

# Why the Sectoral Context Matters for Platform Work



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## 1 Introduction

Sectoral platforms such as *Uber*, *Helpling*, *Deliveroo*, and *Airbnb* offer digitally mediated location-based services. In doing so, they operate in, must adapt to, and can disrupt industries and service markets they enter. The contribution argues for considering the sectoral embeddedness of platforms to explain how and to what extent they are transforming employment relations and service provision. It examines the industry context of sectoral platforms, how sectoral platforms challenge the traditional industry structure through new patterns of work organization, market strategies, and technological innovations, and what this means for sectoral regulation. We compare two types of sectoral platforms: one that brokers cleaning and household services (such as *Helpling*) and the other that provides individual passenger transport services (such as *Uber*) in two cities and regulatory contexts (London/UK and Berlin/Germany). While *Uber* and similar platforms gained a foothold in the taxi industry, challenging existing business models and drastically changing the regulatory context of the taxi industry, platform-mediated cleaning and household services have not radically shaped the sectoral context. Two factors, digitized work organization and the specific sectoral context, explain the different outcomes in terms of market structure, new business models, and regulatory responses.

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## 2 Conceptual Approach and Methodology

Sectoral platforms provide digitally mediated services for a specific industry (Dijk et al., 2018): *Uber* is an example of providing transportation services; *Helping* is a major platform that brokers household and cleaning services. The contribution explores the activities of these platforms through a *sectoral lens* (2.2), as the industry-specific market structure, work organization, and sector regulation are relevant for assessing whether and how platforms can expand their business and shape working conditions as well as labor and industry regulations. At the same time, sectoral platforms have a certain *common* governance form (2.1), namely lean work organization and digitized coordination, which determine service quality and working conditions and—to a greater or lesser extent—have an impact on the industry.

### 2.1 The Governance Model of the Sectoral Platform

First, *highly efficient digital tools* have enhanced the ability of platforms to “make markets”, contributed significantly to lowering transaction costs, and have rearranged informational relationships among clients, service providers (that is the company or independent contractor or self-employed responsible for carrying out the service), and lead firms (Aloisi, 2020; Baronian, 2020). Intermediation between potential clients and service providers has become easier because the app is a low-threshold and simple tool for acquiring the service. At the same time, app-based and algorithmic monitoring of the service provision puts high-performance pressure on the service provider and ultimately on the worker (Kellogg et al., 2020; Veen et al., 2020). In this sense, these powerful digital tools challenge incumbents’ customer engagement and service organization strategies.

By prescribing a certain technology (e.g., software algorithms) and terms of interfering with customers, the service provider’s individual decision on how, when, and where to provide the service and how much to earn from is constrained. The provider is also cut off from key information and processing (such as payment mode, list of customers, rating, etc.), as the platform monopolies this information and is the bottleneck for tapping into the customer market. Of course, there are also counterstrategies such as multi-homing and disintermediation that undermine the platforms’ extensive control over their service providers (Zhu and Iansiti, 2019). Multi-homing erodes the monopoly position that platforms can gain through network effects when service providers use multiple apps to access an expanded customer base, as is the case with *Uber* drivers. When the service provider or worker establishes direct contact to the customer and forgoes the intermediation by the platform, the position of platforms as a bottleneck for intermediation is threatened. Customers who will use the offered service more than once no longer need the platform as an intermediary. This phenomenon can be observed in the cleaning industry.

Second, sectoral platforms want to be *lean* (Srnicsek, 2017), meaning that they keep the core intangible assets (technology and data) in their hands while outsourcing the provision of the actual activity (transport, cleaning, etc.) to a dispersed workforce. They do not see themselves as producers of a service but are mere “enablers” and gain from the productive activities performed by independent contractors through a rent from every transaction the platforms facilitate. They maximize profits not (directly) through productive enterprise activities but through the high valuation of assets due to their technological advantage, through regulatory arbitrage (Tomassetti, 2016) and tax avoidance (Fumagalli et al., 2021) and outsourcing of productive activities to subsidiaries and formally independent entities, including offloading costly employer responsibility (Weil, 2019).

However, according to Aloisi (2020, 26), sectoral platforms rely on two governance logics, the hierarchical imposition of rules as in a traditional firm (setting goals, surveilling work, providing feedback, and imposing sanctions) and the price-based allocation mechanism of markets (dynamic pricing, outsourcing of the actual service). This means—and important court rulings prove this fact—that some of these sectoral platforms exercise managerial power, possess the core means of production (the technology and the data), have the ability to intervene in labour processes and are the masterminds of service provision to an extent that they can no longer be called mere connectors or intermediaries of digital services (Todolí-Signes, 2020). They must assume the responsibility of employers. The extent of platform control through digital means and intrusion into the relationship between customers and workers, respectively service providers, varies from industry to industry.

## 2.2 *Sectoral Embeddedness and Market Regulation*

As sectoral platforms, *Helpling* and *Uber* navigate in sectoral fields, where other companies already operate, a specific market structure prevails, and regulation serves several purposes: industry collective bargaining agreements create a level playing field for employment; product market regulations govern market access, requirements, and standards for service provision; other city and public policies affect demand for these services from the customers’ perspective.

Previous research has emphasized the sectoral context as a critical factor for explaining employer and trade union strategies, patterns of precarious work, or employment outcomes. Keune and Pedaci (2020) conducted a comparative study of precarious work and trade union strategies in three sectors (construction, industrial cleaning, and temporary agency work) in seven European countries. They identified similarities within sectors in different countries as well as differences across sectors in aspects of precarious work, which stem from similar employer strategies and work organizations. Such cross-sectoral differences and intra-sectoral similarities are also at stake in the analysis of work performed for sectoral platforms or “traditionally” provided: work organization and working conditions in the taxi sector in Germany

and the UK have similar characteristics, so do those in the cleaning and domestic services sector. The impact of platformization varies greatly from sector to sector.

Also, product markets as well as trade regulations tend to be comparable across national or city contexts and within sectors, as platforms do not enter wasteland but face more or less protective, detailed, and enforced industry regulation. Muszyński et al., (2022, 17) emphasize the importance of product markets, in which platforms operate, to assess the employment outcomes they generate. Using the example of food delivery, they show that product market regulation setting rules for market entry and consumer protection affects working conditions by limiting competition and establishing minimum standards to produce goods and services. The taxi industry is a highly regulated sector in terms of trade regulation, while cleaning and domestic services were not even considered as “proper work” (International Labour Organization, 2021) until recently, let alone an industry subject to enforceable standards.

Crouch et al. (2009) and Thelen (2012, 145) consider specifics and requirements of the sector as crucial for companies to adapt or deviate from the established (national) governance system. Sectoral platforms therefore not only are rule takers from the national institutions, but also rule makers of the local or sectoral system. On the one hand, sectoral platforms operate within or are forced to comply with the rules and regulations that govern the industry. On the other, innovation and competition constantly challenge the usefulness of this institutional framework and open the search for alternatives. The sectoral platforms first circumvent or ignore the regulations setting labour and service standards and then find substitute solutions and negotiate compromises that affect the industry as a whole.

### **2.3 Methodology**

The empirical data are analysed by comparing traditional and platform-induced market structure, work organization, and innovations in service provision as well as their regulatory embeddedness in the cleaning and household services and the taxi industry in two cities and institutional contexts, Berlin/Germany and London/UK.

The empirical basis of our findings is quantitative and qualitative data collected as part of the PLUS Project. The primary quantitative data on the demand for services mediated by sectoral platforms (cleaning, taxi services, food delivery, short-term rental) are based on the results of an online survey conducted in Barcelona, Berlin, Bologna, Lisbon, London, Paris, Tallinn between November 2020 and January 2021 with 8,149 respondents (Haidinger et al., 2021). To contextualize platforms' activities, we searched for comparable secondary Eurostat and municipal statistical data showing how employment and active firms in the related industries have evolved in the last decade. Data from the Labour Force Survey and Structural Business Survey for the period 2008–2021 were extracted from the Eurostat database and national sources.

To understand quantitative trends in the two industries, we analyse qualitative data based on outcomes from expert and stakeholder interviews in two rounds. The first exploratory round of data collection included 58 interviews with industry experts, local administrators, trade unions, politicians, and members of citizens' committees, as well as 8 European-level interviews. These interviews, which focused on different facets of platform work were conducted between April 2019 and October 2019 and resulted in seven city reports. The second round of expert interviews, in the form of individual and focus group interviews, focused on developments in specific industries (cleaning and household services, taxi services, courier and delivery services, short-term rental) where sectoral platforms are active. A total of 52 industry experts were interviewed between January 2021 and May 2021, resulting in seven city industry reports. For this paper, we use interview data processed from the city and industry reports on cleaning and household-related services and taxi services in Berlin and London.

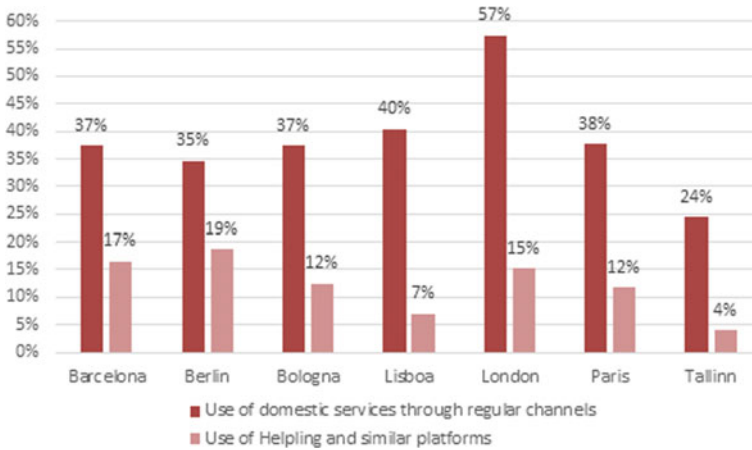
### 3 Sectoral Data and Market Structure

#### 3.1 *Cleaning and Domestic Services*

The cleaning sector can be divided into two major subsectors: industrial cleaning, where companies provide cleaning services to other companies and private households, and domestic services, where the private household acts as a direct employer of the cleaner. So far, platforms such as *Helpling* have mainly been involved in cleaning activities in private households. Whether the platform companies will expand into commercial cleaning is highly uncertain.

According to an ILO report (International Labour Organization, 2021, 48), the number of companies offering platform-mediated domestic and care work has increased eightfold in the past decade, from 28 platforms in 2010 to 224 platforms in 2020. Despite the growth trend of such companies, the PLUS online survey (Haidinger et al., 2021, 23–25) shows that the use of domestic services through channels other than platform-mediated is much more widespread (Fig. 3.1). Platform use is highest in Berlin, where 19% reported using household services via *Helpling* or similar platforms. London shows the highest propensity to use domestic services through traditional channels, with 57% of respondents reporting frequent or occasional use.

In terms of current and future demand trends, industry experts pointed out that demand for household services is steadily increasing (European Federation for Services of Individuals, 2018, 13; Nuria & Ruiz, 2020), and demand is outstripping supply. Therefore, platforms that offer the placement of cleaning staff are entering a market that is far from saturated.



**Fig. 3.1** Use of domestic services through conventional channels compared to Helpling and similar platforms

On the supply side of the domestic services market, the labour market, traditional service provision dominates. In Germany, *Helpling* contracts 10,000 self-employed cleaners to over 100,000 households.<sup>1</sup> In Italy, *Helpling* has a very limited presence, serving 1,200 clients with a total staff of 250 women and 50 men, about half of whom are Italian, according to industry experts. No numbers are available for the UK. This compares with over 162,000 domestic workers (personnel employed by private households, 2021) in Germany, 65,000 in Italy and 43,300 in the UK (2019) and over 1.8 million in the EU-27, of which 89% are women, recorded in the Eurostat Labour Force Survey. Even this data could be an underestimate: according to register data in Germany, the number of mini-jobs holders (i.e., jobs earning less than EUR 450) in private households has surged from 103,000 (December 2004) to 324,000 (March 2021),<sup>2</sup> which is 200,000 more persons than Eurostat reported for 2021.

Undeclared work remains particularly prevalent in the domestic work sector. According to ILO estimates (2021, 277), the number of undeclared domestic workers employed directly by private households in Northern, Southern, and Western Europe was 1,519 million in 2019. Moreover, working hours can be underdeclared by employing domestic workers on a part-time or marginal basis and paying the rest in cash.

In Berlin and Germany, the market for paid domestic cleaning, in which *Helpling* mostly operates, is dominated by mini-jobs, undeclared work, and self-employment, as well as local companies or companies with a franchise system. The generally binding wage for cleaners employed by companies has risen to EUR 13 per hour in

<sup>1</sup> <https://www.helpling.de/pressemitteilung-helpling-gruender-ueber-gesetzesentwurf-von-hubertus-heil>.

<sup>2</sup> [https://www.minijob-zentrale.de/DE/02\\_fuer\\_journalisten/02\\_berichte\\_trendberichte/quartersberichte\\_archiv/2021/1\\_2021.pdf?\\_\\_blob=publicationFile&v=2](https://www.minijob-zentrale.de/DE/02_fuer_journalisten/02_berichte_trendberichte/quartersberichte_archiv/2021/1_2021.pdf?__blob=publicationFile&v=2).

2022, which also includes temporary agency workers.<sup>3</sup> However, most cleaners in private households continue to earn the federal minimum wage of EUR 12 per hour, if they are paid correctly.

In London and the UK, temporary agencies, cleaning companies, and domestic workers hired directly by private households are active. According to Nuria and Ruiz (2020), agencies often insist on self-employment of domestic workers. In these cases, however, bogus self-employment often occurs. Some domestic workers are employed as “live-in” in clients’ households, meaning that they work and live in the employer’s household.

To sum up, the market for cleaning and domestic services is a huge and growing market. Precarious work in the form of undeclared or underdeclared work, temporary agency work, live-in, or with multiple employers is widespread. Women in particular, often with migrant backgrounds, work short shifts and frequently switch between employment or agency-based work and informal domestic work. Earnings from informal work often supplement income from the domestic worker’s main jobs. Payment is close to the minimum wage.

### 3.2 Taxi Services

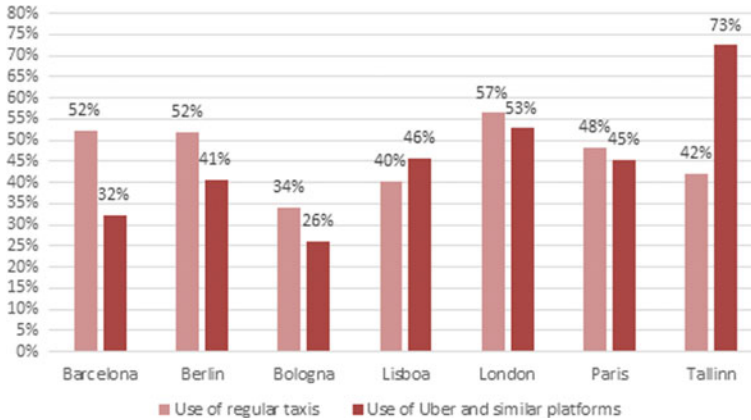
The taxi services industry can be divided into two main segments: the traditional taxi trade (subject to licensing, price regulation, and vehicle restrictions) and ride-hailing services (with fewer regulatory restrictions), in which *Uber* and similar platforms are active.

The PLUS survey data allowed for a comparison between the use of *Uber* and similar platforms on the one hand and traditional taxi services on the other (Haidinger et al., 2021, 21–23). As shown in Fig. 3.2, the seven PLUS cities can be divided into three subgroups: in Barcelona, Berlin, and Bologna, the user share for regular taxis is significantly higher than the use of platforms; in London and Paris, regular taxis also have more users than transport services offered via platforms, but only by a small margin; in Lisbon and Tallinn, more respondents use *Uber* and similar platforms than regular taxis. Overall, the use of platforms is much more widespread in passenger transportation compared to domestic services.

Over the past decade leading up to the onset of the Covid-19 pandemic, demand for taxi services including the activities of ride-hailing services, has increased. This is partly a result of a general economic boom, especially city tourism, and partly a result of an increased supply of taxi services due to the entrance of platform-mediated rides. Data on employment from the Eurostat Structural Business Survey are incomplete and, where available, show a slight increase (from 14% in the United Kingdom to 38% in Portugal) in the number of persons employed in taxi services (including ride-hailing) between 2008 and 2019. In Germany, around 141,000 persons were

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<sup>3</sup> [https://www.lohn-info.de/mindestlohn\\_gebaeudereinigung.html](https://www.lohn-info.de/mindestlohn_gebaeudereinigung.html).



**Fig. 3.2** Use of traditional taxi services compared to Uber and similar platforms

employed in the industry in 2019 (as many as 164,100 in 2018), 17% of them as working proprietors. Compared to 2008, this is an increase of 20%.

City-level data allow a comparison between traditional taxi services and ride-hailing. In Berlin, the market entry of platforms (Uber 2014, and later FreeNow, 2019) gradually shifted the private passenger transportation from the taxi to the rental car business: in 2016, 8,313 taxis and 1,593 rental cars were available; in 2021, the number of taxis dropped to 5,800, while the numbers of rental cars more than doubled to 4,000.<sup>4</sup> Taxi companies usually employ their drivers, but a significant proportion of drivers also works self-employed: In Berlin, 81% of all taxi companies were one-taxi companies in 2016.<sup>5</sup> Uber drivers in Berlin are mostly employed by rental car companies. Employees should be covered by the minimum hourly wage, but this is rarely paid, and income is usually commission-based and does not cover waiting times, according to the expert interviews.

In England, more than three quarters (76%) of all licensed vehicles were Private Hire Vehicles (PHVs), and about one-quarter (58,000) were black cab taxis in 2022.<sup>6</sup> London has seen a 101% increase in PHVs and a 30% decrease in licensed taxis since 2005. According to the expert interviews, *Uber* in London has displaced the mini-cab sector, which is predominant among passenger vehicles, and demand for black cabs has also declined due to increased competition with platforms. In terms of employment, the Covid-19 pandemic led to a dramatic decline in the number of taxi and cab drivers. There were an estimated 127,000 drivers in England in 2022, a 26% decrease from 2020. 90% work as self-employed drivers, 97% are male.

<sup>4</sup> <https://www.taxi-times.com/historischer-tiefstand-bei-berlins-taxikonzessionen/>.

<sup>5</sup> <https://bundesverband.taxi/wp-content/uploads/2021/01/GB-BVTM-2019-2020-Auszug-03-Strukturdaten.pdf>.

<sup>6</sup> <https://www.gov.uk/government/statistics/taxi-and-private-hire-vehicle-statistics-england-2022/taxi-and-private-hire-vehicle-statistics-england-2022#taxi-and-phv-drivers>.



To sum up: until the pandemic, the demand for taxi services increased, especially in cities. Gradually, the provision of taxi services by traditional taxi drivers and companies was replaced by rental car or private hire vehicle companies. Working conditions in the taxi industry are generally described as poor or getting worse as barriers to entry into the profession fall or fixed prices are removed: low and insecure income, long working hours, and strong competition. Remuneration hovers around the minimum wage, which is topped up by tips.

## 4 Work Organization and Technological Innovation

### 4.1 *Cleaning and Domestic Services*

Germany-based *Helpling* is the leading online platform for cleaning services outside the United States. Germany is by far *Helpling's* biggest market, where the company has achieved the leading market position after buying its main competitors. In Germany, *Helpling* specializes in cleaning, gardening, maintenance services, as well as transport services for private households. In the UK, *Helpling* also offers office cleaning.

The business model is that *Helpling* arranges cleaning work and takes care of managing relationship between cleaner and client, including invoicing, IT, and communication. Access to cleaning services in private homes—both for workers and customers—has become more convenient as it is easy to enter the market and offer cleaning services through platforms.

In terms of work organization, *Helpling* sees itself primarily not as an employer of cleaners, but as an intermediary<sup>7</sup> between clients (private households) and cleaners or “partners”, i.e., small companies whose employees perform the actual leaning work (Altenried et al., 2021, 68–73). The *Helpling* model is based on the recruitment of self-employed workers, which is why the working conditions are not regulated by an employment contract but by general terms and conditions. A fee must be paid for the placement, which is up to 40% of the total service cost.

The market for cleaning and domestic services is characterized by high flexibility, multiple employers, and informality. Platforms like *Helpling* seem to fit seamlessly into the sectoral landscape. They complement the market with their services, but do not fundamentally transform it. To some extent, platforms compete with professional agencies that offer cleaners tailored to customers' needs; these services can also be booked online, but no app is used. The price range there is higher because the cleaners are usually employed by these agencies.

New digital technologies affect organization of work in domestic cleaning by controlling access to the market and working time. Domestic work is mainly recruited by word-of-mouth, but clients are increasingly found online and platforms provide

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<sup>7</sup> <https://www.helpling.de/nutzungsbedingungen>.

an easy way to enter the market. To suppress disintermediation, PLUS research in Berlin revealed, *Helping* severely penalizes workers who maintain contact that is not mediated through the platform. To widen customer choice, to build trust and ensure quality of service, systems to rate and review workers, and to select workers based on demographic characteristics such as age or gender, are used. According to Hunt and Machingura (2016), such systems disproportionately benefit customers (who are not evaluated) and bureaucratize the unequal power relations between cleaners and clients. Poor evaluations by clients—regardless of how unsubstantiated and/or untrue they may be—can have a lasting unfavourable impact on domestic workers' access to the market.

Working time has always been a point of contention between workers and clients in private households. Clients often set unrealistic time frames for completing complex and physically demanding work in exchange for low pay (Anderson, 2000; De la Silva et al., 2019). Platforms could have the potential to make working times more clearly defined, trackable, and offered at task-specific rates. The reality is that while platforms allow workers to set their hourly rates, clients decide on working hours and tasks, and the negotiation of working conditions remains very unbalanced.

## 4.2 Taxi Services

*Uber* has become the world's leading provider of ride-hailing and taxi services and is synonymous for platform-mediated individual passenger transportation. In Berlin and London, it is the largest ride-hailing company citywide.

In terms of its business model, *Uber* has had to make adjustments following national and European court rulings. In London, the platform's drivers worked as self-employed freelancers; after the UK Supreme Court ruling in 2021,<sup>8</sup> they enjoy worker status, which comes with certain benefits that the drivers did not have before this court decision. Workers drive their own cars (which they often bought through a loan) or rental cars. In Berlin, some drivers worked as self-employed but this model was rare and usually the first step toward running a subcontracted business. Most platform drivers are employed by rental car companies (*Mietwagenunternehmer*). In contrast to platforms, the traditional taxi industry focuses on providing a public transport service, as they must offer services to all passengers at all times and at the same price.

The work organization for providing platform-run passenger transportation, i.e., driving instructions, working time, and interaction with customers, is managed via an app-based navigation system. It enables monitoring and tracking of employee driving behaviour, cancellation rates, income data, rating systems including rating-based sanctions, interface governance that filters driver access to information, and the so-called dynamic pricing mechanism that charges high prices in areas with high demand for rides and prices are low in areas with low demand. The assignment of a ride to

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<sup>8</sup> Supreme Court, 2021, Case ID: UKSC 2019/0029.

a driver is determined by the driver's rating score, which is processed by the app's technology. Such work organization techniques entail a high degree of information and power asymmetry between drivers and the "system", and the dynamic pricing mechanism is criticized for its unpredictability and ruinous competition (Altenried et al., 2021, 29–31).

The entrance of ride-hailing platforms such as *Uber* had an incisive impact on the taxi industry. The taxi trade is a closed profession, subject to quota and fixed fares. With the additional supply of vehicles from the platforms, which is not limited, the overall supply of cabs to customers increased. The quota system is not always to the advantage of taxi drivers. Those who are "in" do have advantages as competition is limited. Those "out" have to pay considerable costs to enter the market. Platform-mediated businesses have opened up opportunities for taxi drivers to bypass this closed system or supplement it by subscribing to a platform. According to Drahotoupil and Piasna (2017), platforms clearly expand labour supply and lower barriers to entry into the labour market for previously excluded groups and to a protected trade.

To respond to the emergence of *Uber*, incumbents, i.e., traditional taxi enterprises and sole proprietors pursued several strategies, both at the business level and through lobbying at the regulatory level. Traditional taxi companies were incentivized to upgrade their fleets and operating systems: they installed internet-based ride-booking systems that allow customers to book and pay for a taxi through an app. On the customer side, more options to compare prices and waiting times have become available as more taxi companies offer such services. On the supply side, multi-homing has become widespread not only with *Uber* drivers; traditional taxi drivers also use different apps to expand their offer and reduce dependence on one operator.

## 5 Sectoral Regulation and Platform Work

### 5.1 *Cleaning and Domestic Services*

Cleaning in private households has long been, and still is, not considered as proper work. As a result, much of the work continues to be unpaid or done in informal arrangements. The global "decent work standard" for domestic work is ILO Convention 189,<sup>9</sup> which sets out the rights and protections of domestic workers. It is considered a historic achievement, a benchmark, and an extremely important recognition of domestic work as an employment relationship like any other. Recently, a report was published by ILO (2021) on the progress made in implementing the decent work standards set out in the convention and the challenges ahead. The main problems identified continue to be the high prevalence of undeclared work, excessively long

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<sup>9</sup> [https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100\\_ILO\\_CODE:C189](https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C189).

and unpaid working hours, insufficient coverage of occupational health and safety regulations, and filling the legal gaps by including domestic workers in general or specific labour laws, such as working time regulations.

In Germany, there are working conditions for household work regulated by collective agreements at the federal and regional levels, which set maximum working hours, minimum wages, and holidays (Jaehrling & Weinkopf, 2020, 18–19). However, these collective agreements do not even cover the majority of employees in formal employment, as they are not generally binding. The collective agreement for industrial cleaning has been declared *generally binding* and thus applies to all for-profit and not-for-profit companies that provide cleaning services. Whether or not this collective agreement is applicable to private households has not been clarified. Should this be the case, *Helpling* would only be affected if it is considered to be a company that employs cleaners and not a mere placement agency.

The UK does not have a collective agreement that applies to this industry, nor has it signed the ILO Convention on the rights of domestic workers. Moreover, in the UK, domestic workers who live with their employers are exempted from the national minimum wage regulation (Low Pay Commission, 2021).

When it comes to regulations for cleaning work and the role of platforms, two questions arise: does the relationship between the platform and the cleaner qualify as an employment or not, and, if so, what additional features should be addressed in an individual contract or collective agreement between platforms and cleaners? As we have not found relevant rulings addressing these two questions in either the UK or Germany, we refer to the policies in two other European countries. In the Netherlands, in 2019 a legal dispute<sup>10</sup> was brought in by the trade union FNV and a cleaner who claimed that *Helpling* was an ordinary cleaning firm subject to the collective agreement applicable in the cleaning sector. In its judgement, the Amsterdam District Court found no evidence of an employment relationship between *Helpling* and the cleaners. The cleaners can perform the work at their own discretion, can reject offers, and must follow the work instructions of the client, not the platform. However, the court stated that *Helpling* was more than an online notice board and that it played an active part in the placement process (De Stefano et al., 2021, 16). Therefore, agency commissions may not be deducted from the domestic worker's remuneration.

In 2018, the Danish trade union 3F<sup>11</sup> concluded the first collective bargaining agreement (CBA) with *Hilfr* for cleaners working through platforms (Ilsøe, 2020). It established a new category of worker: after 100 h of work, freelancers are automatically treated as employees covered by CBA, unless they *actively* opt out of this status. Protections under the CBA include minimum wage, sick pay, shift cancellation rules, and privacy provisions, including the right to remove inappropriate comments from the platform. If, as in the case of *Helpling*, the platform is not considered as a potential employer, such regulations are obsolete, though.

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<sup>10</sup> <https://www.loyensloeff.com/insights/news--events/news/online-platform-helpling-is-not-all-owed-to-charge-any-commission-to-cleaners/>.

<sup>11</sup> <https://hilfr.dk/om-hilfr>.

## 5.2 Taxi Services

*Uber* and similar platforms have challenged an industry that is highly regulated and where market access is limited: the taxi industry. *Uber's* strategy is to circumvent the rules by claiming to be an “information society service provider” that brokers transportation services. Tomassetti (2016, 17) impressively picked apart the “*Uber* narrative” which insinuated that *Uber* does nothing more than develop software for matching riders and drivers, simplify payment procedures, and borrow its name for marketing purposes. In 2017, the ECJ<sup>12</sup> ruled that *Uber* must be classified as a “service in the field of transport”, because *Uber* in exchange for payment uses a smart-phone application to connect non-professional drivers who use their own vehicle with people who want to take a ride in the city. Moreover, the ECJ noted that *Uber* exercises decisive influence over the conditions under which this service is provided by drivers, including determining a maximum price, controlling the payment process and the quality of the vehicles, drivers and their conduct. Consequently, Member States are free to regulate the conditions under which services such as *Uber* are provided. Therefore, all PLUS cities, including London and Berlin, have introduced new regulations that both regulate and liberalize *Uber's* access to the taxi market. The result is often a compromise but one that has a major impact on the entire private passenger industry.

In Berlin, the Passenger Transportation Act (*Personenbeförderungsgesetz*) underwent an extensive amendment process in 2020 and 2021. The traditional taxi trade continues to be subject to stricter regulations (fixed fares, quota, obligation to operate everywhere, at every time and for everyone, longer training process), but also enjoys privileges. Rental car companies were required to apply for a ride-hailing license, which is issued by municipalities and requires some formal training. They are also obliged to document driver activity and must install a so-called odometer (*Wegstreckenzähler*). Moreover, drivers must return to their company offices before accepting the next assignment, rather than waiting somewhere for a new client. Despite the stricter regulations for platform companies, effective control of compliance with these regulations is currently still insufficient.

London has a two-tier regulatory regime for the taxi industry. Industry regulations are issued at city level by *Transport of London* (TfL). Black cab drivers still operate in a closed market with a maximum number of licenses issued by TfL each year (around 1,000). They are protected—at least partly—from competition by certain privileges, such as hailing on the street and driving and parking in specific zones, but also must follow regulatory requirements, such as regular health checks and demanding qualifications to obtain the licence. Most importantly, all black cabs have an automated system installed with flat-rate pricing. Ride-hailing, on the other hand, has replaced mini-cab riding as a low-cost alternative subject to private vehicle hires standards. While there are less stringent rules on pricing and training, strict safety

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<sup>12</sup> Case C-434/15, *Asociación Profesional Elite Taxi vs Uber Systems Spain SL*, <https://curia.europa.eu/juris/document/document.jsf?docid=198047&text=&dir=&doclang=DE&part=1&occ=first&mode=lst&pageIndex=0&cid=14733378>.

standards are in place and the TfL can revoke the operating license for ride-hailing platforms if safety is not ensured. In response to the boom in ride-hailing platforms, increased traffic and rising air and noise pollution in London, local authorities also require platform drivers to pay a congestion charge, if they operate in certain areas of the city at certain times to compensate for the environmental impact of their work.

## 6 Discussion

The discussion section extrapolates which factors have contributed to the rather high (taxi industry) or rather low (household and cleaning services) impact of the market entry of sectoral platforms on the traditional industry. The impacts can be divided into changes in supply and demand for traditional and platform-mediated cleaning or taxi services (6.1), as well as new work arrangements and regulatory responses in the sector (6.2). Two factors contributing to the results stand out: (1) a new and more digitized work organization, leading to lower barriers to entry for service provision, more competition, and structural domination of service provision by platform technology, and (2) the sectoral context in terms of characteristics of services provided, demand factors, and existing and potential trade and labour regulations. These two factors differ in their impact: while the digitized work organization leads to convergent outcomes in the two sectors, the specifics of the industry contexts seem to override the impact of platform-typical governance.

### 6.1 *Market Developments in Traditional and Platform-Mediated Cleaning or Taxi Services*

The survey data suggest that taxi service platforms have established themselves as an alternative to conventional providers, with evidence in some cities that the platforms are already as popular or more popular than other service providers. Demand for private passenger transportation is driven by tourism, the availability of transportation alternatives, notably public transportation, and the price and accessibility of the service. The platforms are entering a market that has little prospect of expansion. This means that the platforms are competing in an environment where demand is reaching its limits, and traditional taxis are displaced. With Covid-19, the situation for taxi drivers and companies has actually worsened as closures and lock-downs have caused tourism and mobility in general to collapse and demand for private passenger transportation to drop significantly.

On the supply side, the number of ride-hailing operators is increasing, mainly due to platform-mediated rides. Digitized service provision, i.e., the app-based intermediation and algorithm-based allocation of rides, facilitates the matching of supply and

demand, and enables dynamic pricing. Such service is customer-friendly and convenient. Dynamic pricing on the one hand and the increasing availability of platform-mediated rides on the other have led to lower prices. Lower prices, in turn, fostered demand for platform-mediated rides to the detriment of the traditional taxi industry, where prices are fixed and the number of taxi licenses in circulation is limited.

The use of platforms for domestic services still lags well behind conventional service provision, according to the survey. Direct employment by households and employment by traditional household service providers still account for the majority of these services. Demand for cleaning and domestic work is growing strongly, not least due to demographic, socio-economic, and public policy developments. Platforms that broker domestic services are penetrating a market for cleaning that is far from saturated, but so far, the platforms' business model is not gaining acceptance in cleaning and domestic services. Nonetheless, app-based intermediation facilitates access to services for customers and service delivery for workers. Where tasks prevail that are done on a regular basis, such as in cleaning and domestic services, disintermediation jeopardizes the platforms as being a bottleneck for intermediation. Once service providers or self-employed platform workers have established contact with potential customers, who use the service more than once, the platform is no longer needed. The platform has then fulfilled the purpose of mediation. Moreover, trust plays a crucial role in the customer relationship and mitigates competition. Also industry-specific is the limited profitability potential of the sector, where rationalization is hardly possible and private households are not willing to pay much for such services. When prices are too high, domestic work is again informalized, either as undeclared work or unpaid work. Even *Helpling's* (former manager) Benedikt Franke acknowledges that costly employment (rather than self-employment) is not possible unless tax incentives or service cheques subsidise the purchase of household-related services (ArbeitGestalten, 2017, 18; Leduc & Tojerow, 2020). This is, of course, a very telling statement from the founder of the largest platform: decent working conditions in domestic cleaning are not affordable, unless the activities are subsidized.

Platform-typical technological innovations, lower prices, as in passenger transport, and/or more convenient access of customers to the desired service, as in both industries, contributed to a competitive advantage of sectoral platforms over traditional service providers lagging behind with service innovations. At the same time, the specifics of the desired service (regular, trust-based, hardly rationalizable, and personal compared to one-time, unemotional, with potential for leaner service provision) slow down or encourage the use of platform-mediated services.

## 6.2 Responses in Sectoral Regulation to New Work Arrangements

The responses of sectoral regulation in cleaning and domestic services and taxi services following the activities of platforms differ enormously. While for domestic and cleaning services, responses are modest and specific, for taxi services, they are far-reaching and general. Again, the specifics of the sector either reinforce (taxi) or hamper (cleaning) the application of platform-induced technology which in turn leads to different regulatory responses.

*Uber's* initial strategy was to describe itself as an “information society service provider” that only intermediated and did not provide transportation services. *Uber* worked with self-employed drivers using *Uber's* core means of production, namely app- and algorithm-based technology which plays a key role in service delivery, the labour process, and pricing. *Uber* entered a dualized market for private passenger transportation. On the one hand, the traditional taxi industry is highly regulated, with fixed and regulated fares, and the number of taxis or taxi licences allowed to operate in a city is limited by quotas to protect the taxi industry from competition. This means that employed taxi drivers are entitled to an hourly wage and self-employed taxi drivers, i.e., one-taxi-companies are guaranteed a minimum fare. On the other hand, rental car companies (Berlin) and privately hired vehicles (London) provide private passenger transport services that are less regulated, and not subject to price or quantity regulation. In the latter field, the *Uber* model has taken hold and gradually pushed back demand for traditional taxi services. Clearly, then, technology has helped to create a new and powerful business model in private passenger transportation.

However, industry-specific characteristics forced *Uber* to revise its original business model. The ECJ ruling that *Uber* must be classified as a transport service and not as an “information society service” and the national court rulings, such as in the UK, emphasizing the worker or employment status of drivers, strongly reflect the impact that the introduction of digital technology has had on the discretion and independence of the driver in the provision of transport services. The employment situation of taxi drivers facilitated by *Uber* has even taken a paradoxical turn: The recent Supreme Court ruling in the UK<sup>14</sup> demonstrates that the provision of taxi services through *Uber* may entail a higher degree of subordination and control over working conditions than when mediated through a traditional taxi company (Drahokoupil & Piasna, 2017). As a result of such court decisions and respective national or municipal sectoral regulations, *Uber* is increasingly hiring sub-companies to employ drivers with formal labour contracts. This strategy should prevent precarious work, but often reproduces the precariousness of the freelance model when sub-companies cooperating with *Uber* use a wide range of semi-legal or informal practices to circumvent labour law (Altenried et al., 2021). Nevertheless, by classifying the work relationship between drivers and the platforms as an employment, workers are principally included into key pieces of labour protection, and “*the employment relationship remains a paramount institution in delivering workers' protection*” (De Stefano et al., 2021, 41–42).



This is precisely what has not happened in the case of cleaning services provided by sectoral platforms. In a Dutch ruling, *Helpling* was neither classified as a cleaning company nor as a staffing agency that must offer an employment contract (De Stefano et al., 2021). The degree of subordination was not considered strong enough. The new technology for brokering and standardizing domestic services tasks has less influence on the execution of the task and the nature of the employment relationship than in passenger transportation. The *Helpling* model fits perfectly with the non-committal and flexible nature of cleaning work in general, where employees often hold multiple jobs, and an employment, a fixed workplace or one with the same client are rare. It is argued that platforms contribute to the formalization of employment in this sector, as workers have to register online and are visible for recruitment on a website. However, a key question remains: do platforms contribute to formalizing domestic work *and* do they improve the social protection and working conditions? For now, the answer is rather negative. On the positive side, digitalization offers domestic workers and cleaners new avenues to seek employment and become more independent. On the other hand, the increased use of digital means to track workers and evaluate their performance seems to bring unilateral benefits to customers (and platforms). Therefore, formalization and a (minor—as the numbers are still low) shift from undeclared to declared work may have taken place but only in the sense of restoring precarious, unstable, and non-committal working arrangements that were typical of the cleaning and domestic services sector before the platforms became active.

## 7 Conclusions

Clearly, platforms as service interfaces and the use of app- and algorithm-based tools to structure the work process and facilitate the matching of supply and demand for services, have influenced and changed the way services such as cleaning and individual passenger transport are provided. The reliance on self-employed or independent contractors, the replacement of employment relationships with contractual and platform-mediated relations and of wage determination with price determination on the one hand, and the key role of algorithm-based technology and standardization to convey and control outsourced tasks on the other, constitute key features of sectoral platforms.

The extent of platform-induced impact, however, varies per industry. Between a highly intimate, trust-based, and regularly performed service like cleaning in private homes and one-time rides there are notable differences in how digital, app- and algorithm-based technologies affect the labour process and work discretion. In private passenger transport, the platform controls access, price, and processing, unlike cleaning, where the platform interface has so far mainly been used to control customer and worker access to the service market, rather than task performance itself. These disparities also result in various regulatory responses, which were far more

pronounced in private passenger transport than in cleaning and domestic services, though with ambiguous results.

Ride-hailing platforms have had a disruptive effect on the taxi industry reducing demand for traditional taxi services and reinforcing its dual system of industry regulation. By allowing a new or updated category of private passenger transport, namely ride-hailing, municipalities have both de- and reregulated the sector. On the one hand, higher professional standards in place in the taxi industry are levelled down by allowing ride-hailing companies to offer an equivalent service with less formal training and requirements, but as a cheaper alternative to traditional taxi rides. On the other, platform drivers have become subject to some formal requirements. The platform system of dynamic pricing and flexible vehicle supply has taken hold in the industry, not least because regulations have been negotiated which explicitly allow the ride-hailing business.

Cleaning platforms have a less disruptive impact. This is because the cleaning and domestic services sector has been and continues to be characterized by informally negotiated working arrangements and working conditions, personal dependency, low and irregular pay, and un- or underdeclared work. The regulatory framework for domestic services is weak. Moreover, the work itself and the underlying labour processes have not been changed by platform intermediation. Therefore, the impact can hardly be disruptive, as the industry is already one with a poor status. At the same time, sectoral platforms have so far done little to improve the working conditions of cleaners. Industry-level collective agreements with enforceable labour standards including for platform-mediated work, such as in Denmark, are unfortunately still rare. However, they would be a promising way to raise labour standards and broaden the opportunity structure for workers.

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