do not pay enough attention to services gaining prominence in the literature and the sector or the definitions and practices of international organisations like the European Union (EU). European Commission (n.d.), for example, highlights activities such as purchasing, warehousing, distribution, reuse and exchange, as well as value-added services. However, this significant focus on basic transportation shapes the sector in Türkiye.

When it comes to the variations in definitions and approaches, most researchers and professionals argue that these differences come from different modes and needs of companies (İpekçi, 2019, pp. 7-8). Accordingly, there are five different modes, that are, highway, air, maritime, railways, and pipelines, and a number of different services are included in logistics services: transportation, warehousing, customs clearance of

goods, insurance, handling, packaging, customer services, and inventory (İpekçi, 2019, pp. 6-8; Çatıkkaş, 2019, p. 7; Yapraklı & Ünalan, 2017, p. 592; Şenel, 2019, p. 15; Görgün, 2021, p. 4). However, three services, namely transportation, warehousing, and customs, are considered to be the most important and primary logistics services (İpekçi, 2019, pp. 6-12). Although scholars highlight that logistics is not limited to these three services, they also point out that transportation constitutes the first, the most comprehensive, the most expensive, and the most important part, explaining the fact that it can still be seen as the only part (İpekçi, 2019, p. 12; Duran & Türkoğlu, 2019, p. 87; Şenel, 2019, pp. 4-16; Çatıkkaş, 2019, pp. 7-8). On the other hand, some further argue that the reason why logistics in Türkiye is not as developed as it can potentially be is that the sector limits logistics to the transportation of goods and sometimes warehousing (Çatıkkaş, 2019, p. 31).

In this study, I use more technical definitions given above to frame the field research for three reasons. First of all, these definitions provide a more concrete basis, listing particular activities logistics consists of. Secondly, professionals also adopt these definitions, making them influential in the development of the sector. The strategies of different firms and trade associations depend on these definitions. For example, the Union of Chambers and Commodity Exchanges of Türkiye (n.d.), on the main page of the Trade and TIR Department of the Union (*Taşıma ve Lojistik Dairesi*), considers the primary area of work of the department of logistics as "international logistics, transportation, customs, international trade and supply chain management," which in turn shape their strategies and activities. Moreover, most documents share similar approaches to logistics as well. Thus, in this study, I will focus on transportation and warehousing services, particularly within cities. Although logistics is not limited to these two services, they constitute a significant part of the sector, the workforce, and money spent and generated. Lastly, I will focus on highway transportation because most of the transportation in Türkiye, as will be seen, is through highways, and it is the most developed and focused mode of transportation since the 1940s.

4. 1. Development of Logistics Sector in Türkiye: Historical Background

The existing literature on the history of logistics in Türkiye traces the emergence of logistics back to the Ottoman era (Görgün, 2021, p. 79; Orhan, 2014, p. 98). Highlighting the building of highways and railroads, and the significance of Türkiye's geographic location, scholars indicate that the Ottoman Empire required to pay attention to logistics in order to survive, as logistics is an important component of both military and trade strategies (Görgün, 2021, p. 79; Şenel, 2019, pp. 52-53; Orhan, 2014, p. 98). However, there is also almost a consensus that the importance of logistics was not understood until the end of the twentieth century, neither by the academia nor by firms (Şenel, 2019, p. 4; İpekçi, 2019, p. 28). It was only after the rise of foreign trade and the need to improve logistics services to be able to compete against international firms that Turkish firms began to pay more attention to logistics. The sector has seen a rapid development and expansion in line with international economic developments after the late 1990s (İpekçi, 2019, p. 28). Likewise, academic interest in logistics increased with the importance of logistics. Ülengin and Uray (1999) point out that their study is the first analysis of the current status and the future of logistics sector in Türkiye. Henceforth, it is necessary to consider the development of the logistics sector in Türkiye to understand the current conditions of the sector.

With the foundation of the Republic of Türkiye, significant investments into and developments in the transportation sector could be observed, particularly in railways infrastructure (Orhan, 2014, p. 98). In 1929, recognizing the need for highways, the government established the Highway and Bridges Chair (*Şose ve Köprüler Reisliği*) within the Ministry of Public Works (*Bayındırlık Bakanlığı*) (Görgün, 2021, p. 79). The most compelling turning point came after World War II: the turn towards highways as the primary mode of transportation. Until 1950, government policies had favoured railways and maritime transportation. In 1950, more than half of the freight transported (55,1 percent) was transported via railways, while maritime transportation remained at 27,8 percent and landside transportation at 17,1 percent, in contrast to today when 90 percent of freight transportation is done through highways in 2021 while railway transportation decreased to 8 percent in the 1990s, and to 4 percent in 2021 (Görgün, 2021, p. 108 & p. 113; UNIKAD, 2022, p. 85; Ülengin & Uray, 1999, pp. 24-25; T.C. Çevre, Şehircilik ve İklim Değişikliği Bakanlığı, 2022). As Türkiye was getting closer to the West and the automotive sector was growing, a critical turning

point came in 1948 when Türkiye was included in the Marshall Plan (Görgün, 2021, pp. 79-80; Çatıkkaş, 2019, p. 9). It was proven to be important when Türkiye's almost all investments were now into highways as highways were required to be favoured over railways and maritime transportation (Görgün, 2021, pp. 79-88; Çatıkkaş, 2019, p. 9). This concentration on highway investments continues today, with 59 percent of all investments into transportation and communication sector(s) between 2003 and 2022 being into landside, according to the Ministry of Transportation and Infrastructure (2022). On the recommendation of the U.S. administration as a part of the Marshall Plan, the General Directorate of Highways was established in 1950 under the Ministry of Public Works, starting the era of highway construction (Görgün, 2021, p. 80).

In 1965, Türkiye signed the Convention on International Transport of Goods Under Cover of TIR Carnets (TIR Convention) (Görgün, 2021, p. 77). With the Convention, Türkiye joined the international landside transportation systematically, followed by other new developments (Görgün, 2021, pp.77-81). Two years later, in 1967, the State Planning Office introduced the first financial aid, while in 1968, the World Bank began international transportation investments with credits (Görgün, 2021, pp. 77-81). The second major turning point for transportation in Türkiye, after the change in 1950, came about when the Turkish economy changed with the globalisation and increasing international trade and started to grow faster from the 1980s to the 2000s, which in turn led to the logistics sector's growth (Rashid et al., 2016, pp. 75-76; Görgün, 2021, pp. 70-81; Ülengin & Uray, 1999, pp. 23-24). During this time, the automotive and steel industries, international trade, and the changes in Türkiye's export and import relations contributed to the development of logistics (Rashid et al., 2016, p. 76; Erden, 2017, p. 4). Because of these changes, the logistics industry went under significant changes as well, diversifying investments, increasing the quality and quantity of technology use, and developing communication, all of which would continue to well into the twenty-first century (Yapraklı & Ünalan, 2017, p. 592; Şenel, 2019, p. 50). Lastly, introducing visas for highway transportation to Europe in 1987 and establishing the Directorate of TIR Customs in Türkiye were other notable developments in the 1980s (Görgün, 2021, p. 82).

Business firms started to change their approach to logistics services in the late 1980s and the 1990s – as relying on their products was not sufficient for competition, logistics grew as a vital business component in gaining competitive edge (Ülengin & Uray, 1999, p. 22). In other words, increasing trade domestic and international trade increased the importance of the logistics industry in Türkiye (Ülengin & Uray, 1999, p. 23). Accordingly, business firms providing logistics services changed their approach as well, changing their names and including services other than transportation and warehousing in the 1990s, a decade later than the European and American firms (Çatıkkaş, 2019, p. 5). The Association of International Freight Forwarders and Agents, founded in 1986, for instance, first merged with the Association of International Air Cargo Agents in 1995 and then changed its name to the Association of International Forwarding and Logistics Service Providers in 1999. This is a significant example since the Association is one of the most extensive non-governmental organizations in the industry. Similarly, academic studies on logistics in Türkiye came about at the end of the twentieth century, Ülengin and Uray's study in 1999 being the first one, according to the authors. However, the sector was still relatively small at the beginning of the twenty-first century, with approximately 300 third-party logistics firms and 350 international transporters (Ülengin & Uray, 1999, p. 24). Although Ülengin and Uray (1999, p. 24) indicate that these companies provided more than 500,000 job opportunities, according to the database, TÜİK identified only 952 people working in the transportation, communication, and warehousing sectors in 1999 – although this can be a result of different definitions and measurements.

The building of logistics infrastructure started in the 1980s continued in the 1990s as well (Duran & Türkoğlu, 2019, p. 87). Just as the state investments in railways shaped the logistics between the 1920s and the 1950s, and the Marshall Plan and investments in highways and related vehicles transformed the sector from the 1950s onwards, international developments affected the sector in the post-1980s as well as causing an increase in trade. While highway and maritime transportation in/through Türkiye was affected by the Iran-Iraq War in the 1980s, the Gulf War and the dissolution of the Soviet Union were the influential international developments that shaped the Turkish logistics sector in the (early) 1990s (Görgün, 2021, pp. 81-82). Container

transportation which emerged more than 30 years ago, began to gain significance in the 1990s (Ülengin & Uray, 1999, p. 25), while intermodal transportation began to be adopted in the early 1990s as well (Görgün, 2021, p. 82). According to Ülengin and Uray (1999, p. 25), the number of containers processed in Turkish ports increased by approximately 50 percent yearly. In addition to the changes in transportation, the concept of logistics as a whole changed throughout the 1990s and the 2000s, including a variety of different services into the concept/sector, from customer services to repair services, from planning to new information and communication services (Şenel, 2019, p. 51). On the other hand, Ülengin and Uray (1999, p. 30) highlight that while in the 1980s, productivity improvement was more important for firms, in the 1990s, quality improvement gained more prominence. Lastly, the establishment of the Customs Union between the European Union (EU) and Türkiye in 1996 was immensely influential on the logistics sector since it brought about increasing amounts of investments, a 70 percent rise in transportation capacity, more institutionalisation, and globalisation (Orhan, 2014, p. 96; Şenel, 2019, p. 53). As the rapid rise in capacity created excess supply, firms did not only invest in international logistics but improved domestic services as well. Moreover, the need to compete with foreign firms was a factor in improving the quality and variety of logistics services. At the end of the 1990s, 89 percent of the domestic transportation was through highways, a rise from 75.6 percent in 1990 (Çatıkkaş, 2019, p. 9; Şenel, 2019, p. 53).

The 2001 economic crisis negatively affected the logistics sector, particularly highway transportation. The dramatic imbalance between imports and exports affected existing businesses negatively and changed investment plans, leading to a 30 to 40 percent downsizing in the sector (Orhan, 2014, p. 96). However, the rise in e-commerce and international trade, construction of international highways and domestic economic developments contributed to the logistics sector afterwards (Rashid et al., 2016, p. 78; Çatıkkaş, 2019). Several scholars and professionals argue that the logistics sector in Türkiye came to see the results of previous investments and benefits of commerce agreements, reaching a certain level of maturity, rising to international standards, and developing and growing strongly in and after the 2000s (Duran & Türkoğlu, 2019, p. 87; Şenel, 2019, pp. 51-53). Most significantly, highway transportation became one of

the most important sectors in the country, both in terms of value-added and employment (Görgün, 2021, p. 77).

However, when we look at the studies on the logistics sector in Türkiye, there is still much to be studied. First of all, although there were technical publications on logistics before, considering logistics as a neutral, non-political matter of calculations and techniques, and focusing on technologies, ways of calculations of quality and quantity of services, and ways of organization, the oldest analysis problematizing the current status and the future of logistics in Türkiye seems to be Ülengin and Uray's article (1999). As is the case in other countries, most of the publications in Türkiye approach logistics as a technical issue, a non-political, neutral matter of expertise, calculations, and methods, focusing on how to improve logistics services, i.e. how to maximise output and profit, either not taking labour into account or simply considering labour as an input or cost. A critical and comprehensive approach to the history of logistics in Türkiye could contribute significantly to the literature. Likewise, as there are a few studies examining labour in the logistics sector in Türkiye, even as a technical addition to the analysis, critical studies of conditions of labour would also contribute to the literature.

4. 2. The Outlook of the Logistics Sector in Türkiye After 2007

In order to examine the conditions of labour in the logistics sector in Türkiye, more specifically, in the sub-sector of highway transportation and warehousing in cities, establishing the context is important. Therefore, here, I will briefly introduce the logistics and highway transportation and warehousing sectors in Türkiye. Although logistics is considered to be one of the youngest sectors developing in the country, with 30-35 years past, according to the Ministry of Labour and Social Security (2014), one of the first things both scholars and professionals observe is that the potential of the country is not reflected in the actual outlook. First of all, geographically, Türkiye is in an advantageous position when it comes to logistics, being at the centre of roads between Asia, the Middle East, Africa, and Europe (Duran & Türkoğlu, 2019, p. 87). Moreover, the country benefits from trade agreements signed with different countries and international organizations such as the European Union (Şenel, 2019, p. 51). In

other words, it is argued that the logistics sector in Türkiye is growing because of (a) the international trade and (b) the geographical location of the country (Şenel, 2019, p. 54).

It is argued that logistics is the third largest sector in Türkiye (İpekçi, 2019, p. 29). In fact, according to the Turkish Statistical Institute report (TÜİK, 2022), the transportation and warehousing sector is the third largest sector, with 8.8 percent of the GDP in 2021, i.e. more than 6 billion TL, following the production and the wholesale and retail trade industries. In 2013, Isan and Klaus (2013, p. 23) stated that while the transportation, warehousing, and communication sector accounted for 14 percent of Türkiye's GDP, the cargo logistics sector accounted for 4 percent. The following year, Orhan (2014, p. 97) indicated that the logistics sector represents 2 percent of the country's GDP, while in 2019, Çatıkkaş (2019, p. 40) observed that the sector represented 12 percent of the GDP (also see İpekçi, 2019, p. 29; Şenel, 2019, p. 56 for different observations). This apparent inconsistency, Isan and Klaus (2013, p. 23) highlight, is a result of different definitions of the logistics sector used by Turkish ministries as well as different scholars and organisations. Although measuring the size of the logistics sector at the national level seems to be a challenging task everywhere, it is particularly complicated in Türkiye because of the limited availability of sufficient statistics, systematic documentation, and corresponding identification of the Turkish logistics sector as well as the rapid changes (Isan & Klaus, 2013, pp. 21-22). It does not only hinder the efforts to track and assess the sector as a whole but also makes it difficult to identify and assess the business firms providing logistics services in the country.

However, the World Bank's international logistics performance index provides a tool to analyse the logistics sector's development. The index measures different countries' logistics performance based on six criteria: (1) "efficiency of the clearance process (i.e. speed, simplicity and predictability of formalities" at the borders, (2) "quality of trade and transport related infrastructure (e.g. ports, railroads, roads, information technology", (3) "ease of arranging competitively priced shipments", (4) "competence and quality of logistics services", (5) "ability to track and trace consignments", and

lastly, (6) “timeliness of shipments in reaching destination within the scheduled or expected delivery time” (The World Bank, 2023). These criteria set the standard for the national and international logistics sectors in the world and provide guidelines for business firms in the sector. Therefore, Türkiye’s performance across the years provides a better picture of the development of the logistics sector than the data, such as the share in GDP, employment, or number of firms. Türkiye’s logistics performance across the years can be seen in Table 1 below.

*Table 1: Türkiye Logistics Index Performance Across Years**

Year	**2007**	**2010**	**2012**	**2014**	**2016**	**2018**	**2023**
LPI Rank	34	39	27	30	34	47	38
LPI Score	3.15	3.22	3.51	3.5	3.42	3.15	3.4
Customs Score	3	2.82	3.16	3.23	3.18	2.71	3
Infrastructure Score	2.94	3.08	3.62	3.53	3.49	3.21	3.4
International Shipments Score	3.07	3.15	3.38	3.18	3.41	3.06	3.4
Logistics Competence Score	3.29	3.23	3.52	3.64	3.31	3.05	3.5
Tracking & Tracing Score	3.27	3.09	3.54	3.77	3.39	3.23	3.5
Timeliness Score	3.38	3.94	3.87	3.68	3.75	3.63	3.6

Source: Adapted from https://lpi.worldbank.org/international/scorecard/radar/C/TUR/2023 (the World Bank, 2023).

As can be seen, in 2023, Türkiye's performance in all indicators was better, except timeliness (the World Bank, 2023). However, four of the indicators are more important for this study, which are international shipments, logistics competence, tracking and tracing, and timeliness scores, since they are based mainly on the performance of logistics firms. In the last period between 2018 and 2023, international shipments, logistics competence, and tracking and tracing scores increased, from 3.06 to 3.4, 3.05 to 3.5, and 3.23 to 3.5, respectively (the World Bank, 2023). Only the timeliness score slightly decreased from 3.63 to 3.6 (the World Bank, 2023). The rise in logistics performance is considered to be a result of investments and increasing international trade since business companies try to improve their logistics operations to be able to compete against international firms (UTIKAD, 2022, p. 36). Nevertheless, both investments and international trade are influenced by public policies, if not determined by them.

Public policies have been an important determinant of the development of logistics and developments within the sector, as we can see in the changing modes of transportation throughout the republican history and the changing patterns of international trade. The Ministry of Transportation and Infrastructure developed a Turkish Logistics Master Plan project in order to determine the principles and policies in the field (Şenel, 2019, p. 73; Çatıkkaş, 2019, p. 39). The Ministry aims to diversify the modes of transportation in Türkiye and to determine the criteria according to which logistics centres are to be assessed and new ones to be established, as well as to promote combined transportation (İpekçi, 2019, p. 48; Şenel, 2019, p. 73). According to the Ministry of Transportation and Infrastructure (2022b, p. 12), there were 1 trillion 659 billion 451 million TL investments in logistics between 2003 and 2022. Despite the efforts to develop other modes of transportation, communication services, and a variety of other logistics services, such as quality management, supply chain management and value-added services, 60 percent of these investments were made in

highway transportation (T.C. Ulaştırma ve Altyapı Bakanlığı, 2022b, p. 12). Although the investments in different modes of transportation do not seem to be sufficient yet, the establishment of logistics centres/villages, another one of the aims of the Ministry, which is expected to improve logistics services other than transportation as well as transportation, seems to be rising (Rashid et al., 2016, p. 77; İpekçi, 2019, p. 48). Considering the existing logistics projects and international agreements with countries like China, Şenel (2019, p. 54) predicts that the development of logistics infrastructure, particularly railways and ports, will continue to establish Türkiye as a logistics centre. In fact, in 2022, the Directorate of Strategy and Budget (*Cumhurbaşkanlığı Strateji ve Bütçe Başkanlığı*) (2022) reported that in the 2022 Investment Programme, with 27 percent, the biggest share will go to the transportation and communications sectors (also see UNIKAD, 2022, p. 38). As it is considered to be the most important part of the logistics sector, getting the largest shares of investments and providing more employment and profit, the transportation sector, particularly the highway transportation segment, needs to be further scrutinized.

Transportation constitutes the largest, the costliest and the most comprehensive part of the logistics sector in Türkiye (İpekçi, 2019, p. 6 & p. 44; Çatıkkaş, 2019, p. 8). Şenel (2019, pp. 60-61) remarks that 50 to 60 percent of logistics costs are transportation costs. Furthermore, Isan and Klaus (2013, p. 25) observed that 90 percent of the spending on transportation goes to domestic land transportation. In other words, in Türkiye, the primary mode of transportation is highway transportation, with railways, maritime, and airways only representing a small percentage of all transportation (Orhan, 2014, p. 98 & p. 104; İpekçi, 2019, p. 14; Yapraklı & Ünalan, 2017, p. 593). According to the recent reports of the Ministry of Transportation and Infrastructure (2022b), 89.4 percent of freight and 92.7 percent of passenger transportation are still through highways. İpekçi (2019, pp. 14-29 & pp. 47-50) argues that this is because highway transportation is the only mode delivering door-to-door, and because most of the international trade is with European countries, to where highway transportation makes it possible to deliver without changing vehicles. Orhan (2014, p. 98) furthers that highway transportation is well-developed because it is the primary mode of transportation in the country. UNIKAD (2022, p. 85), on the other hand, points out that low investment costs and the ability to deliver without changing vehicles are

among the most important reasons why highway transportation is the most preferred mode of transportation. As a result, Türkiye has one of the biggest and youngest fleets in Europe as well as creating more value-added and employment (Orhan, 2014, pp. 98-99; Görgün, 2021, p. 77; İpekçi, 2019, p. 28; Isan & Klaus, 2013, p. 33). This fleet is used for freights destined for the Middle East, Europe, and Caucasus (Çatıkkaş, 2019, p. 34).

As mentioned, sufficient statistical data and transparent information about the logistics sector in Türkiye are not available (also see Isan & Klaus, 2013, p. 24). However, it is necessary to draw a general picture of business firms and labour in logistics to have a further discussion, although it is difficult to ensure the accuracy of estimates (Isan & Klaus, 2013, p. 26). Çatıkkaş (2019), p. 38) reports that there are 2000 logistics and transportation firms working in Türkiye. According to UTIKAD (2022, p. 88), at the end of 2022, 7268 firms had transportation work organization licences, while Isan and Klaus (2013, p. 33) stated that there were 3216 third-party land transport companies. These differences are not only a result of inaccurate information but also a result of different definitions used by authors. Different definitions are also evident in different categorizations of chambers of commerce in different cities. For example, in Ankara, the most related category is called “Transporters and Logistics Services”, which had 2827 members, with all branch offices and firms included. On the other hand, in İstanbul, there are separate categories called “Logistics Services,” which has 10,113 members, and “Cargo, Post, and Warehousing,” which has 3,405 members. Lastly, when we look at different licences, we see that in Juna 2022, there were 531,640 highway transportation licences, with an increase from 4,175 in 2002 (Ulaştırma ve Altyapı Bakanlığı, 2022a, p. 20). Even though all these categories and definitions are different and insufficient, they still give an idea about the size of the sector.

Business firms in the logistics sector are not the same in terms of their organization, finance, capacity, continuity of profits and administrative capabilities (Şenel, 2019, p. 55). For instance, Şenel (2019, p. 55) remarks that while some logistics firms in Türkiye are institutionalised companies, others are small-sized, non-institutionalised family firms which cannot contribute to development and problem-solving. Isan and

Klaus (2013, pp. 27-29) underline that there is a lack of transparency regarding logistics companies' revenues and business lines and that powerful family holdings, like Koç, Sabancı, Doğuş, Oyak, Ülker, Borusan, Enka, Anadolu, Zorlu or Tekfen, dominate the logistics market. There is not only a concentration of providers but also a network among logistics providers and shippers. Nevertheless, most of the companies in Türkiye prefer to keep logistics services in the firm rather than purchasing services from logistics firms, i.e. outsourcing, since low labour cost reduces the incentives (Şenel, 2019, p. 56; Orhan, 2014, p. 95; Isan & Klaus, 2013, p. 24). Çatıkkaş (2019, p. 40) remarks that the production or sale companies do 85 percent of the transportation. Similarly, Görgün (2021, p. 11) states that only 25 to 30 percent of logistics services are provided by logistics firms, while 70 to 75 percent is kept within the companies who need the services (also see Isan & Klaus, 2013, p. 24) because, as opposed to its international definition, in Türkiye, logistics is still considered to be limited to transportation. However, logistics now includes services ranging from customs to warehousing, labelling to packaging, and quality management to communication services (also see Orhan, 2014, p. 95). For Çatıkkaş (2019, p. 31), the reasons behind this preference are that the sector is not well-developed, that logistics is limited to transportation, and that the sector is highly-divided. However, the firms, particularly after the Customs Union Agreement with the European Union, started to demand more than simple transportation and warehousing (Yapraklı & Ünalan, 2017, p. 593). When we look at the relationship between international and domestic logistics firms, we see that in the parcel part of the transportation sector, international firms and domestic ones developed subcontractor links, such as Yurtiçi Cargo and Geopost/DPD or Coneks with FedEx (Isan & Klaus, 2013, p. 30). Even with no subcontractor relationships, international service providers like Dachser, Geis, Rhenus, or DB Schenker, cooperate with their Turkish counterparts (Isan & Klaus, 2013, p. 30). Lastly, there are also international companies that developed their own activities in Türkiye, like DHL Freight or CEVA (Isan & Klaus, 2013, p. 30).

Data on labour in logistics are much more complicated and much less sufficient, although it is the most critical aspect of the sector for this study, which focuses on the conditions of labour in highway transportation and warehousing within cities in

Türkiye. According to the TÜİK database, in 1988, 778 thousand people worked in the transportation, communication and warehousing sectors, which gradually increased to 952 thousand in 1999. In 1988, while 390 thousand were wage workers, 17 thousand were recorded as employers, and 305 thousand were self-employed. 32 thousand of the remaining workers were temporary workers, and 35 were unpaid family workers. In 1999, 441 thousand people were wage labourers while 35 thousand were employers, and 326 thousand were self-employed. On the other hand, the latest TÜİK (2023) data shows that, in March 2023, 1 million 155 thousand 816 people were working in the transportation and warehousing sector, which increased from 1 million 70 thousand 361 workers in March 2022. When we look at their positions at work, there are more than 1 million wage workers as opposed to 66 thousand employers and 321 thousand self-employed in 2022. 15 thousand remaining workers were unpaid family workers. Isan and Klaus (2013, p. 33) report that third-party highway transportation companies employed 400 thousand professionals. Unfortunately, these data seem to be the only official data regarding labour in logistics.

In short, highway transportation has been and still is the primary mode of transportation in Türkiye. That is why this study will focus, first of all, on workers in this part of the logistics sector. Moreover, logistics is limited to transportation and sometimes warehousing both by firms and public institutions in the country. However, despite focusing on highway transportation, this study will not limit logistics to transportation and warehousing because logistics is not only a more comprehensive sector, providing various services other than transportation and warehousing but also a calculative rationality or logic shaping everyday life. It is not reducible to transportation (Chua et al., 2018, p. 618). Even though there seems to be a change in the approach of the Ministry of Transportation and Infrastructure, which could be traced in their plans and annual reports, it is yet to be seen in practice. Although the Ministry's documents no longer limit logistics to transportation, particularly highway transportation, the investments and plans still prioritise highway transportation. Most of the investments throughout the decades have been directed toward highway transportation. Furthermore, although many scholars argue that highway transportation is well-developed due to this focus and investments, and there are international and Turkish firms up to international standards, it is hard to argue that

most firms in the sector conform to these standards. An important reason is that only 30 percent of logistics services are provided by logistics firms because outsourcing is still not a common practice. In this context, this study focuses on highway transportation and warehousing within cities in Türkiye. Considering that highway transportation constitutes the biggest part of the logistics sector in the country, in terms of financial value, employment, and service capacity, it is critical to analyse the conditions of labour in this subsector.

CHAPTER 5

LABOUR IN LOGISTICS IN TÜRKİYE: THE CASE OF INTRACITY TRANSPORTATION WORKERS

The logistics sector in Türkiye has multiple subsectors, ranging from transportation to warehousing, from ports and customs to customer relations, and involves millions of workers. This study focuses on one section of this enormous sector: the labour in highway transportation within cities. To provide a framework for research and analysis, Chapter 3 presents major themes or dimensions derived from the literature review on the conditions of labour in the logistics sector in general. Accordingly, not only three major dimensions are identified as the legal dimension, the socio-spatial dimension, and the technological dimension; but also examples of different case studies are discussed as well. In this chapter, these three dimensions provide a framework to evaluate the conditions of labour in the logistics sector in Türkiye. Based on the guidance from the literature review and case studies, field research was conducted between February and April 2023. In this chapter, I will first explain the methods adopted for the empirical data collection and then evaluate the collected data, structured following the framework provided in Chapter 3, under the sub-headings of the legal, socio-spatial, and technological dimensions.

5. 1. Research Sample and Research Methods

As highlighted, logistics includes all the processes and services, from planning to implementation and management, required for the continuous circulation of goods, services, people, and information, i.e. the working of the global economy existing today. Despite being one of the most important and biggest sectors, both in terms of production/revenue and the number of workers, all these processes usually take place away from the gaze of everyday life. Workers in this sector are even more invisible than the processes in general since logistical services usually operate in the background

and away from most people. Furthermore, some logistics services, such as distribution, require constant mobility from workers, making it difficult for others to notice them. In this research, henceforth, I will analyse a small section of this global logistics system based on the characteristics of labour in it. Namely, I will focus on the intracity transportation services. Figure 1 shows, in a simple way, where the intracity transportation services fit within the broader logistics sector. The highway transportation sector within cities was chosen because (1) transportation is considered to be the most significant part of logistics; (2) highway transportation is the primary mode of transportation in Türkiye both in terms of the volume and value of transported goods and people, and (3) highway transportation sector is the single biggest employer within the logistics sector. Furthermore, intracity transportation has been the scope of this research because including inter-city or international transportation services would not be plausible in the capacities of this study. Yet, further studies problematising inter-city and international transportation sectors in Türkiye would be worthwhile.

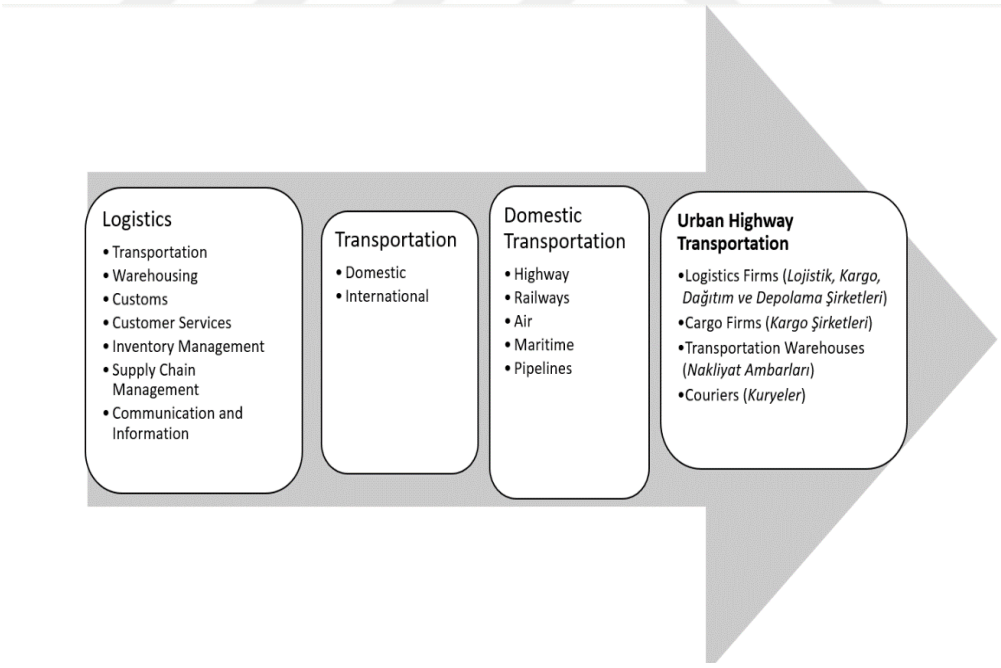


Figure 1: From Logistics to Urban Transportation

For this study, I collected qualitative data from different actors in the intracity transportation sector. In total, 14 interviews were conducted between March and April 2023, with ten workers, one trade union chairperson, one trade union secretary, and two company managers located and working in Ankara, Mersin, and İstanbul. Interviewees were contacted through the trade unions and friends and family. Relying on trusted referees helped solve the problem of gaining interviewees' trust, creating a more open environment. Questions were prepared beforehand based on the framework of the legal dimension, socio-spatial dimension, and technological dimension of work in highway transportation logistics in Türkiye. On average, interviews lasted between 20 to 25 minutes. Moreover, by spending one day at a warehouse/distribution centre, non-participatory observation is added to improve the analysis. Although they cannot be counted as one of the interviewees, conversations with a consultant working at a consulting firm providing services for logistics firms also inform the analyses in this chapter. The list of interviewees is provided in Table 2.

Among the ten workers, four of them were working as drivers at different transportation warehouses, while another one was working at a logistics firm warehouse. The other warehouse worker was working at a cargo company. The remaining four workers were drivers working for cargo companies. The two managers interviewed for this study were working at a logistics company. With this variety, all three identified business firm categories were included in this study (see below Chapter 5.2). Moreover, workers had different ages, educational, and professional backgrounds. However, although there were women working at cargo and logistics companies, they could not be included in this study for two reasons. Firstly, the jobs or tasks chosen for this study, i.e. delivery and warehouse work, are highly gendered and occupied by male workers. Secondly, I could not contact any female workers for this study either.

5. 2. The Research Field

The research includes three different types of companies providing intracity transportation services. They can be categorised as follows:

*Table 2: List of Interviewees**

Name*	Age	Occupation	Type of Company	Years of Work (in the sector)	Trade Union Membership	Education
Serdar	-	Trade Union Chairperson	Not applicable	-	Member	-
Ahmet	50	Worker/Driver	Transportation warehouse	13	Member	Lower secondary School
Mehmet	43	Worker/Driver	Transportation warehouse	20	Member	Upper Secondary School
Ali	27	Worker/Driver	Transportation warehouse	1	Member	University (not graduated)
Can	42	Worker/Driver	Transportation warehouse	15+	Member	-
Ibrahim	50	Worker/Driver	Cargo Firm	18	Member	Upper Secondary School
Halil	38	Warehouse Worker (now) Worker/Driver (for 8 years)	Cargo Firm	12	Member	Primary School
Kemal	44	Worker/Driver	Cargo Firm	11	Not Member	Upper Secondary School
Mustafa	28	Worker/Driver	Cargo Firm	5	Not Member	Upper Secondary School

Emin	-	Manager (National Office)	Logistics Firm	30+	Not applicable	-
Selim	-	Manager (Central Anatolia Office)	Logistics Firm	20+	Not applicable	-
Harun	-	Operation Chief (*Operasyon Şefi*)	Logistics Firm	30+	Not member	-
Kerem	28	Driver	- Platform Firm - Independent	8	Not member	Upper Secondary School
Deniz	-	Trade Union Secretary	Not applicable	-	Not applicable	-

* To maintain the confidentiality, the real names of the interviewees were changed.

(1) Logistics, distribution, and warehousing companies (*lojistik, kargo, dağıtım ve depolama*), i.e. logistics firms,

(2) Cargo firms (*kargo*), and

(3) Transportation warehouses (*nakliyat ambarları*).

The first category, logistics firms, usually have one or more of the terms logistics, distribution or warehousing in their names and offer various services, from transportation and warehousing to customer services and handling. They provide services for both firms and individuals, but they prefer to work with the firms since they are institutionalised companies specialised in larger freight – i.e. providing services for large amounts of goods, be it transporting, warehousing, or other services. They can be both domestic and international companies in terms of service provision. The second category of companies, cargo firms, is the one we encounter the most,

especially with the increase in online shopping. They are the standard cargo firms, such as Yurtiçi Kargo, Sürat Kargo, Aras Kargo or UPS. These companies are again institutionalised ones. The last category of companies, the transportation warehouses, offers services to firms and legal entities who need transportation, warehousing, or handling services for smaller amounts of goods. They are smaller, not institutionalized, and focus on the cities they operate within. The companies in all three categories have either distribution centres/warehouses or branch offices where the freight is stored during transportation. For example, when a cargo package is handed over to a driver by a sender in Bursa to be transported to an address in Ankara, it is first delivered to the branch office or regional office. Then, the cargo is sent to the city's distribution centre and loaded onto intercity trucks. It is then delivered to the distribution centre in Ankara. From here, it is either transferred to the branch office or a smaller distribution centre to be delivered to the destination address or sent directly to the destination address. There are sometimes regional distribution centres/warehouses as well. Some of the freight is first transferred to these regional distribution centres before being transported to the destination city. The warehouses included in this study are the ones mentioned in this example, although there are different types of warehouses. Hence, they are also referred to as distribution centres.

When it comes to the type of jobs, even though there are different jobs/positions, in the research sample, the focus is on drivers or couriers. Depending on where they are working, they could be responsible for (1) only driving, (2) driving and delivering, or (3) driving and handling the cargo both at the distribution centre/warehouse and the destination. If the drivers' job is only driving, on a usual day, they would take over an already packed car, distribute the cargo, and collect cargo from senders. For example, Mustafa, working at a cargo firm, describes a usual work day as,

> *We come to the branch office around 8:30 am to 9:00 am. Freight come from Adana. We leave at 9:00 am and distribute the cargo. Then, collect the sent packages. We return to the branch office and have the invoices issued. We usually leave by 7:00 pm. (Mustafa, 28)*

On the other hand, most drivers also load their own vehicles at the distribution centre or the branch office and carry the cargo to the delivery address. Moreover, material

handling, i.e. packing or unpacking, both at the distribution centre and at the point of delivery, can be included in the service, increasing drivers' workload. I use the term worker/driver to differentiate the drivers from those with more responsibilities than simply driving vehicles. It must be highlighted that there is no official data on how many drivers work in these jobs.

In this research, I observed two types of warehouses: (1) fulfilment centres and (2) distribution centres or branch offices. Fulfilment centres are warehouses where different kinds of logistical services are also provided, from storing and inventory to picking and packing, packaging, labelling, and shipping. On the other hand, distribution centres are places where the freight is stored until it is transferred to the next stop or its final destination. Goods can be stored for longer periods, but these warehouses do not provide the services fulfilment centres do. Since distribution centres are integral to highway transportation within cities, they are the only type of warehouses in this study. Henceforth, the terms warehouse and distribution centre are used interchangeably.

5. 3. Legal Dimension of Labour in Logistics

Chapter 3 shows that the main characteristics of work in logistics are observed to be flexibility, insecurity, low wages, lack of benefits and social rights, non-unionisation, and underemployment (see Bonacich & Wilson, 2008; Hildyard, 2020; Jaffee & Bensman, 2016; Sealey, 2010; Coe, 2014; Loewen, 2018; Kıdak, 2021). Employment agencies, intermediaries, and self-employed contractors are increasingly in demand, and employment contracts are changing accordingly (Hildyard, 2020; Sealey, 2010; Gutelis, 2015; Bonacich & Wilson, 2008; Coe & Jordhus-Lier, 2010). Although it is possible to make similar observations in the logistics sector in Türkiye, there are also differences and complications adding to the general picture drawn by scholars. Building on the previous discussions, I will discuss different types of employment and legal classifications.

To begin with, there are various overlapping categories of labour and business firms in logistics. While there are three different profession codes for drivers in question, all

are under the “Plant and Machine Operators and Installers” sector, “Car, Truck and Motorcycle Driver” group and the profession code 832 defined by the Turkish Employment Agency (İŞKUR) (İŞKUR, 2023; Ceylan, 2022, p. 97). Furthermore, categorisations of different chambers of commerce are not the same either. Different branches of the same company can be classified differently in different cities. For instance, while the Ankara Chamber of Commerce labels the companies in this study as “Transporters and Logistics Services” (38th Committee), in İstanbul, two different categories are employed, namely, “Logistics Services” (24th Group) and “Cargo, Post, and Warehousing” (75th Group). The categorisations of Kocaeli, İzmir, Bursa and Adana are even more different. The Chamber of Commerce of Kocaeli, Bursa and Adana adopt a separate category each, Transportation and Travel Agencies” (17th Committee), “Freight Transportation Services, Customs, Warehouses, and Logistics Services” (44th Group), and “Garages, Freight and Passenger Transportation Service Providers” (35th Professional Group), respectively. On the other hand, İzmir has three categories: “Freight Transportation and Warehouse Group” (45th Professional Committee), “Post and Courier Services” (46th Professional Committee), and “Logistics and Customs Consultancy” (50th Professional Committee). Consequently, different branches of the same company can be labelled differently in different cities. All these different categorisations are without clear definitions or justifications. Different chambers of commerce do not provide any reasons for their own classifications. However, this variety draws attention to the lack of standardisation and regulations in the country. These classifications, or lack thereof, make the sector more complicated to work in, both for companies and workers, since these classifications are to determine the legal framework to work within. They also make it challenging to collect information, analyse, and understand the sector. This variety of classifications and the lack of a standard legal framework were brought to my attention by one of the logistics company managers. He remarked that

> *These gaps [created by different classifications and a lack of standard regulations and supervision] within the legal framework is exploited by non-institutionalised companies and individuals. They create dangerous working conditions (and) decrease the quality of services in the sector. These firms or individuals focus only on low prices. They work without proper equipment and knowledge (leading to dangerous and low-quality services). (Emin)*

Accordingly, from the statements of the interviewees, the lack of standardization, both in terms of definitions/categories and regulations, can be observed to create dangerous, contingent and insecure working conditions for workers while creating unfair competition for firms. Dangerous and contingent working conditions are created by companies changing either the category of the firm or the classification of the workers. While different company categories can lead workers to carry cargo in unsuitable vehicles, creating dangerous conditions, inappropriate classification of workers, such as (mis)classifying them as "businesspeople" rather than workers, create contingent jobs without social rights.

In this study, I have identified three types of employment relations: independent contractors, those employed through temporary worker agencies, and those employed directly by the companies; I was also informed about another type, namely informal employment, although I could not investigate this fourth type further.

Similar to the observations of Bonacich Wilson (2008), Monaco and Grobar (2004), Jaffee and Bensman (2016), and Kıdak (2021), one group of drivers are legally classified as "independent contractors," "owner-operators" or self-employed as named in Türkiye, "artisan couriers" ("*esnaf kurye*") – the group drivers claimed to be (mis)classified as "businesspeople" above. Even though it is difficult to quantify or detail because of the lack of transparency and data, based on the interviews and my observations at the warehouse, it seems that both the logistics firms and cargo firms, the two types of companies detailed above, are increasingly employing this kind of contractors, in a way to outsource some of their operations. Although I could not interview anyone working as an "owner-operator", different interviewees informed me about their working conditions. I could also observe how one such driver was found, contracted, and received the cargo which needed to be transported. Similar to those in the US (Bonacich & Wilson, 2008, p. 212; Jaffee & Bensman, 2016, pp. 59-60) and the detailed observations of Kıdak (2021) in cargo companies in Türkiye, these drivers, i.e. artisan couriers, are paid by trip, work without contracts or with insecure contracts by trips, earn much less by trip. They are responsible for all the costs of transportation, from fuel to vehicles and safety equipment, as well as their own social insurance. Some

of them work with the same companies over a period of time, while others work with different companies or individuals. Based on my limited observations and discussions, I reach the same conclusion as the scholars mentioned above (particularly, Kıdak, 2021; Bonacich & Wilson, 2008), that is, these "independent contractors" do not show the characteristics of "businesspeople" they are claimed to be. Their work, if they have work at all, working hours, and earnings seem to be dependent on the companies they work for. They need to be available all the time in case those companies need them, and they can work. In other words, there are no limited working hours either. They do not have the legal status as *workers* and, consequently, the rights workers have. On the other hand, they do not have the advantages, rights, and financial gains businesspeople do either. Although they can earn more when they work more, they are also responsible for costs which they would not be responsible for if they were employed workers, such as spending on their vehicles and equipment, insurance payments and more. Moreover, they are even blamed for decreasing the quality of services and prices by their employers. While supervising the loading of the cargo to be carried by an independent contractor, one manager elaborated,

> *See by one cargo, three different people (their company, intermediator who contacted the driver, and the driver himself) make money, but how much?! Yet, see his truck! Not even secure enough, let alone comparing it to our vehicles! And see the cargo he carries! What will happen if it rains on the road? All will be damaged. And who know how many other places he will go before even thinking about delivering our cargo. He now knows customers. They will see him. The next time he will try to work directly with them. Just one delivery as his reference. But these drivers work for much, much lower prices. They effect the sector. Pressure prices and reduce the quality of services. Now that there are many more of these drivers, they greatly impair the quality of services in the sector. (Emin)*

One difference in Türkiye I observed and was informed about in the process of contracting one independent contractor driver is the use of intermediaries and networks to find work. Studying the loss of rights experienced by independent contractors, i.e. *esnaf kuryeler*, working in cargo companies, Kıdak (2021, p. 58) observes that these drivers may be contracted through workers agencies, employment websites, and social media. On the other hand, in this study, there are intermediaries, individuals rather

than firms or agencies, whose work is to connect these drivers to companies when companies need additional drivers. Using networks of co-workers and managers (of the employing companies) is another way of ensuring continuous work used by these drivers. However, drivers also try to contact service buyers directly, eliminating not only intermediaries but also logistics and cargo companies employing them. When asked about working with independent contractors, one manager explained,

> *When we need to deliver one cargo immediately, but do not have any vehicle available, we call our associates [intermediaries] to see if there is anyone available on that route, who can deliver our cargo as well. We agree on a price. Then, that person finds a driver and gives some of the money to those drivers. We make money, the intermediary makes money, and the driver makes money from one single cargo. But now that the driver knows the customer, if he thinks that the customer will have more deliveries, he tries to convince the customer to work directly with him, showing one successful delivery as their reference. (Selim)*

Overall, this study indicates that these drivers often depend on intermediaries and employing companies, earn much less than companies by the trip, work contingently, and do not have access to social rights, such as health insurance. Even though it is hard to trace the misclassification of these drivers as businesspeople, those categorisations nevertheless seem to be used to create flexible/contingent, insecure, and cheap outsourced work.

The second category of drivers I have identified in my field research includes those employed through temporary worker agencies. There are two different types of temporary worker agencies identified by Bonacich and Wilson (2008, pp. 234-235), both of which can be observed in Türkiye. The first type is the ones specialized in temporary worker placement. According to the two interviewed managers, these companies, called "suppliers" ("*tedarikçi*"), providing drivers and vehicles, are usually employed by logistics firms, the first category of companies in this research sample. As logistics firms provide services to producers and retailers, they are more affected by the changing decisions and the annual business cycles. Both managers and the operation chief I interviewed, all working in logistics companies, highlighted these changes throughout the year and contingencies in demand. According to them,

although there are known high and low demand periods, such as periods of low demand in December and January, and increasing demand in September, most of these changes are irregular. That is because neither producers nor retailers stock goods, not for long, creating a continuous need for transportation. Yet, they cannot make long-term plans either. Therefore, their need for vehicles and drivers, as well as warehouse workers, fluctuates throughout the year. Hence, one of the managers concludes that using temporary worker agencies supplying drivers, vehicles, and workers, while keeping their own drivers and vehicles, is the most efficient and effective way to ensure continuous and cheap circulation.

> *There are individual contractors as well. We sometimes work with them, supervise them throughout the task. But we cannot trust them in the long run. They do not have the means to provide quality services either. They cannot supply more vehicles and/or workers when needed. Therefore, we only employ them for daily emergencies. We prefer to work with several supplier firms at once. We prefer institutionalized firms. Our own vehicles and drivers are kept waiting just in case. Moreover, if we cannot agree with one of the suppliers, and lose a number of vehicles as well as workers at once, we can still depend on our own vehicles and drivers. (Emin)*

Furthermore, although managers and the operation chief I talked to complained about the lack of control over labour as those workers are not their companies' employees, they highlighted that working with these agencies instead of directly hiring more drivers increases competitive power by lowering costs and provides financial security in case contracts with main clients are not renewed. When they stop working with one of their main clients, their need for vehicles and drivers decreases suddenly. In those cases, they can simply stop paying the suppliers, which is considered to be much easier, more flexible and less complicated than hiring and firing their own employees.

On the other hand, cargo firms, the second group of companies examined in this study, reported utilising the services of temporary worker agencies specialised in employee leasing, i.e. being the legal employer. They are called "agencies" ("*acente*") by the drivers and the trade union representatives. In some cases, one parent cargo company establishes three or more temp agencies and registers their employees under these agencies. This practice is internalized to such an extent that workers do not consider

themselves employees of these temp agencies, which they directly state. Indeed, one reason for this is their social relations, which lead them to identify more with the cargo company they are working at than with their legal employer – as will be discussed later. Another reason, however, is the workers' awareness and acceptance of this practice. One worker described this system when he was directly asked if there was an agency or another employer,

> *Yes, there is an agency. But they are part of the [parent] cargo company. There is the boss. He simply relays the orders he gets from above. The (parent) cargo company has procedures. Agencies work within them. There are three agencies here [in this city], part of the parent company. (Mustafa, 28)*

One difference between my observations and the literature is that here, in Türkiye, there are different practices based on social networks, making the working conditions more acceptable and reliable for workers – which again will be discussed later. Relying on these informal networks and acceptable practices, workers sometimes do not even think about contracts. One such driver, who also does not consider himself an employee of the temp agency, when asked about contracts, said that "There is no contract. It is something between us." (Kemal, 44)

Although my initial observation is that these social networks do provide more security and better working conditions than agencies offer, it is unclear how common or effective these networks are, especially in big cities like İstanbul or Ankara. On the other hand, even though it was said to be uncommon for logistics firms to use this kind of temporary worker agencies, there are said to be companies hiring at least some of their workers through these agencies to increase their competitiveness in terms of prices they offer for the services they provide. They seem to be not preferable because the control and management practices, such as competing workers from one agency to another to decrease prices and increase effective control over workers, as discussed in Chapter 3, are not in place in Türkiye, which decreases the quality of services as well as control over labour. Cargo firms in question, for example, cannot dictate the daily work schedules of their drivers when social networks are available to those drivers. Yet, these claims and observations require further investigation.

There are also workers and drivers under standard labour contracts as employees of transportation companies. Six interviewed worker/drivers worked under such contracts without intermediaries or agencies. These workers enjoy rights based on the country's labour, social security, and industrial relations legislations, such as joining trade unions, collective bargaining and health insurance paid by their employers. Worker/drivers under other types of employment relations could not have access to such rights. For all of the interviewees in this category, the difference between the time before and after the collective agreement and unionisation was clear. Despite having short-term, two-year contracts, all the interviewed workers directly employed by the companies highlighted the perceived security and rights guaranteed by the union. In line with Dörflinger et al. (2021) study, the fact that they could access "institutional forces," i.e. the trade union, shaped their working conditions and experiences. They maintained that they could use their legal rights thanks to the union and collective bargaining.

> *Three years ago, with the unionisation, things have changed. Before the union, everything depended on the boss/manager. Now, they cannot fire you if you do not commit any crimes. (İbrahim, 50)*

> *Non-unionised, agency workers do not earn more than we do. They pay for food, insurance, transportation cost etc. We earn more. Social rights came with the union. There was no question (or concept) of working hours (meaning, overtime without payment). Workers (themselves) were earning minimum wage (before the unionisation and the collective agreement). Service buses, education aid, fuel aid during winter etc. also came with the unionisation. (Halil, 38)*

There is, of course, a need for further research on the conditions of non-unionised workers with standard contracts. However, the interviews with unionised workers with standard labour contracts also give an idea about their working conditions. Some of the interviewed workers worked at different transportation warehouses (*nakliyat ambarları*). Transportation warehouses are small- and medium-sized enterprises providing transportation and warehousing services to small- and medium-sized enterprises in other sectors. They also offer these services to individuals with cargo considered to be small for bigger logistics companies and big for cargo companies.

The trade union representatives in Ankara reported that most of the bigger transportation warehouses are unionised.

The chairperson of the All Transportation Workers' Union (TÜMTIS) highlighted in the interview that there is another category of employment relationship within the sector: informal and illegal employment. He informed that employing informal, daily, illegal, and immigrant labour became the norm for non-unionised transportation warehouses. Accordingly, there are also unpaid worker/drivers working in exchange for a place to stay and food. In short, while the working conditions of union members are reported to be much better than the standards of the sector, non-unionised workers work in much worse conditions.

5. 4. Socio-Spatial Dimension of Labour in Logistics

In Chapter 3, labour agency, management practices of control, social networks and social capital, workplace attachment, and territorial (re-)construction of legal boundaries in the workplace were identified as important aspects of this study (Jordhus-Lier et al., 2019; Warren, 2018; Heiland, 2021; Dörflinger et al., 2021; Coe & Jordhus-Lier, 2010). In addition to the discussion in Chapter 3, the analysis of the collected data underlines the importance of workplaces and experiences within everyday spaces as a determinant of quality of work life. Working hours, the intensity of work and tempo, relationships with co-workers and seniors/employers, and the physical conditions of workplaces are all components of the socio-spatial dimension. Evaluating these components of the socio-spatial dimension of labour in logistics, I try to examine the aspects mentioned above in the field research.

To begin with, the majority of the interviewed workers were drivers spending most of their working hours on the road within cities, either delivering cargo to different addresses or collecting them from different places. Therefore, one of the most significant themes in the interviews was their workplace and its effect on their relationship with their colleagues and seniors/employers, regardless of the type of company, workplace, and workplace size. Surprisingly, attitudes and experiences were observed that are not only different but also opposites. According to the interviews,

for all the workers, work days begin at 8:00 am while the end of the shifts is either at 5:00, 5:30 or 7:00 pm. Based on the interviewees' statements, the conditions of the vehicles seem to depend on the company – more prominent and more institutional companies provide better vehicles, more in line with their service standards and reputation than for the efficiency they provide. Yet, I neither observed nor was informed about vehicles in unsafe or unhealthy conditions. The number of employees in the workplaces studied during the empirical research was never more than 20. Although there were bigger centres, it was not possible to include them in this study.

In this context, the first critical differentiation between the interviewed workers was where they perceived their workplace and its relation to the social networks and relationships between co-workers. Warehouse workers' workplaces were clear: the warehouse they work at. However, it was not always clear for drivers who spend most of their time on the road, driving through the city. A young driver working at a transportation warehouse with eleven other worker/drivers would not clarify where exactly his workplace was despite being happy about being on the road most of the time.

> *We are 12 people at the warehouse. We see each other in the morning while picking up our cargo, and again at lunch as we eat at the same place. Although we get along well, I don't think we are friends or anything. We don't have a relationship. Spending most of the time on the road is really good for one's psychology. It's really good! Away from pressure [of having co-workers around]! No pressure from the boss either [thanks to being on the road]! (Ali, 27)*

Here, it seems that the lack of a group identity and a relationship between workers which could produce such an identity, combined with decreasing pressure, i.e. surveillance and control of employers over workers, or perception of it, may lead to detachment. Neither the warehouse nor the vehicle was perceived as the interviewee's workplace, while the only attachment and loyalty was to the labour union. This detachment could also be observed in non-unionised worker/drivers and drivers, although the tone was set differently. The interviewees who were legally employees of agencies (*acente*) were also detached from their legal employers. This detachment I observed in my field research seems to be similar to the one that Jordhus-Lier et al.

(2019, p. 81) observed in temporary agency workers. Temporary agency workers in their study placed themselves within the communities of the companies they were working for rather than the agency which was their legal employer (Jordhus-Lier et al., 2019, p. 81). As the workers in my empirical research were drivers spending their working hours on the road within cities, some could not develop such an attachment to their workplaces either. Instead, those who were members of a trade union seemed to develop an attachment to their union and the community they had there.

On the opposite side, there were also interviewed workers/drivers thinking that being on the road and the common difficulties they were experiencing on the road would bring them together. For instance, another transportation warehouse worker remarked,

> *We do not see each other during the day. [We may see each other] only if we run into each other during breaks… But it is difficult for 14 workers to come together. The fact that our work is on the road brings us together. We face problems with customers, with traffic… Of course, there is also the union's contribution – with all the meetings, solidarity! There is an order, there are rules. Everybody follows them. If we don't, we would be breaking the order (not only one single rule)! (Mehmet, 43)*

One aspect of this identification with a group and the importance of keeping "the order" was that workers not only wanted to shape their workplaces but also control to whom access could be granted (cf. Coe & Jordhus-Lier, 2010, p. 219). Anyone who would not be accepted into this identified group could be kept out of those workplaces. In addition to individuals, one significant group of workers who created problems/conflict between workers and employers was immigrants. Transportation warehouse worker/drivers, for instance, underlined that they did not tolerate any immigrants in their workplace, particularly because they could not be part of their community. According to the workers, having co-workers who were not part of their community would undermine the community and their collective power and gains. I cannot elaborate further since I could not examine this issue in my empirical research.

The intense emphasis on "order" repeated itself in not only the union member interviewees but almost all drivers and worker/drivers. This emphasis was also

significant for İbrahim, working at a cargo firm, but in a completely different way,

> *Nobody will interfere in others' business as long as you do your job! Before the union, we did not have any options. Now, there cannot be any arbitrary practices. The rules are obvious, everyone has to do their job! If anything happens out of this order, there will be problems. [Not only with the management but between workers as well.] There is not unrest when everyone does their job. People learn their responsibilities. For example, some eat their food but leave everything around. They should not do it! (İbrahim, 50)*

Here, "following the order" is not based on a group identity but on the peacefulness of the workplace. One common characteristic of those emphasising order is that they consider branch offices, warehouses or distribution centres they work at as their workplaces, while for others, the defining experience is being on the road. While, for the union members, it was a matter of belonging and the survival of the union's order, for non-unionised workers, social networks would come to the foreground in the interviews. For Kemal, for instance, his relationship with other workers and the branch manager seemed to be critical even though he repeatedly underlined that they would not see each other during the day. Even a legal contract was out of the question because of their relationship. In other words, demanding a contract could mean distrust between him and the management. Likewise, Ali, another non-unionised temp agency worker, described their relationship at the branch as "being like a family" since they saw each other more than they saw their families. As briefly discussed in Chapter 3, this emphasis on social networks, order and responsibility, and collective identity confirms the observations of other scholars. Jordhus-Lier et al. (2019, p. 81) observe that adapting to the existing order, performing accordingly, and developing team spirit are ways "workers actively embedded themselves in the workplace community". Contemplating the outcomes or functions of these strategies, the authors (Jordhus-Lier, 2019, pp. 85-86) point out how collegial relations and social networks in workplaces can balance insecurity and make even the most difficult challenging more manageable. Similarly, both workers' own experiences and their statements in the interviews and the remarks of managers and union representatives point out the importance of social networks and social capital.

The qualitative data show that despite the set working hours, overtime work seems to be the norm, at least for certain periods throughout the year, in all different types of companies included in the research sample. While the interviewed union members are paid for overtime work, others usually are not, except certain firms (big enough to influence the sector in Türkiye on their own). However, as Warren (2018, p. 22) claims, workers' everyday experiences in their workspaces are critical to understanding their conditions. Regardless of the payment status, the intensity of work and interference of managers/seniors/employers during the day emerged as the most critical aspects of the discussions on working hours. Not being confined to a limited physical space and not being under the supervision of employers or managers were voiced as the most appealing aspects of being a driver. Ahmet (50), for instance, stated that even being checked through phone calls cannot be the same as being under constant supervision at the workplace. In other words, having agency over their labour process, especially without struggling for it, is observed to be recounted as one of the most defining and critical aspects of working as a driver. It was more significant for less institutionalized, small- and medium-sized enterprises. Significantly, all the transportation warehouse workers mentioned that they had no managers, and their employers or freight forwarders would not interfere with their work unless there were problems they should solve. Union member interviewees, moreover, had from none to minimum interaction with their managers or employers, which they appreciated. In this context, Mustafa contemplates that despite the difficulties they may face, the agency they have made it less desirable for them to change their jobs or workplace.

> *We are mavericks. We make our own decisions. No one interferes in our business. Everyone knows their job. When we leave the branch office, we decide on everything. We distribute the cargo as we wish. It can sometimes be tiresome. Yet, it is nearly impossible to work somewhere else after getting used to this (Mustafa, 28).*

The emphasis on the agency is not limited to the drivers and worker/drivers interviewed. Halil, working at a cargo firm's warehouse, is another one underlining the agency he has over his work as a critically important aspect of their work at the warehouse, one that they would not surrender easily.

> *I work five days, 45 hours a week, from 9 am to 5 pm. I have one-hour break. I decide when and how long the break/s will*

> *be. We don't have a boss hovering over our head, telling us what to do or not to do, or asking why did or did not do something. We have been working together for a long time. So, no one tells us what to do, or gives us directions to follow. We know our jobs. Managers cannot interfere as long as we do our jobs (Halil, 38).*

Even the lack of institutionalisation in small- and medium-sized enterprises was celebrated as something positive by some interviewees since it would increase worker/drivers' agency. Comparing cargo firms where he previously worked with transportation warehouses where he now works, Mehmet underlines,

> *There is no [institutional] order in the warehouse. There is an order followed in institutional firms, cargo firms. This increases our control. We can look at the list given to us, and reject certain deliveries, noting that we cannot go there in time or that it is in the opposite direction, far away from where we will go. This cannot happen in cargo firms (Mehmet, 43).*

The agency drivers and worker/drivers have over their labour process was also highlighted by the interviewed managers and the operations chief. However, employees having this much agency was not desirable or preferable for managers/employers. They claimed that it was inefficient and should change. They deliberated on the tools and strategies of control, such as using GPS devices more effectively, following the drivers, and immediately questioning them with phone calls when they change their route. As in the example, technological tools, which will be further elaborated on in the next section, came into the picture with these discussions on control and labour agency, reminding the discussions in the literature reviewed in Chapter 3.

Another issue that deserves attention is the workload and the workers' experiences with customers. Heavy workload is defined by the interviewed worker/drivers and drivers in two different ways: (1) in terms of the number of deliveries they must complete every day, and (2) in terms of the heavy packages they need to carry without help. Both were mentioned to cause major health problems as well as continuous stress. The interviewees voiced back injuries and spinal injuries as common problems faced by worker/drivers who needed to carry heavy cargo. When it comes to completing all the deliveries in the given time, relationships with customers and the

fact that some employers or managers do not take the delays customers create into account when determining the number of deliveries were mentioned to cause problems between the employees and managers and employers. Moreover, the interviewed worker/drivers also draw attention to the time and effort needed to carry heavy cargo over long distances to places vehicles cannot go.

> *We cannot take breaks during the day. In the last month, there had been a decrease in our workload. We have a right to one-hour break, but we cannot use it. It doesn't work like that. We have to complete our deliveries. We cannot even use our union rights (İbrahim, 50).*

> *Communicating with customers causes stress. When I was a driver, I was getting physically tired. Both driving and carrying heavy weights without lift… Here, my brain is getting tired. We are on the phone all through the day, trying to convince people, and explain things (Halil, 38).*

Enjoying the recognized rights was defined as a common problem – although the extent of which could not be determined. On the other side of these relationships are those between worker/drivers and customers. From demanding additional services and delaying other deliveries to being rude and humiliating, all the interviewed worker/drivers as well as managers recounted various problems they experienced with customers. The interviews show that for drivers, the use of technological tools emerges as a problem-solver and a guarantee for them, as will be further examined in the following section.

5. 5. Technological Dimension of Labour in Logistics

The technological dimension is where we see the most significant differences between the working conditions in the logistics sector in Türkiye and the working conditions pointed out and thoroughly discussed by scholars studying other country cases. Moreover, there are critical differences in workers' perceptions of the introduction and the use of new technological tools. Chapter 3 discusses two sides of the issue of technology use: the question of automation and replacement of human labour and the issues of control and surveillance of the labour force. Both optimistic accounts focusing on the advantages and innovations and critical discussions emphasising their negative impacts, particularly on workers, were highlighted. Moreover, reactions and

resistance of workers to technological transformation constituted another aspect of discussions on the use of technology in logistics. However, two main topics brought about by the interviewees were different from the literature: (1) the prevalence and desirability of mechanisation and the use of technology, and (2) the way existing technological tools are used.

While the literature draws attention to the appeal of mechanisation and automation, i.e. replacing human labour, for employers, the interviews with transportation warehouse worker/drivers and the union representatives elucidated a completely different picture. The first answer the interviewed worker/drivers in transportation warehouses gave to the question about the use of technology was that there was none they used.

> *There is only GPS the boss uses. We do not use any other technology or equipment. Everything is done by humans. The GPS has no effect on us. It does not affect our work either. It only enables the boss to follow, if he ever does (Ahmet, 50).*
>
> *We do not use any technological equipment. Nothing! Even if the cargo weights 150-200 kgs, we will carry them. Not just at the warehouse! We carry them to addresses that cars cannot go. But there is just GPS [which does not affect our work] (Mehmet, 43).*

Accordingly, the interviews show that transportation warehouses' pricing policies and costs do not allow technological transformation nor enable the use of different tools. The same policies and related costs make technological devices undesirable as well. Contrary to the tendency or desire to increase mechanisation and decrease dependency on human labour as identified in the literature (Hildyard, 2020, p. 13), the interviewed worker/drivers working in transportation warehouses point out that employers in transportation warehouses do not show any effort to decrease dependency to human labour or increase the use of technological tools, neither mechanical nor the digital ones.

On the other hand, the interviews show that there are certain technological tools used by cargo and logistics firms. Handheld mobile terminals (or handsets), POS machines, navigation systems, tracking systems, and barcodes are mentioned as the most

commonly-used technological tools. While the literature cautions against the use of such technological tools for surveillance and control of labour as well as highlighting the negative experiences of workers discovered through a variety of case studies in different countries, so far, the analysis of the interviewed worker/drivers' and drivers' experiences and observations mainly point out to the positive aspects of technological transformation, rather than the aspects of surveillance and control over labour.

> *When I was a driver, we had paperwork in deliveries. Now, they scan the barcode with the handset. It had been almost two years since we started to use these handsets. They also function as navigation systems. This system increased the efficiency. It saves 1 to 1.5 hours [which directly benefits drivers and workers]. They don't follow or bother us (Halil, 38).*

> *POS machines and handsets made our work much easier. All the cargo is recorded. We use codes and barcodes. Now, we use phones instead of old handsets. It made the job much more comfortable. Handsets began to be used 5-6 years ago. There is also the GPS. We can be found; customers can find us. They work as guarantees for us. If I go to an address, but cannot find the customer, I will take the pictures. If I don't know the address, the navigation system can easily show me the way (İbrahim, 50).*

> *The old paperwork system would take too much time and effort Now, with phones, handsets, and bills, everything is much more practical. They save time (Kemal, 44).*

The interviews show that since these technological tools are not used to pressure workers, they are taken either as improvements or as things that do not affect their working practices negatively. Moreover, the time saved by using these technological tools is not usually taken over by employers. That is perceived as another gain by the interviewed worker/drivers and drivers. When directly asked if they think these devices are used to control them or if they are affected negatively in any way, such as physically or psychologically, none of the worker/drivers or drivers thought that technological tools are used to control them or could think of any negative impacts. Only one driver, İbrahim (50), mentioned that with the increasing use of ID numbers and codes, they faced a new problem. If the customers do not provide the information they need, they would have more problems than when they did not use these devices.

Considering Cattero and D'Onofrio's (2018, pp.145-147) observation that workers assume that the technological tools are not used to monitor or control them due to the depersonalized way of this control, interviewed worker/drivers and drivers were asked to detail how they use these technological tools. In line with the interviewed workers' statements, and contrary to Cattero and D'Onofrio's (2018) study, technological tools, mechanical or digital, do not seem to be used to control labour in a way experienced or observed by other scholars in different countries. Moreover, Cattero and D'Onofrio (2018, p. 146) observe that workers in their case study did not have autonomy or agency over the work or the tasks they performed. However, as detailed, workers having agency over their work seems to be one of the characteristics of the sector (at least regarding the intracity highway transportation sector) in Türkiye. Warehouse worker Halil's account, for instance, draws a picture completely different from the strictly controlled warehouses described in the literature (cf. Struna et al., 2012; Hildyard, 2020; Cattero & D'Onofrio, 2018) where workers cannot even use the bathroom. After the abovementioned description of his daily work, when asked about the digital programme or system they were using at the warehouse and if it was used to monitor and control workers, Halil remarked that workers were not controlled, that they determined the pace of work, break times, how they worked and could go around the warehouse talking with other workers. The programme/system recorded their operations, but they would benefit from this recording as they could not be held responsible for something they did or did not do.

Following the arguments in the literature highlighting the importance of "technology acceptance" (Mathauer & Hofmann, 2019, p. 417; Paardenkooper, 2023, p. 71; Herold et al., 2021), i.e. the willingness to accept technological changes, the interviewees were also asked if they would want further technological advancements if they would be willing to adopt new tools if they were to be introduced. While managers expressed their enthusiasm for technological developments and talked about the existing innovative projects in their companies, different groups of workers gave different answers. The interviewed worker/drivers employed in transportation warehouses were willing, but they did not expect any such technological changes anytime soon. On the other hand, employees of cargo firms were willing to adopt new technologies as long as they were not used to intensify their workload. Although they argued that these

devices do not affect their working experiences negatively, they were aware that these technologies could be used to monitor and control them.

The case of logistics firms, the first of the three different types of firms included in the research sample, however, seems to be supporting Cattero and D'Onofrio's (2018, p. 142) argument that the result of technological changes is determined by "the interaction between technical features, organizational choices -or no choices- and intervening rationalities", hence not by the technology being used. They seem to be slowly developing different practices that are not yet perceived negatively by the workers and drivers but could be in the near future. The interviewees provided some examples. For instance, digital applications are used to track the capacities, conditions, and positions of vehicles. Drivers are to take photographs of their cargo, showing the conditions of the cargo and the space left in the vehicle. They are followed by their coordinators and are required to keep them informed throughout the day. Handsets, digital applications, and GPS devices are otherwise used in the same way as cargo companies do. Currently, these practices are claimed to function as guarantees for workers, especially in case of accidents or complaints from customers. One such example is given by a cargo company driver, Ibrahim. Although he was not obligated to take photographs, he did when he could not find the customer at the delivery address. Later they were used as proof in his defence when the customer tried to blame him for not delivering the cargo. Despite being tracked through GPS devices, the interviewees do not seem pressured as the scholars observe in other countries. Instead, these changes are considered to be improvements. Incidents such as the example given by Ibrahim are reported to underpin the idea that these technologies improve working conditions. However, these observations would also require to be compared with any input from employees of logistics companies, which seem to have different practices.

Overall, this empirical research seems to be supporting Gutelis's (2016, pp. 3-4) observations that the use of technology and automation is much lower than the expectations within the literature. Although there are technological tools, from cameras to applications, available for employers and managers to use for the surveillance and control of labour, it seems, they are yet to be utilised for those

purposes. According to employees' accounts, the few technological tools that are used, such as GPS, do not have significant negative impacts on their lives. Yet, further investigation in different companies, examination of the conditions of employees who work under different types of employment relations and examinations of different parts of the logistics sector would give us a more comprehensive picture.

In short, in this chapter, I first tried to describe the details of the empirical field research and then analyse the collected qualitative data under three subtitles, namely the legal, socio-spatial, and technological dimensions, based on the framework drawn in Chapter 3. In order to understand the conditions of labour in logistics in Türkiye, I conducted interviews in the intracity highway transportation sector and made observations at these workplaces. In the legal dimension, I, most importantly, identified three types of employment relations and their implications for labour. In the socio-spatial dimension, the research focused on (1) workers' workplace attachment, (2) labourers' agency over the labour process, (3) social relationships among workers and between workers and employer/managers, and (4) workload and workers' relationships with customers. Finally, in the technological dimension, the issues of different uses of technology and surveillance and control over workers came to the foreground. In the following chapter, I will elaborate on the conclusions I drew based on this research and analysis.

CHAPTER 6

CONCLUSION

From the beginning, the aim of this thesis was to scrutinize the working conditions of labour in logistics in Türkiye. The vital importance of logistics for the efficient working of the global economy as we know it today, and the critical place of transportation in global logistics, combined with the dramatic transformation logistics went through over the last few decades, prompted questions about the role of labour in logistics. Remarkably, the consequences of the transformation of logistics on labour and the impacts of efforts to ensure continuous, seamless circulation on labour were two main issues to be investigated. The literature review indicated that these studies "often tended to homogenize" the appearances of this transformation of logistics as well as the strategies adopted by employers/managers in the sector, and their implications for labour, at the workplace (Dörflinger et al., 2021, p. 138). There were, however, studies, such as Dörflinger et al. (2021), observing substantial variation across cases in different localities. Henceforth, in this research, I tried to inspect the conditions of labour in logistics in Türkiye and compare the experiences of workers with those in different case studies conducted in different countries. Specifically, three dimensions of labour, namely the legal, socio-spatial, and technological dimensions, were critically assessed in one section of the logistics sector in Türkiye, the intracity highway transportation sector.

The study began with a discussion of the historical trajectory of the logistics sector and the academic literature on logistics in the world. In Chapter 2, four stages of the development of modern logistics from the 1950s onwards were identified. In that sense, different periods or stages could be distinguished based on major events and approaches to logistics. The first period, *Early Developments*, the 1950s and the 1960s, was characterised by the emergence and development of logistics as a response to "a

chronic problem of the capitalist system" (Bonacich & Wilson, 2008, p. 4). Recognition of logistics as an essential part of the global economy and the conceptual development of the field with the application of total cost analysis and systems approach to the field of logistics were the most important theoretical developments between the 1950s and the 1970s. On the other hand, the invention of the standard shipping container and the beginning of its widespread use, sharply decreasing distribution costs and changing the labour requirements were critical developments of this period with long-lasting consequences. These were the prerequisites for the development of the type of globalisation observed since the 1980s.

Consolidation and Institutionalisation: 1970s-1980s was the second period discussed in Chapter 2. While the 1970s experienced further and more apparent development of logistics, the 1980s were the years of major institutional changes and the reorganisation of the global economy. Despite the solid economic growth and development of logistics, at the beginning of the decade, the 1973 oil crisis and the subsequent recession devastated the logistics sector. However, as logistics in this period was considered to be "one of the last remaining frontiers for significant cost savings" (LaLonde et al., 1970, p. 45), businesses paid more and more attention to the sector. The development of intermodal transportation, deregulation, retailers' rising power, the shift from the "push system" to the "pull system," and the spread of just-in-time production can be listed as notable developments in this period. The following period, from the 1990s to today (2023), was marked by much slower and more nuanced changes, transforming production and increasing the exploitation of labour in poorer countries (Neilson, 2012, pp. 323-324). This period was also when professionals and scholars began to pay more attention to inter-organisational relationships and networks of suppliers, customers and other stakeholders. This period was also characterized by the emergence of new problems, new issues, and new approaches to logistics, both in theory and practice. The issues of sustainability, e-logistics, problems of reverse logistics, and the critical approaches to logistics can be given as examples. The last subtitle in Chapter 2, *Critical Logistics*, presents a period different from the previous one although they overlap. This period is characterized by the emerging critical approaches to logistics. This new literature started to pay more critical attention to logistics and its role in shaping contemporary political, social, and economic life.

Scholars with different research interests conducted various studies in areas such as critical geography, urban planning, global value chains, national security, national borders and citizenship, and most significantly, for this thesis, in labour studies.

Chapter 3 further elaborates on the literature on labour in logistics to outline the debates in the literature and determine which aspects or dimensions of labour in logistics should be accounted for in this study. Assessment of critical studies on labour in logistics helped identify three dimensions to be paid attention to in this thesis. These dimensions are the legal dimension, the socio-spatial dimension, and the technological dimension. Each dimension further identified key concepts and questions to guide the empirical research and analysis. Based on the previous research, the concepts of job security, types of employment, employment contracts, social rights and benefits, and unionisation were highlighted as the issues to be addressed under the legal dimension of labour in logistics both during the empirical research and analysis. The way these legal arrangements were experienced in workplaces, social networks and social capital, the relationship between workers, and workers and management/employer, workers' agency over their labour process, management practices of control, working hours, the intensity of work, and physical conditions of the workplace were the concepts that came to the foreground while elaborating on the socio-spatial dimension of labour in logistics. Lastly, different uses of technology and the concepts of surveillance and control shaped the discussions on the technological dimension. Just as Chapter 2 provided the historical context for the study and placed it within the literature, Chapter 3 drew the framework for the empirical research and analysis. The concepts highlighted by the scholars provided the starting point of the interviews.

To better understand the collected data on the labour in logistics in Türkiye, it was important to clarify the context in which these workers were situated. Therefore, Chapter 4 first briefly outlines the development of logistics in Türkiye and then the outlook of the sector in Türkiye today. Historically, the development of logistics, particularly the transportation sector, was presented in four different periods. The first period, between the 1920s and the 1950s, was shaped by investment in railways, while the second period, between the 1950s and the 1980s, was shaped by the Marshall Plan

and investments in highways. Through these investments, it was observed that highway transportation gained such prominence that it is still the primary mode of transportation in Türkiye. Similarly, international developments, the economic growth of Türkiye, the development of automotive and steel industries, and the building of logistics infrastructure -which continued well into the 1990s – were critical phenomena determining the conditions of the logistics sector in Türkiye. Finally, it was highlighted that the period from the 2000s onwards was when Türkiye started seeing the results of the investments and benefits of commerce agreements. Following the historical background, the outlook of the logistics sector in Türkiye, particularly the highway transportation and warehousing services within cities, was sketched. Accordingly, logistics is the third largest sector in the country, while highway transportation, with almost 90% of freight carried through highways, is the largest part of the sector. This mode of transportation is not only the largest service provider but also employs the highest number of people.

Against this historical, theoretical, and spatial context, Chapter 5 first introduced the characteristics of the empirical field research, and then analysed the collected data according to the theoretical framework drawn in Chapter 3. The data collected from 14 interviews were examined under three headings corresponding to three dimensions. The first dimension of labour in logistics is the legal dimension. Under this subtitle, types of employment relations and their implications for the workers were analysed. Through the interviews, I have identified three types of employment relations within the intracity highway transportation sector, that are, (1) independent contractors or owner-operators, (2) employment through temporary labour agencies, and (3) direct employment by companies. Although I could not have any further data and accordingly could not explore further, I was informed that there were also informal workers working without any kind of contracts, sometimes in exchange for food and a place to stay. Elaborations on the first type of employment relations showed that contrary to the claims, “independent contractors” were neither “independent” as their naming suggest nor they were businesspeople. Instead, interviews and observations, as discussed in detail in Chapter 5, pointed out that this type of employment relation created highly contingent, insecure, underpaid, and sometimes even dangerous jobs (cf. Jaffee & Bensman, 2016; Monaco & Grobar, 2004; Bonacich & Wilson, 2008).

When it comes to those employed through temporary workers' agencies, their conditions changed according to the type of agency they were working for. There were two types of agencies, both identified in the literature (Bonacich & Wilson, 2008) and visible in the interviews: (1) those specialised in providing drivers, workers, and vehicles for both logistics and cargo companies, as well as others who need vehicles to carry freight, and (2) those specialised in employee leasing, i.e. being the employer of record. Both groups had relatively more secure and stable jobs, and they were reported to be paid, on average, more than independent contractors. This type of employment highlighted the significance of workers' agency over their labour process, i.e. their ability to shape their daily work, (cf. Cattero & D'Onofrio, 2019) and the vital role social relations played in workers' experiences and conditions (also see Jordhus-Liar et al., 2019). Lastly, workers directly employed by companies were observed to have the most secure, better-paid jobs and better working conditions (cf. Loewen, 2018). What were these better conditions pointed out during the discussions under the socio-spatial dimension of labour in logistics.

The second dimension of labour in logistics is the socio-spatial dimension. Following Warren's (2018, p. 22) emphasis on the importance of "lived experiences within the everyday spaces and places of work" for understanding the conditions of labour as well as their opportunities and struggles, this dimension focused on everyday relationships and experiences of workers. Workers' agency over their labour process, social relationships between workers and their implications, workplace attachment, workload and intensity, working hours, and lastly, workers' relationships with customers and their management were discussed under this subtitle. Two concepts came to the fore and seemed to deserve to be highlighted here. First of all, exploring the socio-spatial dimension of labour showed the importance of social relations between workers. Those with more autonomy over their work and those with better, well-connected social relations with their co-workers seemed to have better working conditions and experiences. Similar to the cases underlined in Chapter 3, such as those by Jordhus-Liar et al. (2019) or Jaffee and Bensman (2016), social relations seem to even the balance that the exclusions created by the legal status of workers while the lack of it could not be compensated with legal status. Worker/drivers who did not have reciprocally close relationships with their colleagues, for example, could not develop

any “attachment” to their workplace despite being direct employees. On the other hand, drivers with close relationships with their colleagues would consider themselves a part of the company they were working for even when they were not direct employees but were legally employed by other companies. The impacts of close relationships are not limited to workers’ relative satisfaction and workplace attachment. While scholars such as Bonacich and Wilson (2008) or Loewen (2018) show the deteriorating influence of temporary workers’ agencies on working conditions, the interviews and my observations in this study indicate that having agency over their work and social relationships to rely on can play a balancing role, sometimes even improving working conditions. Close relationships between workers, for example, could provide some degree of job security to the workers employed through temp agencies, which was not inherent in their legal status. At workplaces which have workers with different legal statuses simultaneously at the same time, social relationships were observed to provide workers advantages their legal status does not indeed ensure. On the contrary, not being part of the community when there is an existing community among workers may cause workers to lose rights their legal status should have guaranteed. The workplace becomes the playground of the complex interplay between legal and social dimensions of labour. Moreover, workers’ autonomy, i.e. their control over their work, was emphasised by all the workers in the sample as a defining and appealing characteristic of their work. These confirm the results of the case studies providing the theoretical framework of this thesis, most importantly, Jordhus-Lier et al. (2019). However, considering this study’s small and limited research sample, these results also require further elaboration.

The third dimension of logistics labour elucidated in this study is the technological dimension. Among these three dimensions, the technological dimension provided differentiated evidence compared to the other country cases presented in Chapter 3. Most importantly, although surveillance and control of labour were two of the most critical concepts explored in the literature (Cattero & D’Onofrio, 2018; Sealey, 2010; Kanngieser, 2013; Delfanti, 2021; Jordhus-Lier et al., 2019; Hildyard, 2020), both from negative and positive perspectives, the practices in the highway transportation sector in Türkiye were significantly different from those studies since they were not observed to be the primary determinants of workers’ experiences in Türkiye. In the

first place, in some cases, technological tools that would be used for surveillance and control of workers did not exist. In places they did, these devices were not observed to be used to create increasing pressure on workers. The use of GPS devices is an excellent example of this. While the case studies in the literature (Kanngieser, 2013) reported how these devices were used to track and control the movements of workers, interviewees of this study reported how they were used to provide guarantees for them, both against their employers and customers. However, it must be noted that workers knew that these devices could, in fact, be used to control them. Furthermore, although interviewees mentioned different uses of technology in the industry, the research sample did not include any workers from those logistics companies where technology could be more controlling. Hence, this phenomenon also requires further inquiry.

Overall, it is possible to argue that the labour in logistics, studied with a focus on the intracity highway transportation sector, is characterized by variations in terms of types of companies, employment relations, the use of technology, social relationships among workers, and management practices in the Turkish case. However, certain characteristics of labour in logistics in Türkiye are different from the cases presented in Chapter 3. First of all, workers seem to have agency over their labour in the sense that they can control or at least shape their daily work, the pace of work, and how they perform their tasks. Secondly, technological tools are not used to establish high levels of control and surveillance over workers. On the one hand, some technological tools are not used because they increase the cost for the companies. On the other hand, those used to establish strict controls over labour in other country cases were observed to be used for the benefit of workers in Türkiye. For instance, the programs used within warehouses facilitate the workers' jobs by eliminating time- and energy-consuming paperwork. This provides them with more time and flexibility rather than intensifying their work. Finally, social relationships and networks, both among the workers and between the workers and the employers, seem to play significant roles in defining the conditions of labour in logistics in Türkiye, in a way, indicating less institutionalisation. Legal protections attached to workers' legal status could be easily erased by social networks at work. Likewise, having strong social relationships could provide workers with what their legal status does not.

There are also some limitations of this study. One of them is the limited scope of the empirical research. First of all, although a variety of interviewees were interviewed or observed, the sample could not include all the relevant actors. For example, there are no drivers or warehouse worker, from a logistics company, one of the three categories of companies included in this research. Still, two managers and one team leader/"operations chief" working at a logistics company were interviewed, and the operations of agency drivers and an independent contractor driver could be observed during the day I spent at a logistics company warehouse. Moreover, no independent contractor could be interviewed either. Not including their perspectives and experiences, especially while including that of the managers, of course, may create the risk of a biased analysis. Similarly, the sample does not include non-unionised workers working with standard labour contracts, nor does it includes any informal or migrant workers. These groups can be the focus of further research on labour in logistics. Furthermore, the delivery jobs and most of the warehouse jobs were highly gendered, i.e. dominated by male workers even though there were women working at different warehouse/distribution centre jobs and branch offices of cargo companies. However, the research sample of this study could neither include any women nor could it take the gender issue into account. That was because, on the one hand, there were reportedly no women working at one of the two particular jobs this study focused on, that is, driving, and, on the other hand, I could not reach and contact a female warehouse/distribution centre worker. The gendered nature of transportation and warehousing jobs could be the focus of another research. Moreover, a comparative study of two different types of warehouses, i.e. distribution centres and fulfilment centres, would be relevant and timely.

Another limitation of this research was that the state's role could not be scrutinised. It should not be forgotten that the state played, and continues to play, a central role in the development and expansion of logistics. More specifically, it changed the global economic landscape which fostered the conditions for this development and expansion (see Harvey, 2007) as the role of the state shifted from being limited to the protection of national and individual property to new tasks in making markets (see Cowen, 2014). The rise of logistics was fundamentally aided by the states changing the spatiality of capital and positioning national economic spaces within global circuits of

accumulation (Chua, 2021). However, this study did not include the state in the analysis, except for the role it played in the historical development of the sector in Türkiye (Chapter 4) and to a limited extent in relation to the legal dimension. Further research hereafter could focus on this relationship between logistics and the state and the state's role in shaping the conditions for and within the logistics sector.

The development of logistics decreased labour standards and weakened trade unions since the system created depends on uninterrupted circulation across the globe (e.g. Bonacich & Wilson, 2008). However, it also created vulnerabilities within the global capitalist system that can be a basis for building resistance, organizing labour nationally and internationally, and broadening conceptions beyond individual workplaces to global supply chains (Chua, 2021). The critical literature on logistics, in general, remarks that the rise of logistics created new sites of vulnerability and potential emancipation as well since it became a source of power not only for corporations, states, and military organisations but also for social movements and organisations trying to challenge their practices (Chua et al., 2018, p. 623). Here, the concept of counterlogistics came to be a banner for the emerging scholarly discourse focused on labour, antiracist, and anticolonial struggles, although it should be used in a careful manner (Chua et al., 2018). The rise of logistics brought about and intensification of exploitation and various other negative consequences, yet, it also consolidated global supply chains, connecting seemingly different labour forces more than before, so much so that scholars are questioning if this increased the workers' power through the strategic occupation of global supply chains, bottlenecks (Silver, 2003; Bonacich & Wilson, 2008; Cowen, 2014). Although the benefits of being a trade union member and having collective agreements were briefly mentioned under the legal dimension of labour in logistics, these issues were beyond the scope of this thesis. These vulnerabilities, labour organisations within this context, and the question of whether the logistics workers can actually utilise this potential power are worth further exploration.

REFERENCES

Acar, A. Z., & Gürol, P. (2013). Türkiye'de lojistik yazınının tarihsel gelişimi. *İşletme Araştırmaları Dergisi*, 5(3), 289-312. https://isarder.org/index.php/isarder/article/view/133

Allen, W. B. (1997). The Logistics Revolution and Transportation. *The Annals of the American Academy of Political and Social Science*, *553*, 106–116. http://www.jstor.org/stable/1048727

Bair, J. (2014). Editor's introduction: Commodity chains in and of the world system. *Journal of World-Systems Research,* 20(1): 1–10.

Ballou, R. H. (2007). The evolution and future of logistics and supply chain management. *European Business Review*, 19(4), 332-348. DOI: 10.1108/09555340710760152

Benvegnù, C., Cuppini, N., Frapporti, M., Milesi, F. & Pirone, M. (2019). Logistical gazes: Introduction to a special issue of Work Organisation, Labour and Globalisation. *Work Organisation, Labour & Globalisation*, 13(1), 9-14.

Birtchnell, T., Savitzhy, S. & Urry, J. (eds.) (2015). *Cargomobilities: Moving materials in a global age*. New York and London: Routledge

Bolstorff, P. & Rosenbaum, R. (2003). *Supply Chain Excellence*. New York: American Management Association.

Bonacich, E. & Wilson, J. B. (2008). *Getting the goods: Ports, labor, and the logistics revolution*. Ithaca & London: Cornell University Press.

Bottalico, A. (2019). Towards the mapping of port labour systems and conflicts across Europe: a literature review. *Work Organisation, Labour & Globalisation*, 13(1), 130-154. https://www.jstor.org/stable/10.13169/workorgalaboglob.13.1.0130

Bowersox, D. J. (1969). Physical distribution development, current status, and potential. *Journal of Marketing*, 33 (January), 63-70.

Bowersox, D. J., Closs, D. J. & Cooper, M. B. (2002). *Supply Chain Logistics Management*. New York: McGraw-Hill

Briken, K. & Taylor, P. (2018). Fulfilling the 'British way': Beyond constrained choice – Amazon workers' lived experiences of workfare. *Industrial Relations Journal*, 49(5-6), 438-458. https://doi.org/10.1111/irj.12232

Cant, C. (2020). The warehouse without walls: A workers' inquiry at Deliveroo. *Ephemera: theory & politics in organization*, 20(4), 131-161. https://ephemerajournal.org/sites/default/files/pdfs/contribution/20-4Cant.pdf

Cattero, B. & D'Onofrio, M. (2018). Organizing and collective bargaining in the digitized "Tertiary Factories" of Amazon: A comparison between Germany and Italy. In E. Ales, Y. Curzi, T. Fabbri, O. Rymkevich, I. Senatori & G. Solinas (Eds.), *Working in Digital and Smart Organizations* (pp. 141-164). Palgrave Macmillan. https://doi.org/10.1007/978-3-319-77329-2_8

Cengiz, Ö. (2021). *Lojistik 4.0: Türkiye lojistik sektörü durum analizi*. İstanbul: Siyasal Kitabevi.

Ceylan, B. (2022). *Labor process and work in platform capitalism: A study on motor couriers of digital platforms in İstanbul* (Master Thesis). Middle East Technical University.

Chesta, R. E. (2021). A new labor unionism in digital Taylorism? Explaining the first cycle of worker contention at Amazon logistics. In M. Klumpp & C. Ruiner

(Eds.), *Digital Supply Chains and the Human Factor*, Lecture Notes in Logistics, 181-198. Springer. https://doi.org/10.1007/978-3-030-58430-6_10

Chua, C., Danyluk, M., Cowen, D. & Khalili, L. (2018). Introduction: Turbulent circulation: Building a critical engagement with logistics. *Environment and Planning D: Society and Space*, 36(4), 617-629. https://doi.org/10.1177/0263775818783101

Chua, C. (2021). Logistics. In S. Farris, A. Toscano & B. Skeggs (eds.), *The SAGE Handbook of Marxism.* London: SAGE Publications.

Council of Supply Chain Management Professionals. (n.d.). *CSCMP supply chain management definitions and glossary*. https://cscmp.org/CSCMP/Academia/SCM_Definitions_and_Glossary_of_Terms/CSCMP/Educate/SCM_Definitions_and_Glossary_of_Terms.aspx?hkey=60879588-f65f-4ab5-8c4b-6878815ef921

Coe, N. M. & Jordhus-Lier, D. C. (2010). Constrained agency? Re-evaluating the geographies of labour. *Progress in Human Geography*, 35(2), 211-233. https://doi.org/10.1177/0309132510366746

Coe, N. M. (2014). Missing links: Logistics, governance and upgrading in a shifting global economy. *Review of International Political Economy*, 21(1), 224-256). DOI: 10.1080/09692290.2013.766230

Cowen, D. (2010). A geography of logistics: Market authority and the security of supply chains. *Annals of the Association of American Geographers*, 100(3), 600-620, DOI: 10.1080/00045601003794908

Cowen, D. (2014). *The deadly life of logistics: Mapping violence in global trade*. Minneapolis & London: University of Minnesota Press.

Cumhurbaşkanlığı Strateji ve Bütçe Başkanlığı. (2022). *2022 yılı yatırım programı yayımlandı.* https://www.sbb.gov.tr/2022-yili-yatirim-programi-yayimlandi/

CSCMP. (n.d.) *CSCMP supply chain management definition and glossary*. https://cscmp.org/CSCMP/Educate/SCM_Definitions_and_Glossary_of_Terms.aspx

Çatıkkaş, B. (2019). *Türkiye ekonomisinde lojistik sektörünün gelişimi ve lojistik sektörünün Türkiye ekonomisindeki yeri* (Master Thesis). Anadolu University.

Danyluk, M. (2018). Capital's logistical fix: Accumulation, globalization, and the survival of capitalism. *Environment and Planning D: Society and Space*, 36(4), 630-647. https://doi.org/10.1177/0263775817703663

Davis, R., Vochozka, M., Vrbka, J. & Negurita, O. (2020). Industrial artificial intelligence, smart connected sensors, and big data-driven decision-making processes in internet of things-based real-time production logistics. *Economics, Management, and Financial Markets*, 15(3), 9-15. doi:10.22381/EMFM15320201

Drucker, P. (1962). The economy's dark continent. *Fortune*, 72, 103-104.

Duran, G. & Türkoğlu, M. (2019). Lojistik sektörünün önemi ve bölgesel kalkınmaya katkıları. *Isparta Uygulamalı Bilimler Üniversitesi Uygulamalı Sosyal Bilimler ve Güzel Sanatlar Dergisi*, 1(2), 86-97. https://dergipark.org.tr/tr/download/article-file/909252

Gonos, G. & Martino, C. (2011). Temp agency workers in new jersey's logistics hub: The case for a union hiring hall. *The Journal of Labor and Society*, 14(0), 499-525. https://doi.org/10.1111/j.1743-4580.2011.00359.x

Gutelius, B. (2015). Disarticulating distribution: Labor segmentation and subcontracting in global logistics. *Geoforum*, 60(2015), 53-61. https://doi.org/10.1016/j.geoforum.2015.01.009

Gutelius, B. (2016). *Global production networks from below: Geographies of labor in logistics* (Doctoral Thesis). University of Illinois at Chicago.

Görgün, M. R. (2021). *Türk lojistik sektörünün analizi ve alternatif taşıma modelleri.* Ankara: Akademisyen Kitabevi.

Handfield, R. B., and Nichols Jr, E. L. (2002). *Supply Chain Redesign: Transforming Supply Chains into Integrated Value Chains*. Upper Saddle River, NJ: Prentice Hall.

Harvey, D. (2007). *A Brief History of Neoliberalism*. Oxford: Oxford University Press.

Hildyard, N. (2020). *Corridors as factories: Supply chains, logistics and labour. Is this the world you want?*. Counter Balance. https://counter-balance.org/publications/corridors-as-factories-supply-chains-logistics-and-labour

Hugos, M. (2003). *Essentials of Supply Chain Management.* Hoboken, NJ: John Wiley

Heiland, H. (2021). Controlling space, controlling labour? Contested space in food delivery gid work. *New Technology, Work and Employment*, 36(0), 1-16. DOI: 10.1111/ntwe.12183

Heiland, H. (2022). Neither timeless, nor placeless: Control of food delivery gig work via place-based working time regimes. *Human Relations*, 75(9), 1824-1848. https://doi.org/10.1177/00187267211025283

Heilig, L., Lalla-Ruiz, E. & Voß, S. (2017). Digital transformation in maritime ports: Analysis and game theoretic framework. *NETNOMICS: Economic Research and Electronic Networking*, 18, 227-254. https://doi.org/10.1007/s11066-017-9122-x

Henaway, M. (2023). Amazon's distribution space: constructing a 'labour fix' through digital Taylorism and corporate Keynesianism. *ZFW-Advances in Economic Geography*, 1-15. https://doi.org/10.1515/zfw-2022-0017

Herod, A. (1997). From a geography of labor to a labor geography: Labor's spatial fix and the geography of capitalism. *Antipode*, 29(1), 1-31. https://doi.org/10.1111/1467-8330.00033

Herold, D. M., Nowicka, K., Pluta-Zaremba, A. & Kummer, S. (2021). COVID-19 and the pursuit of supply chain resilience: Reactions and "lessons learned" from logistics service providers (LSPs). *Supply Chain Management*, 26(6), 702-714. https://doi.org/10.1108/SCM-09-2020-0439

Ipekçi, E. (2019). *Lojistik sektöründe çalışma koşulları: İnsan onuruna yakışır iş açısından bir araştırma* (Master Thesis). Kırklareli University.

Iskan, S. & Klaus, P. (2013). *Transport, logistics, and supply chain services in Turkey: Market sizes, market players, infrastructure and latest trends in the Turkish logistics industry*. DVV Media Group. https://www.utikad.org.tr/images/HizmetRapor/stefaniskanutikad_transportlogisticsandsupplychainservicesinturkey-0678.pdf

Jaffee, D. & Bensman, D. (2016). Draying and picking: Precarious work and labor action in the logistics sector. *The Journal of Labor & Society*, 19(0), 57-79. https://doi.org/10.1111/wusa.12227

Jordhus-Lier, D., Underthun, A. & Zampoukos, K. (2019). Changing workplace geographies: Restructuring warehouse employment in the Oslo region. *EPA: Economy and Space*, 51(1), 69-90. https://doi.org/10.1177/0308518X18787821

Kanngieser, A. (2013). Tracking and tracing: Geographies of logistical governance and labouring bodies. *Environment and Planning D: Society and Space*, 31 (4): 594–610. https://doi.org/10.1068/d24611

Katz, C. (2004). *Growing-up global: Economic restructuring and children's everyday lives*. Minneapolis: University of Minnesota Press.

Kıdak, E. (2021). *Kargo taşımacılığında kendi hesabına çalışma aldatmacası: Esnaf kurye modeli.* İstanbul: TÜMTİS Yayınları.

Korkmaz, İ. H. & Çetinkaya, C. (2019). Post-graduate theses on logistics and supply chain in Turkey: A bibliometric analysis. *Gaziantep University Journal of Social Sciences*, 18(1), 479-493.

Kuyzu, G. & Tekin, S. (2013). *TR81 düzey 2 bölgesi (Zonguldak-Karabük-Bartık) ulaşım ve lojistik master planı.* Batı Karadeniz Kalkınma Ajansı. https://www.kalkinmakutuphanesi.gov.tr/assets/upload/dosyalar/bakka-ulasimlojistik-rapor.pdf

LaLonde, B. J., Grabner, J. R. & Robeson, J. F. (1970). Integrated distribution systems: A management perspective. *International Journal of Physical Distribution*, October, 43- 49.

Levinson, M. (2006). *The box: How shipping container made the world smaller and the world economy bigger*. Princeton and Oxford: Princeton University Press

Loewen, K. (2018). Reproducing disposability: Unsettled labor strategies in the construction of e-commerce markets. *Environment and Planning D: Society and Space*, 36(4), 701-718. https://doi.org/10.1177/0263775818770453

Marx, K. (1973). *Grundrisse: Foundations of the critique of political economy*. London: Penguin Books

Mathauer, M. & Hofmann, E. (2019). Technology adoption by logistics service providers. *International Journal of Physical Distribution & Logistics Management*, 49(4), 416-434. https://doi.org/10.1108/IJPDLM-02-2019-0064

Neilson, B. (2012). Five theses on understanding logistics as power. *Distinktion: Scandinavian Journal of Social Theory*, 13(3), 322-339. DOI: 10.1080/1600910X.2012.728533

Orhan, O. Z. (2014). *Dünyada ve Türkiye'de lojistik sektörünün gelişimi*. İstanbul: İstanbul Gelişim Üniversitesi Yayınları.

Paardenkooper, K. M. (2023). Digitalization and data driven logistics at Dutch logistics SMEs. In I. Ilin, C. Jahn and A. Tick (Eds.), *Digital technologies in logistics and infrastructure* (pp. 68-78). Springer.

Rashid, M. N., Ngalawa, F. & Cil, I. (2016). Comparative study of logistics industry of Tanzania and Turkey. *International Journal of Operations and Logistics Management*, 5(2), 74-82. https://www.academia.edu/26942845/Comparative_Study_of_Logistic_Industry_of_Tanzania_and_Turkey

Republic of Türkiye Ministry of Transport and Infrastrucuture. (2022). *2053 Transport and Logistics Master Plan*. https://www.uab.gov.tr/uploads/pages/bakanlik-yayinlari/20221025-2053-ulastirma-ve-lojistik-ana-plani-eng.pdf

Rodrigue, JP. & Notteboom, T. (2009) The geography of containerization: half a century of revolution, adaptation and diffusion. *GeoJournal*, 74, 1–5. https://doi.org/10.1007/s10708-008-9210-4

Sadowski, J. (2019). When data is capital: Datafication, accumulation, and extraction. *Big Data and Society*, 6(1), 1-12. https://doi.org/10.1177/2053951718820549

Schechter, D. (2002). *Delivering the Goods: The Art of Managing Your Supply Chain*. Hoboken, NJ: John Wiley

Sealey, R. (2010). Logistics workers and global logistics: the heavy lifters of globalisation. *Work Organisation, Labour & Globalisation*, 4(2), 25-38. https://doi.org/10.13169/workorgalaboglob.4.2.0025

Sowers, E. A. (2017). Logistics labor: Insights from the sociologies of globalization, the economy, and work. *Sociology Compass*, 11(3), 1-11. https://doi.org/10.1111/soc4.12459

Smykay, E. W., & LaLonde, B. (1967). *Physical Distribution: The New and Profitable Science of Business Logistics*. Chicago: Dartnell.

Speranza, M. G. (2018). Trends in transportation and logistics. *European Journal of Operational Research*, 264, 830-836. http://dx.doi.org/10.1016/j.ejor.2016.08.032

Staab, P. & Nachtway, O. (2016). Market and labour control in digital capitalism. *TripleC: Communication, Capitalism & Critique*, 14(2), 457-474. https://doi.org/10.31269/triplec.v14i2.755

Stenmanns, J. (2019). Logistics from the margins. *EPD: Society and Space*, 37(5), 850-867. http://dx.doi.org/10.1177/0263775819834013

Struna, J., Kevin, C., Elias, E., Reese, E., Roberts, T. & Bingle, E. (2012). Unsafe and unfair: Labor Conditions in the warehouse industry. *Policy Matters*, 5(2), 1-12. https://policymatters.ucr.edu/wp-content/uploads/2014/10/pmatters-vol5-2-warehouse.pdf

Şenel, S. H. (2019). *Lojistik sektörü, Türkiye ve dünyadaki gelişimi, faaliyet tabanlı maliyetleme yönteminin sektörde uygulanması* (Master Thesis). Gazi University.

Toscano, A. (2011). *Logistics and opposition*. Metamute.org Mute, August 9. From http://www.metamute.org/editorial/articles/logistics-and-opposition.

Tsing, A. (2009). Supply chains and the human condition. *Rethinking Marxism*, 21(2), 148-176. https://doi.org/10.1080/08935690902743088

TÜİK. (2022). *Yıllık gayrisafi yurt içi hasıla, 2021.* https://data.tuik.gov.tr/Bulten/Index?p=Yillik-Gayrisafi-Yurt-Ici-Hasila-2021-45834#:~:text=%C4%B0malat%C4%B1%2C%20%13%2C0%20ile,ula%C5

%9Ft%C4%B1rma%20ve%20depolama%20sekt%C3%B6r%C3%BC%20izledi.

TÜİK. (2023). *Ücretli çalışan istatistikleri, Mart 2023*. https://data.tuik.gov.tr/Bulten/Index?p=Ucretli-Calisan-Istatistikleri-Mart-2023-49360

Türkiye Cumhuriyeti Çalışma ve Sosyal Güvenlik Bakanlığı İş Teftişi Kurulu Başkanlığı. (2014). *Kargo hizmeti veren şirketlerde çalışanların çalışma koşullarının iyileştirilmesi programlı teftişi sonuç raporu*. https://www.csgb.gov.tr/medias/6067/2015_80.pdf

Türkiye Cumhuriyeti Çevre, Şehircilik ve İklim Değişikliği Bakanlığı. (2022). *Ulaştırma türlerine göre taşınan yolcu ve yük miktarı.* Çevre, Şehircilik ve İklim Değişikliği Bakanlığı. https://cevreselgostergeler.csb.gov.tr/ulastirma-turlerine-gore-tasinan-yolcu-ve-yuk-miktari-i-85789#:~:text=De%C4%9Ferlendirme%3A,ise%200%2C38%20%25%20olmu% C5%9Ftur.

Türkiye Cumhuriyeti Ulaştırma ve Altyapı Bakanlığı Demiryolu Düzenleme Genel Müdürlüğü. (2019). *Türkiye lojistik master planı yönetici özeti*. UTİKAD. https://www.utikad.org.tr/Images/Duyuru/19082019turkiye_lojistik_master_plani_yonetici_ozeti489684.pdf

Türkiye Cumhuriyeti Ulaştırma ve Altyapı Bakanlığı. (2019). *Türkiye lojistik master planı* [PowerPoint Slides]. Ulaştırma ve Altyapı Bakanlığı. https://uhdgm.uab.gov.tr/uploads/pages/lojistik-merkezler/20191225-tlmp-sunum.pdf

Türkiye Cumhuriyeti Ulaştırma ve Altyapı Bakanlığı. (2022a). *Veri Seti Haziran 2022*. Strateji Geliştirme Başkanlığı. https://sgb.uab.gov.tr/raporlar-ve-istatistikler

Türkiye Cumhuriyeti Ulaştırma ve Altyapı Bakanlığı. (2022b*). Ulaşan ve erişen Türkiye 2002-2022.* Ulaştırma ve Altyapı Bakanlığı. https://www.uab.gov.tr/bakanlik-yayinlari

Türkiye Odalar ve Borsalar Birliği (TOBB). (2015). *Türkiye ulaştırma ve lojistik meclisi sektör raporu.* TOBB. https://www.tobb.org.tr/Documents/yayinlar/2014/ulastirma2014.pdf

Uluslararası Taşımacılık ve Lojistik Hizmet Üretenleri Derneği (UNIKAD) Sektörel İlişkiler Departmanı. (2022). *Lojistik Sektörü Raporu 2022*. UNIKAD. https://www.utikad.org.tr/images/HizmetRapor/utikadlojistiksektoruraporu2022-857.pdf

Ülengin, F. & Uray, N. (1999). Current perspectives in logistics: Turkey as a case study. *International Journal of Physical Distribution & Logistics Management,* 29(1), 22-49. https://doi.org/10.1108/09600039910253869

Warren, A. (2018). Labour geographies of workplace restructuring: An intra-labour analysis. *Antipode*, 51(2), 681-706. https://doi.org/10.1111/anti.12432

The World Bank. (2023). *Logistics performance index (LPI): International scorecard page.* https://lpi.worldbank.org/international/scorecard/radar/C/TUR/2023

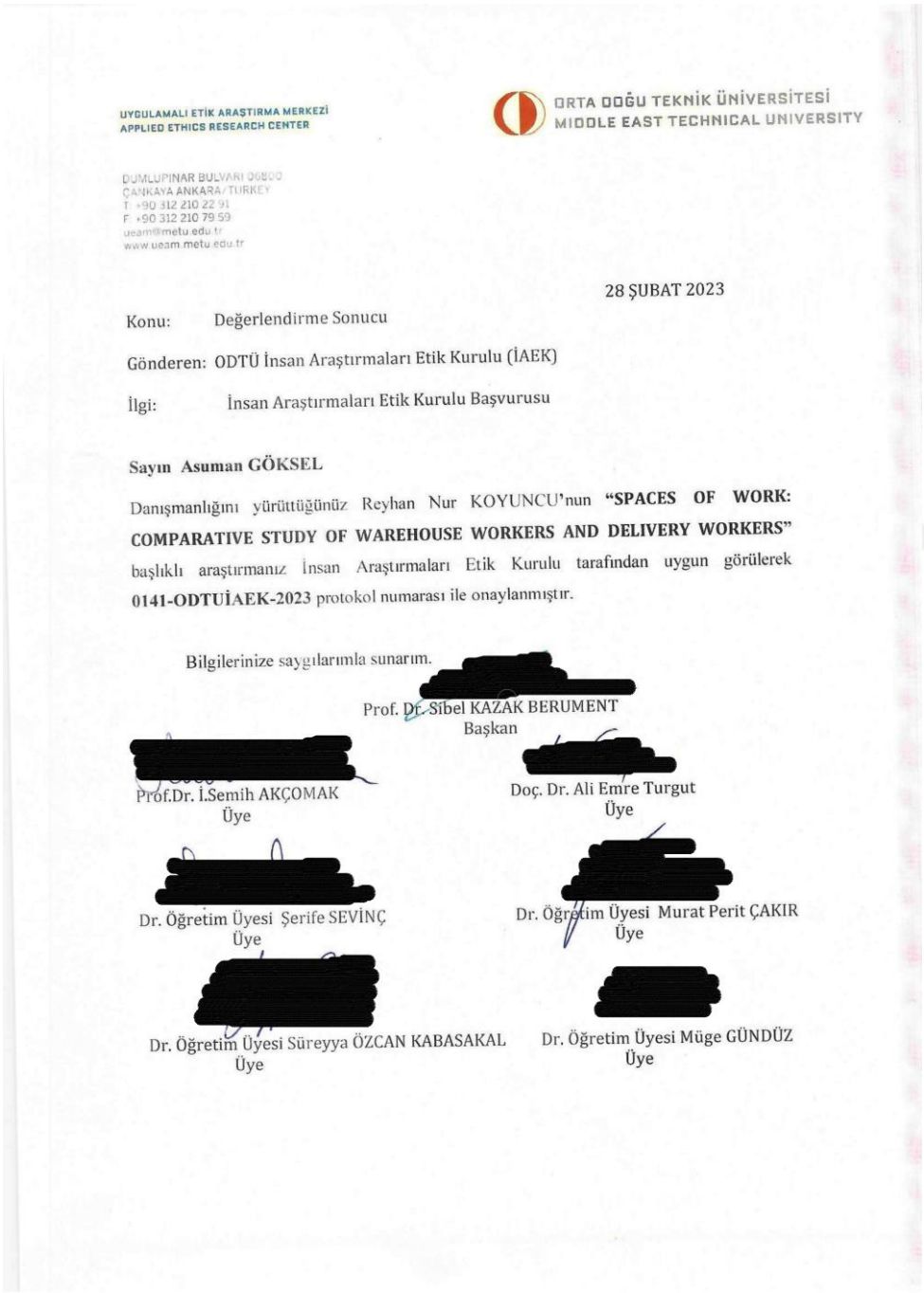
Yalman, İ. N. (Ed.). (2020). *Türkiye'de dış ticaret ve lojistik: Uygulamalı ve teorik seçme konular*. Ankara: Nobel Akademik Yayıncılık

Yapraklı, T. Ş. & Ünalan, M. (2017). Küresel lojistik performans endeksi ve Türkiye'nin son 10 yıllık lojistik performansının analizi. *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi,* 31(3), 589-606. https://www.researchgate.net/publication/318447406_Kuresel_lojistik_performans_endeksi_ve_Turkiye%27nin_son_10_yillik_lojistik_performansinin_analizi

Zuboff, S. (2019). *The Age of Surveillance Capitalism*. New York: PublicAffairs.

APPENDICES

A. APPROVAL OF THE METU HUMAN SUBJECTS ETHICS COMMITTEE



UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
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28 ŞUBAT 2023

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Asuman GÖKSEL

Danışmanlığını yürüttüğünüz Reyhan Nur KOYUNCU'nun **"SPACES OF WORK: COMPARATIVE STUDY OF WAREHOUSE WORKERS AND DELIVERY WORKERS"** başlıklı araştırmanız İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek **0141-ODTUİAEK-2023** protokol numarası ile onaylanmıştır.

Bilgilerinize saygılarımla sunarım.

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Üye

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Dr. Öğretim Üyesi Müge GÜNDÜZ
Üye

B. INTERVIEW QUESTIONS

1. Demografik Sorular

- Yaş:
- Cinsiyet:
- Medeni Hal:
- Eğitim:
- Meslek:
- İş Geçmişi:

2. Hukuki Boyut

- Ne kadar zamandır bu iş yerinde çalışıyorsunuz?
- Çalıştığınız şirket ile nasıl bir iş sözleşmeniz var?
- Bu iş yerinde çalışmaya başladıktan sonra statünüzde bir değişiklik oldu mu? Olduysa nasıl?
- Çalıştığınız şirkete doğrudan bağlı mısınız yoksa aracı bir kuruluş ile mi çalışıyorsunuz? Eğer aracı bir kuruluş varsa, onunla ilişkinizi anlatabilir misiniz?
- Yaptığınız sözleşmenin şartlarının uygulandığını düşünüyor musunuz?

3. Sosyo-Mekansal Boyut

- İşinizden bahseder misiniz?
- Bir iş gününüzden bahseder misiniz? Yapmakla sorumlu olduğunuz görevler, süreçler vs. nelerdir?
- Haftada kaç gün ve kaç saat çalışıyorsunuz? Bir günde kaç saat çalışıyorsunuz?
- Mola veriyor musunuz? Hangi aralıklarla, ne uzunlukta molalar veriyorsunuz?
- Normal bir iş gününde kaç kişiyle birlikte çalışıyorsunuz? Kaçı sizinle aynı konumdaki çalışanlar? Kaçı yöneticileriniz?

- Nasıl bir iş bölümü içinde çalışıyorsunuz? Nasıl bir hiyerarşi içinde çalışıyorsunuz?
- Sizinle aynı konumdaki çalışanlar sizinle aynı işi mi yapıyorlar?
- İş arkadaşlarınızla ilişkinizden bahseder misiniz?
- Çalışırken ve/veya molalarda iş arkadaşlarınızla sohbet edebiliyor musunuz?
- Yöneticilerinizle olan ilişkinizden bahseder misiniz? Hangi konumlardaki yöneticilerinizi hangi aralıklarla görüyorsunuz? Konuşmak istediğiniz bir konu olduğunda ilgili kişilere ulaşabiliyor musunuz?
- İş yerinizden biraz bahseder misiniz?

4. Teknolojik Boyut

- İşinizde kullandığınız cihaz, teknoloji ve dijital uygulamalar var mı? Hangileri olduğundan bahseder misiniz?
- Bu tür cihaz, teknoloji ve uygulamaların nasıl ve işinizin hangi aşamalarında kullanıldığını anlatabilir misiniz?
- Sizin açınızdan aralarında yeni kullandıklarınız var mı?
- Sizin açınızdan, bunların işinizi nasıl etkilediklerini düşünüyorsunuz?

C. TURKISH SUMMARY / TÜRKÇE ÖZET

Bu tezin amacı, Türkiye'de lojistik sektöründe emeğin çalışma şartlarını problematize etmektir. Geçmişte askeri alanda göz önüne çıkan lojistik, zaman içinde ekonomide de önemli bir yer edinmiştir. Lojistiğin günümüz küresel ekonomisinde hayati bir öneme sahip olduğu yadsınamaz bir gerçektir. Fakat bu kavram ve işaret ettiği pratiklerin askeri alandan sivil ekonomi alanına geçişi uzun yıllar almış, değişmeye başladığı 1950'li yıllardan 2023 yılına dek büyük değişimler geçirmiştir. Hızlı kentleşme, e-ticaretin ortaya çıkışı ve yükselişi, değişen tüketici davranışları ve yeni teknolojilerin ortaya çıkışı gibi gelişmeler de bu sürece katkı sağlamıştır. Zaman içinde "lojistik devrimi" olarak anılmaya başlanan bu gelişmeler sonucunda, çok sayıda farklı hizmet, lojistik kavramı altında bir araya getirilmiştir. Ortaya çıkan bu yeni durum, üretim ve tüketimi önemli ölçüde dönüştürmüş, ürün ve hizmetlerin dolaşımını rekabetin temeli haline getirmiştir. Lojistiğin artan önemi ve genişleyen alanı bu kavrama gösterilen akademik ilgiliyi de artırmıştır. Lojistiğin hem bir kavram olarak hem de bir sektör olarak geçirdiği değişimlerin ve gelişmelerin, bu sayede düşen maliyetler ve artan kar oranlarına bakıldığında, şirketlere katkı sağladığı açıktır. Bu değişim ve gelişmeler sektördeki işçilerin durumunu da derinden etkilemiştir. Öyleyse lojistiğin ekonominin ve günlük hayatın temel belirleyenlerinden biri olduğu günümüzde sektördeki emeğin durumu nedir? Çalışma koşulları nasıldır? Bu tez, bu ana sorular etrafında inşa edilmiş ve Türkiye'de şehir içi karayolu taşımacılığı sektöründe emeğin durumunu, hukuki, sosyo-mekansal ve teknolojik olmak üzere üç boyutta incelemiştir. Bu inceleme, şehir için karayolu taşımacılığı sektöründeki farklı aktörlerle yapılmış, yarı-yapılandırılmış mülakatlara dayanmaktadır.

1960'lardan bu yana, insanlar, mallar ve bilginin dolaşımına odaklanan lojistik kavramı üzerine çok sayıda eser ortaya konmuş, çok sayıda akademik çalışma yürütülmüştür. Fakat 2000'li yıllara gelinene dek lojistik, işletme ve mühendislik gibi disiplinlerin tarafsız, bilimsel ve teknik olduğu iddia edilen yaklaşımlarıyla ele alınmıştır. Mal, insan ve bilgi akışının sorunsuz biçimde devam etmesini sağlamak

tartışılmaz bir amaç olarak ortaya konmuş ve akademik çalışmalar bu amaca hizmet etmek için yapılmıştır. 2020 yılında dahi kar ve ekonomik gelişmenin lojistiğin ulaştığı ve sorunsuz bir biçimde çalıştığı yerlere gideceği vurgulanmıştır (the World Bank, 2020, p. 168). Buna göre, lojistiğin sorunsuz işlemesini sağlama amacına hizmet etmek, yapılması gerekli görülen şeyleri meşrulaştırmak için yeterli bir sebep olarak görülmektedir. Lojistiğin bu anaakım tanımları ve idealize edilmiş imajı var olan eşitsizlikleri derinleştirmiş ve yeni eşitsizlikler ve sömürü mekanizmaları yaratmıştır. Bu yaklaşımlar yalnızca lojistiğin apolitik, tarafsız ya da teknik olmayan yönlerini reddetmekle kalmamış, lojistikteki değişimlerin emek ve emeğin yeniden organizasyonu üzerinde olan etkilerini de görmezden gelmişlerdir. Bu durum, literatürde büyük bir boşluk bırakmıştır. Bir zamanlar ekonominin önemsiz bir parçası olarak görülen lojistiğin, günümüzde olduğu trilyon dolarlık bir iş, kendi başına bir sektör ve dünyanın en büyük işvereni haline gelmesi, hayret verici ve şiddetle inşa edilmiş teknolojilerin, altyapıların, mekanların, emeğin ve en önemlisi de kavramın anlamının değişmesi sonucu mümkün olmuştur. Bu dönüşümler elbette çalışılması ve anlaşılması gereken süreçlerdir.

2000'li yıllarda ortaya çıkmaya başlayan eleştirel çalışmalar, lojistiğin matematiksel hesaplara indirgenebilecek teknik bir mesele olmadığını vurgulamakla kalmamış, siyasal yönlerini de çalışmaya başlayarak lojistiğin somut altyapılardan ibaret olmadığını gözler önüne sermişlerdir. Bu çalışmalar, küresel lojistiğin arka planında yer alıp, bu sistemlerin inşasını, işleyişini ve devamlılığını mümkün kılan mülksüzleştirme, sömürü, şiddet ve yönetim mekanizmalarını çeşitli perspektiflerden çalışarak aydınlatmaya başlamışlardır. Eleştirel lojistik çalışmaları işletme ve mühendislik disiplinlerinin ötesine geçerek arkeolojiden tarihe, ekonomiden coğrafyaya, kent çalışmalarından uluslararası ilişkilere, şehir ve bölge planlamadan siyaset bilimine çok sayıda disiplin içerisinde yerlerini almaya başlamışlardır. Bu çalışmaların en önemli odak noktalarından biri de sektördeki emeğin durumudur. Bu bağlamda, lojistik devriminin emeğin durumunu nasıl değiştirdiğine belirli ülkelerden bakan çalışmalar olduğu gibi, teknoloji, yönetim mekanizmaları, kontrol ve gözetim gibi boyutlarıyla bakan çalışmalar da bulunmaktadır. Geçtiğimiz yıllarda lojistik sektöründeki çeşitli gruplara odaklanan çalışmalar (örneğin Kıdak, 2021) olsa da

dünya literatüründe olduğu gibi Türkiye'de de akademik çalışmaların çoğu lojistik sektörüne teknik açıdan bakmakta olan çalışmalardır. Bu tez, kendisini eleştirel lojistik çalışmaları içerisinde konumlandırarak ve teorik temellerini bu çalışmalar üzerine inşa ederek sektördeki emeğin durumuna Türkiye'den bakmaktadır.

İyi bir teorik ve tarihsel arka planın önemini vurgulayarak işe başlayan tez, tartışmaya Bölüm 2'de lojistiğim modern zamanlardaki tarihsel gelişimine ve bu gelişmelerle birlikte şekillenen ve bu gelişmeleri şekillendiren akademik literatüre kısa bir bakışla başlamaktadır. Bölüm 2, lojistik sektörü ve literatürünün 1950'li yıllardan günümüze dek olan gelişimine bakarak önemli olay ve yaklaşımları özetlemektedir. Bölüm, lojistiğin tarihsel gelişimini dört ana döneme ayırarak incelemektedir. Çeşitli olay ve yaklaşımlar birden çok dönemde yer alabilse de bu dönemler önemli tarihi olay ve akademik çalışma ve yaklaşımlara dayanarak belirlenmiştir. Bu dönemler kısaca şöyle adlandırılmaktadır: (1) ilk gelişmeler dönemi: 1950'lerden 1970'li yıllara, (2) konsolidasyon ve kurumsallaşma dönemi: 1970'lerden 1980'li yıllara, (3) küresel ağlar ve güvenlik dönemi: 1990'lardan 2000'li yıllara, (4) eleştirel literatür dönemi: 2000'li yıllardan günümüze.

Günümüzde bildiğimiz haliyle lojistik, 1950'li yıllarda ortaya çıkmış ve gelişmeye başlamıştır. 1950'li ve 1960'lı yıllara yayılan bu ortaya çıkış dönemi, sermaye ve şirketlerin, ekonominin daha önce görmezden gelinen bir bölümüne, dağıtıma, yüzlerini dönmeleri ile başlamıştır. 1960'lı yıllara gelindiğinde hala ekonominin keşfedilmesi ve etkili ve verimli bir biçimde kullanılmaya başlanması gerektiği söylenilen bir parçası olan lojistik, takip eden on yıl içerisinde küresel ekonomide merkezi bir yere gelmiştir. Hem teknolojik gelişmeler hem de anlayış ve yaklaşımların değişmesiyle şekillenen bu dönemde lojistiği dönüştüren ve arz zincirlerinin yönetimini kapsayacak şekilde anlamını genişleten altı önemli gelişme saymak mümkündür. Bunlar: (1) toplam maliyet analizi perspektifinin ortaya çıkışı ve sistem teorisinin lojistik alanında kullanılmaya başlanması, (2) maliyeti düşürmeye odaklanan yaklaşımlardan karı artırmaya odaklanan yaklaşımlara geçilmesi, (3) standart nakliye konteynerinin geliştirilmesi ve yaygın biçimde kullanılmaya başlanması, (4) taşımacılık ve iletişimde bilgisayarların kullanılmaya başlanması, (5)

yeni bilgi ve iletişim teknoloji ve tekniklerinin geliştirilmesi ve (6) lojistiğin profesyonel iş organizasyonları ve akademik kurumlarda kurumsal bir yer edinmesi. Tüm bu gelişmeler lojistiği ve küresel ekonomiyi temelden dönüştüren bir gelişmelerdir. Bu gelişmelerin emek üzerindeki etkileriyse hem derin hem de uzun vadeli olmuş, emeğin sektördeki ve küresel ekonomideki konumunu tamamen dönüştürmüştür. Bir yandan taşımacılık kolaylaşmış ve ucuzlaşmış, diğer taraftan daha önce yüzlerce kişinin yaptığı işi tek kişi yapabilir hale gelmiştir.

1950'li ve 1960'lı yıllardaki ortaya çıkış dönemini, 1970'li ve 1980li yıllarda konsolidasyon ve kurumsallaşma dönemi izlemiştir. 1970'li yıllar, daha önceki dönemde başlayan dönüşümlerin netleşmesi ve derinleşmesiyle geçerken, 1980'li yıllar, uzun yıllara yayılan kurumsal dönüşümler ve küresel ekonominin yeniden organize olduğu dönem olmuştur. Döneme güçlü büyüme ile başlamış olsa bile lojistik sektörü 1973 petrol krizinden derinden etkilenmiştir. Fakat maliyetlerin düşürülmesi ve karların artırılması için kalan tek alan olduğu düşünüldüğü için şirketler giderek artan bir ilgiyle lojistik sektörüne yönelmişlerdir. Dönemin önemli gelişmeleri, intermodal taşımacılığın geliştirilmesi, deregülasyon, büyük perakendecilerin yükselişi, "itme sisteminden" ("*push system*") "çekme sistemine" ("*pull system*") geçiş ve tam zamanında üretim (*just-in-time production*) metotlarının yaygınlaşması şeklinde listelenebilir.

Devamında gelen ve 1990'lı yıllardan günümüze kadar dönemi kapsayan küresel ağlar ve güvenlik dönemiyse, yeni sorunlar, yeni konular ve yeni yaklaşımlarla şekillenmiştir. Sürdürülebilirlik, tersine lojistik, sınırlar ve güvenlik gibi konular bu dönemde kendilerini göstermeye başlamışlardır. Özellikle de 2000'li yıllara gelindiğinde güvenlik konusu ve lojistik sistemleri ve küresel arz zincirlerini korsanlardan doğal afetlere, düşman saldırılarından grevlere kadar her türlü tehditten koruma çabaları ön plana çıkmıştır. Bunun yanında, bu dönem küresel arz zincirleri, meta zincirleri, küresel değer zincirleri gibi birbiri yerine de kullanılan çeşitli kavramların da yerleştiği dönemdir. Küresel arz ya da değer zincirleri bir yandan gelişmiş ülkelerdeki işçilerin üzerindeki baskıyı artırırken diğer taraftan az gelişmiş ve gelişmemiş ülkelerdeki işçileri hiper-sömürüye maruz bırakmanın yeni geliştirilen

araçlarından biri olmuştur. Bu noktada lojistik, farklı coğrafyalardaki işçileri birbirlerine, daha önce olmadıkları biçimlerde bağlayan yapı haline gelmiştir.

Son olarak, bir önceki dönemle çakışan ama aynı zamanda farklılaşan eleştirel lojistik de güncel sınamalarla şekillenmiştir. Ortaya çıkmakta olan eleştirel literatür, lojistiğe ve günümüz siyasal, sosyal ve ekonomik hayatına bakan çalışmalar yapmaya başlamıştır. Kent planlama, eleştirel coğrafya, küresel değer zincirleri, ulusal güvenlik, ulusal sınırlar ve vatandaşlık gibi kavramlar bu dönemin anahtar kavramları olmuştur. Lojistiğin; dünya ekonomisi için önemi, 1960'lı yıllardan günümüze dünya ekonomisinin dönüşümündeki yeri, günümüzde dünyanın farklı yerlerinde mülksüzleştirme, sömürü ve şiddet mekanizmaları ile neleri beraberinde getirdiği, var olan eşitsizlikleri nasıl derinleştirdiği ve nasıl yeni eşitsizlikler yarattığı, nasıl mekanlar yarattığı ve bu mekanları nasıl yarattığı, coğrafyayı nasıl dönüştürdüğü, savaşları nasıl dönüştürdüğü gibi konular eleştirel literatürün çalışmakta olduğu konular arasında sayılabilir. Bunun yanında lojistikte emek, çalışma koşulları, yeni uygulamalar, yönetim, gözetim ve kontrol mekanizmaları, örgütlenme, emeğin kaybettikleri kadar kazandığı kritik konum gibi konular da eleştirel literatürü inşa eden bilim insanlarının ilgilendikleri konular arasındadır.

Bölüm 3, başka ülkelerde lojistik sektöründe emek üzerine yazılmış çalışmaları ve bu alandaki tartışmaları ortaya koymaktadır. Bu inceleme, bu çalışmada lojistikte emeğe hangi açılardan ve ne şekilde bakmak gerektiğini belirmek için kritiktir. Lojistikte emek üzerine yapılmış çalışmaların incelenmesi, bu konuyu üç farklı boyutuyla incelemek gerektiğini tespit etmede yardımcı olmuştur. Bu boyutlar, hukuki, sosyo-mekansal ve teknolojik boyutlardır. Bölüm 3 her bir alt bölüm/boyut için, bu alandaki araştırmayı şekillendirecek olan anahtar kelimeleri ve soruları da tespit etmektedir. İş güvenliği, istihdam biçimleri, iş sözleşmesi, sosyal haklar kavramları, lojistikte emeğin hukuki boyutunu inceleyen çalışmalarda öne çıkan kavramlar olmuşlardır. Lojistikte emeğin sosyo-mekansal boyutunu inceleyen çalışmalardaysa, otonomi, sosyal sermaye, sosyal ilişkiler, iş yeri, çalışma saatleri, iş yoğunluğu ve fiziksel koşullar gibi kavramlar öne çıkmıştır. Son olarak, lojistikte emeğin teknoloji boyutuna geldiğimizde iki temel konu karşımıza çıkmaktadır: (1) teknolojinin kullanılması ve

(2) teknolojik ürünlerin işçileri gözetim ve kontrol altında tutmak amacıyla kullanılmasıdır. Bu kavramlar ve çalışmalar, bu tezin alan çalışmasında kullanılmış olan mülakat sorularına da kaynaklık etmiştir.

Türkiye'de lojistikte emeğin durumunu çalışabilmek ve anlamlandırabilmek için hem bu insanların hem de çalışmanın içinde bulunduğu Türkiye şartlarını netleştirmek kritik bir öneme sahiptir. Bu sebeple Bölüm 4 Türkiye'de lojistiğin tarihsel gelişimini ve günümüzdeki şartlarını incelemektedir. Bölüm 4, lojistik sektörünün ve özellikle de taşımacılığın gelişim tarihini dört dönemde incelemektedir. İlk dönem 1920'lerden 1950'ya kadar olan yılları kapsamakta ve demiryolları ve limanlara odaklanmaktadır. Bu dönemde ilgili yatırımlar da buna göre yapılmış, demiryolları ve limanlar geliştirilmiştir. Türkiye'nin Marshall Planına dahil edilmesiyle başlayan ve 1950'lerden 1980'li yıllara kadar olan dönemi kapsayan dönem ise etkileri günümüzde de devam etmekte olan önemli değişiklikleri beraberinde getirmiştir. Amerikalı yöneticilerin talepleriyle taşımacılık sektöründe karayollarına odaklanılmaya başlanmış, demiryolları ve limanlar uzun yıllar ihmal edilmeye terk edilmiştir. Karayollarına verilen önem ve yapılan yatırımların artmasıyla taşımacılık sektörü de bu alana yoğunlaşmaya başlamıştır. Lojistik altyapı inşaatları 1990'lı yıllarda da devam etmiştir. Bu yatırımlar günümüzde de etkilerini devam ettirmektedirler. Karayolu taşımacılığı yıllar içerisinde lojistik sektörünün en büyük alt kolu haline gelmiştir. Son olarak, 2000'li yıllarda görülen gelişmeler, bu dönemin, daha önceki yıllarda yapılmış olan yatırımların ve imzalanmış olan ticaret anlaşmalarının sonuçlarının görülmeye başlandığı dönem olarak karşımıza çıkmasını sağlamıştır. Bölümün devamında ise lojistik sektörünün ve karayolu taşımacılığı alt-sektörünün günümüzdeki genel görünümüne bakılmıştır. Buna göre, lojistik sektörü ülkedeki en büyük 3. sektör iken, ülkede yapılan taşımacılığın yaklaşık yüzde 90'ı karayolları üzerinden yapılmaktadır. Diğer taraftan, şirketlerin yalnızca yüzde 30'u lojistik hizmetleri dışarıdan satın almaktadır. Kalan yüzde 70 ise bu işlemleri kendi kuruluşları içindeki departman aracılığıyla gerçekleştirmektedir. Ayrıca lojistik hala hem devlet kurumları hem de özel şirketler tarafından taşımacılık, depolama ve bazen de gümrük hizmetlerine indirgenmektir. Bu tanım ve yaklaşımlar sektörün gelişimi üzerinde belirleyici etkiye sahiptirler.

Bu tarihsel ve teorik bölümlerin üzerine inşa edilmiş olan Bölüm 5, öncelikle ampirik alan çalışmasını ve alanı tanıtmakta ve daha sonra araştırmada toplanan verileri hukuki, sosyo-mekansal ve teknolojik boyutlarıyla incelemektedir. Bu incelemeler, şehir içi karayolu taşımacılığı sektöründe tespit edilmiş üç farklı şirket kategorisinde çalışmakta olan işçiler, yöneticiler ve sendika temsilcileriyle yapılmış olan yarı-yapılandırılmış derinlemesine görüşmelere dayanmaktadır. Karayolu taşımacılığı Türkiye'de lojistik sektörünün en büyük ve önemli alt-sektörü olması sebebiyle örnek vaka olarak seçilmiştir. Çalışmada özellikle sürücülere/kuryelere odaklanılmaktadır. Alanda faaliyet gösteren çok sayıda aktörden ancak birkaçına örneklemde yer verilebilmiş olduğundan çalışma çeşitli sınırlılıklara sahiptir. Lojistik sektöründe emeğin hukuki boyutu incelendiğinde istihdam türleri ve bunların işçiler üzerindeki etkilerine bakılırken, sosyo-mekansal boyut incelendiğinde dört farklı fakat bağlantılı kavrama odaklanılmıştır. Bunlar; (1) işçilerin iş yerlerine bağlanmaları (*workplace attachment)*, (2) işçilerin işleri üzerinde sahip oldukları otonomi, (3) işçilerin birbirleriyle, patron ve yöneticileriyle girdikleri sosyal ilişkiler ve (4) iş yükü ve işçilerin müşterilerle olan ilişkileri. Son olarak, lojistikte emeğin teknolojik boyutu incelendiğinde, sektörde teknolojik araç ve gereçlerin kullanımına ve işçileri gözetim ve kontrol altında tutmak için kullanılıp kullanılmadıklarına bakılmıştır.

Lojistikte emeğin hukuki boyutuna bakıldığında istihdam türleri ve bu türlerin emekçiler üzerindeki etkileri incelenmektedir. Buna göre sektörde faaliyet gösteren üç firma türü gözlemlenmiştir: (1) lojistik şirketleri, (2) kargo şirketleri ve (3) nakliyat ambarları. Benzer bir şekilde, sektörde görülen üç istihdam biçimi tespit edilmiştir: (1) serbest çalışan kuryeler veya esnaf kuryeler, (2) istihdam firmaları aracılıyla işe alınmış veya çalıştırılmakta olanlar ve son olarak, (3) standart sözleşmeler ile şirketler tarafından doğrudan işe alınmış olanlar. Hem farklı şirket türleri hem de istihdam biçimleri emeğin durumu üzerinde belirleyici etkiye sahiptir. İlk istihdam biçimi incelendiğinde, "kendi işlerinin patronu oldukları" söylenen serbest çalışan kuryelerin, diğer bir adıyla esnaf kuryelerin, gerçekte bağımsız çalışamadıkları görülmektedir. Bu çalışmadaki mülakat ve gözlemler, bu istihdam biçimini çalışmış olan bilim insanlarının gözlemleriyle uyuşmaktadır (Kıdak, 2021, Monaco & Grobar, 2004; Jaffee & Bensman, 2016). Buna göre, serbest çalışan kuryeler, güvencesiz ve tehlikeli

işlerde, düşük ücretlerle çalışmaktadırlar. Çalışabilmek için neredeyse 7/24 müsait olmaları gerekmekte, araçlarının masrafları ve bakımlarından kendi sosyal sigortalarına kadar birçok sorumluluğu da onlar üstlenmektedir. Tespit edilen ikinci istihdam biçimi olan istihdam firmaları aracılığıyla istihdam edilenlere baktığımızda sektörde iki farklı biçimde hizmet sunan geçici istihdam firmaları olduğu görülmektedir. Tedarikçi olarak anılan birinci firma türü, kendi araçlarına sahip veya araçları üçüncü bir firmadan kiralayan fakat şirketlere hem araç hem de sürücü sağlayan istihdam firmalarıdır. Lojistik ve kargo şirketleriyle uzun süreli ilişkiler kurarak çalışabildikleri gibi sadece ihtiyaç duyuldukça araç ve kurye sağlama biçiminde de çalışabilmektedirler. Her iki durumda da işçiler iki farklı işverene sahip olmaktan olumsuz etkilenmektedirler. Diğer taraftan, çoğunlukla kargo firmalarının kiraladığı bir geçici istihdam biçimi daha bulunmaktadır. Acente olarak adlandırılan bu firmalar, işçilerin kağıt üstünde işverenleri olmaktan öteye gitmemektedirler. İşçileri doğrudan istihdam etmek yerine bir veya daha fazla acente ile çalışarak aracı firmalarla istihdam etmek işçiler için esnek, güvencesiz, düşük ücretli işler yaratmakta, çoğu durumda her iki firma da sorumluluklarını reddedebilmektedir. Son olarak, karşımıza yasada tanımlanmış, standart, çalıştıkları firmalar tarafından doğrudan istihdam edilen işçiler çıkmaktadır. Diğer grupların sahip olmadıkları haklara sahip olan bu gruptaki işçiler, bu çalışmada değerlendirilen açılardan bakıldığında, diğer gruplara göre daha iyi çalışma şartlarına sahiptirler. Özellikle sendikal haklara sahip olmaları ve bu hakları kullanmaları çalışma şartlarında büyük fark yaratmaktadır.

Lojistikte emeğin sosyo-mekansal boyutu incelendiğinde gündelik mekanların emekçilerin deneyimleri üzerindeki önemli etkisi öne çıkmaktadır. İşçilerin emek süreçleri üzerinde sahip oldukları ya da olmadıkları otonomi, emekçiler arasındaki sosyal ilişkiler ve bunların iş yerlerindeki durumları üzerindeki etkileri, iş yerine bağlanma, iş yükü ve yoğunluğu, çalışma saatleri ve son olarak, işçilerin müşteriler ve yöneticileriyle olan ilişkileri bu noktada karşımıza çıkan ve tezde tartışılmakta olan kavramlardan birkaçıdır. Bu kavramlardan ikisi özel olan vurgulanmalıdır. Emeğin sosyo-mekansal boyutuyla incelemek işçiler arasındaki sosyal ilişkilerin önemini bir kez daha önemle vurgulamaktadır. Diğer taraftan, işçilerin, işlerini ne şekilde yapacakları üzerinde söz sahibi olmaları, iş günlerini düzenleyebilmeleri, iş

yerlerindeki durum ve deneyimlerini önemli ölçüde etkilemektedir. Öyle ki otonomiye sahip olmaları, işçiler için işlerinin olumsuz yanlarına katlanmaları ve iş değiştirmemeleri için önemli bir sebep olarak gösterilmektedir. İşleri üzerinde otonomiye sahip olmaları ve güçlü sosyal ilişkiler ağı içinde bulunmaları işçilerin çalışma şartları ve deneyimlerini geliştirebilmektedir. Bu durumun ayrıca işçilerin legal statülerinin sağlamadığı faydaları bulunabilmekte, haklar sağlayabilmektedir. Bu noktada iş yeri, lojistikte emeğin hukuki ve sosyo-mekansal boyutlarının karşı karşıya geldiği bir güç alanına dönüşebilmektedir.

Son olarak, lojistikte emeğin teknolojik boyutunu incelediğimizde karşımıza başka ülkelerde çalışmalar yapmış olan bilim insanlarının karşılaştığından çok farklı bir tablo çıkmaktadır. Öncelikle, lojistikte emeği teknolojik boyutuyla incelemekte olan veya lojistik sektöründe teknolojik araç ve gereçlerin kullanımını analiz eden çalışmalara baktığımızda, teknolojinin işçileri gözetim ve kontrol altında tutmak amacıyla kullanımının en çok vurgulan noktalardan biri olduğu görülmektedir. Diğer yandan, literatürde karşılaştığımız çalışmalarda teknoloji kullanımı, işverenler tarafından neredeyse her zaman istenilen bir şey olarak karşımıza çıkar. Halbuki bu çalışmada görülen her iki durum da bunların zıttıdır. Teknolojik araç ve gereçlerin kullanımı, işverenlerin, özellikle de nakliyat ambarlarındaki işverenlerin, maliyet ve fiyatlandırma politikaları nedeniyle istenilmeyen bir şey olabilmektedir. Teknolojik araç, gereç ve dijital programların kullanıldığı lojistik ve kargo firmalarındaysa bunlar henüz işçileri gözetim ve kontrol altında tutmak amacıyla kullanılmamaktadır. Bu araç, gereç ve dijital programların kullanılmaya başlanması ya işçilerin gündelik hayatında hiçbir değişikliğe yol açmamış ya da işlerini daha kolay ve verimli hale getirerek olumlu yönde değişiklikler yapmıştır. Bu durumda işçilerin, bu teknolojik araç, gereç ve programlarla kurdukları ilişkiler de literatürde gözlemlenenlerden farklıdır. Teknoloji kendisine direnilen bir şey değil, sağladığı avantajlar ve kolaylıklarla talep edilen bir şeydir. Fakat mülakatlar, işçilerin, teknolojik araç, gereç ve programların onları gözetim ve kontrol altında tutmak için kullanılabileceğini bildiklerini de göstermektedir.

Her şeyi birlikte düşündüğümüzde, lojistik sektöründe emeğin durumunun, şehir içi karayolu taşımacılığına odaklanılarak çalışıldığı bu tezin ulaştığı sonuç, sorunsuz ve devamlı dolaşımı sağlamak amacıyla kullanılan stratejilerin ve lojistiğin yıllar içinde yaşadığı dönüşümlerin Türkiye'de lojistik sektöründe homojenleşmeye değil, farklılaşmaya neden olduğudur. İzlenen stratejiler ve bunların yarattığı sonuçlar, şirketlere, istihdam biçimlerine, teknolojik araç ve gereçlerin kullanıma, işçiler arasındaki sosyal ilişki ve ağlara ve yönetim pratiklerine göre değişim göstermektedir. Bununla birlikte, Türkiye'deki örnekler arasında ortak özellikler görülebildiği gibi, Türkiye'de yaygın biçimde görülüp literatürdeki örneklerde görülmeyen veya nadiren görülen özellikler de bulunabilmektedir.

Türkiye'de yaygın görülen durumlardan biri, işçilerin işlerini nasıl ve hangi hızda yapacaklarını belirleyebilmeleri ve iş günleri üzerinde otonomiye sahip olmalarıdır. Özellikle bu tezde odaklanılan kuryelerin sahip oldukları bu otonomi, çalışma şartlarını olumlu yönde etkilemekte, deneyimlerini iyileştirmekte ve işlerini cazip hale getirmektedir. Özellikle de daha fazla kontrol altında bulundukları işlerde çalışmış olan işçiler bu otonomiyi vazgeçilmez bir avantaj olarak değerlendirilmektedir. Lojistik sektörünün, Türkiye'de yaygın olduğu gözlemlenen fakat diğer ülke örneklerinde az görülen bir diğer özelliği teknolojik araç ve gereçlerin işçilerin çalışma koşullarını etkilemeyecek veya iyileştirecek biçimde kullanılıyor olmaları, onları gözetim ve kontrol altında tutmak için kullanılmamalarıdır. Son olarak, her ne kadar benzer durumlar farklı bilim insanları tarafından farklı ülkelerde de gözlemlenmiş olsa da işçiler arasındaki sosyal ilişkilerin kullanımı da burada vurgulanması gereken bir durumdur. Bu ilişkiler çoğu zaman çalışma şartları ve işçilerin gündelik deneyimlerini çeşitli biçimlerde iyileştirmek için kullanılmaktadırlar. Günlerinin büyük bir bölümü yolda geçiyor olsa da bir topluluğa ya da bir grup kimliğine sahip olmak kuryeler için önemli görülmektedir. İş yerinde bir topluluğa ya da grup kimliğine sahip olmadıkları noktalarda bu boşluk çeşitli şekillerde doldurulmaktadır. Belirli bir firma kategorisinde kurye olarak çalışmak bir kimlik sağlayabileceği gibi, sendika üyeliği de bir kimlik ve topluluk sağlayabilmektedir. Topluluk veya grup kimliği bir düzeni beraberinde getirebildiği gibi, bunların olmadığı yerlerde de işlerin yürüyebilmesi için bir düzene ihtiyaç duyulduğu düşünülebilmektedir. Bir topluluğa, grup kimliğine ya

da düzene sahip olmak her zaman için işçilerin çalışma şartlarını ve gündelik deneyimlerini geliştirme çabalarıyla iç içe geçmiş biçimde gelmektedir. Her ne kadar bir topluluğa ya da grup kimliğine sahip olma isteği maddi kazançlara indirgenemez olsa da bunların varlığı çalışma şartlarını iyileştirmeye ve zorlukların dengelenmesine de hizmet edebilmektedir.

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