

# EMPLOYMENT TERMS OF PLATFORM WORKERS

DATA-DRIVEN ANALYSIS OF ONLINE  
PLATFORMS IN DENMARK

FEPS and Nordic partners Digital Programme  
on Algorithms at the Workplace

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# 1. INTRODUCTION

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*On the basis of quantitative data, we can obtain new insights into the employment terms under which platform workers in Denmark operate.*



Over the last decade, platform work has become a sizable part of the labour market. The European Commission estimates that around 28 million people in the EU work through one or more digital labour platforms; this is expected to reach 43 million people in 2025.<sup>1</sup> There are serious concerns about the working conditions and social rights of people working in what is called the “gig economy”. That is why the European Commission has proposed a directive on improving working conditions in platform work.

As part of the FEPS-Nordic Digital Programme on Algorithms at the Workplace,<sup>2</sup> this policy study seeks to cover the extent to which existing and available quantitative data sources can uncover workers’ employment terms in platform companies. Besides this study, a workers’ survey was conducted as part of the digital programme on experiences with algorithmic management on the shopfloor in different Nordic countries. We are also investigating company case studies in various sectors in Finland, Sweden and Norway on AI in the workplace. The outcomes of these research efforts are expected to be published in Q2 of 2024 and discussed at conferences around the Nordic countries in the second half of 2024.

This case study uses Denmark to examine how three specific data sources can be used to examine platform companies and their workers’ terms. There have been many studies of platform companies. However, most studies have used qualitative methods or surveys. While these methods give a lot of insight into the platform companies and how they operate, this study seeks to contribute with new angles and, thus, should by no means be seen as a substitute for other methods but as complementary. On the basis of quantitative data, we can obtain new insights into the employment terms under which platform workers in Denmark operate, including information on how many workers are self-employed.

As stated, the study is exploratory and only examines some aspects of the platforms or the terms of the workers. However, the study contributes valuable and helpful insights into the workings of the platform companies and the information about them that is available. This is also relevant for the policy debate at both the European and Danish levels when it comes to the objectives of the afore mentioned Platform Work Directive, which is expected to clarify the limits between employed workers and self-employed workers.<sup>3</sup>



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# **EXECUTIVE SUMMARY OF THE MAIN FINDINGS**

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# EXECUTIVE SUMMARY OF THE MAIN FINDINGS

The main findings of the study are summarised below:

## **1) Platforms are growing rapidly but also quickly decaying**

Often it has been contested how the platforms fit into the existing regulation, and many platforms have tried to avoid employer obligations. Also, there are some tendencies to “winner takes all” markets. We see this in the fact that most of the platform companies examined run deficits, while only one has surpluses. This indicates that many companies will come and go. Workers risk working on unregulated terms if the platforms avoid regulation in the first years of their existence and they only operate for a few years.

Therefore, it is essential to have a regulatory framework that makes workers’ conditions with platform companies transparent to ensure that regulators and unions have the tools to sanction non-compliant companies in real time.

## **2) Data on platform companies and their workers comes with a delay**

There is a lot of information out there about platform companies. However, much of the available data comes with several years of delay or only indirectly gives information about workers’ terms. This means that development and potential issues can only be spotted in the data a few years later. Due to the fast-changing nature of the platform economy, the practices and companies may have changed entirely by the time they become apparent in the official administrative data.

## **3) Looking at the data, the rise in remunerated work stands out**

The data gathered from the National Statistics Agency shows an apparent rise in remunerated work in sectors like “transport, information, and communication”, where many platform workers can be expected. In the transport, information, and communication industry, the number of people receiving remuneration has more than doubled since 2017.

## **4) More platform workers in Denmark are recognised as employees in collective agreements.**

A big part of the political debate around platform work has focused on the employment status of workers. Many platforms operate under the premise that the platform does not employ their workers but delivers services as a self-employed provider. The assertion of the self-employed status of workers has been under political, legal and legislative pressure. In Denmark, unions have worked actively with platform companies to make them recognise platform workers as employees. As a result, many of the platforms have accepted the worker’s employment status and signed collective agreements with unions, such as Nemlig (an online grocery delivery platform), Just-Eat (an online fast food delivery platform), and Hilfr (an online cleaning service platform).

## **5) Call for transparency on the employment conditions and pay of platform workers**

We tried to gather more information on platform workers’ pay and employment conditions with the web-scraping technique. For many platforms, it is unclear to the customer what they will pay for the services of a platform worker. This lack of transparency made it impossible to scrape this

data for most platforms. Only where the person that provides the service is an essential part of the customer's decision, like with household help, are different hourly wages available online. This meant that we could access data on two platforms, Hilfr and Happy Helper, for which we provide a more detailed case study and analysis of the employment conditions.

#### **6) Scraping data on a platform engaging cleaners shows that only a few of them work many hours; they do not want more hours, cannot get more hours or are in the informal economy**

Besides wages, the Hilfr platform, providing household help services, gave an insight into the work schedule of different Hilfrs booked through the platform and their availability. It points to most Hilfrs only working a few hours through the platform.

From our analysis, we cannot conclude whether the low number of hours engaged through the platform is due to workers' preferences for few hours or the lack of demand meaning that workers are engaged fewer hours than they prefer. It could also be that workers use the platform to find new customers/employers and continue their work afterwards outside of the platform in the informal economy.

#### **7) Profile of new remuneration recipients – young and non-Danes**

Our data analysis shows that the general rise of workers within platform industries receiving remuneration is unequally distributed compared to the general working population of Denmark. The recent rise in remunerations within the transport, information, and communication industry indicates that platform workers are younger than average and that workers with a foreign background are overrepresented. Young non-Danes is a group that can be expected to be more vulnerable to exploitation, either because they have less knowledge about their rights or have few alternative employment options.

#### **8) EU legislation can help to clarify that platform workers are employees**

This study shows that even in one of Europe's most organised labour markets, workers are not guaranteed employment status. All workers should be guaranteed basic employment terms, like a labour contract and the platform being responsible for applying basic social security and tax regulations to platform workers. As several rulings in Denmark have shown, many indirectly employed platform workers are falsely self-employed, and already have the right to employee status, although the legislation can be interpreted as ambiguous.

At the time of writing, an agreement was sought on the EU Platform Work Directive which would provide a legal framework for all EU member states to implement that includes a presumption of an employment relationship for platform workers, which aims to guarantee basic employment terms under national law, like a labour contract, and the platform being responsible for applying basic social security and tax regulations to platform workers. Hopefully, this Platform Work Directive will assist member state authorities in clarifying workers' employee status, but it is essential that this is done with respect for national labour market systems; in the Danish case, the Nordic labour market model, which in many ways relies on collective agreements for setting working conditions. It was agreed in the latest political agreement on the Directive that platform companies with collective agreements are not exempted from applying the presumption of an employment relationship.

Especially for the Nordic welfare state model, it is essential that all workers contribute to the extensive social security system and that the evasion of social legislation and collective agreements through treating workers as self-employed service providers are effectively stopped. It is essential that the legislation is implemented under consideration of the Nordic labour market model.



*Research on employment terms of platform workers is most often done using qualitative data (such as interviews) and surveys. This study seeks to contribute knowledge about platform companies and the terms of employment for workers engaged through them by using different kinds of existing quantitative data.*



### **Range of quantitative data**

Research on employment terms of platform workers is most often done using qualitative data (such as interviews) and surveys. This study seeks to contribute knowledge about platform companies and the terms of employment for workers engaged through them by using different kinds of existing quantitative data. The hope is that the results will enlighten the field and that the methods can inspire other researchers to use quantitative methods to examine platform companies.

Since this study seeks to contribute by showing other methods than those most used, it is, to a large extent, explorative, meaning that considerations of how data can and cannot be used are part of the contribution. Also, practical considerations on what can and cannot be done are part of the contribution.

In the analysis, the following three data sources are used:

#### **1) Administrative data, which requires privileged researcher access**

Here, we use administrative data from Statistics Denmark, which contains individual data for the Danish population. We examine how remuneration as payment has developed in Denmark since 2010, focusing on industries we suspect have many platform workers.

#### **2) Publicly available administrative data from the Danish company register**

Here, we use data from the publicly available company register hosted at [www.virk.dk](http://www.virk.dk) by the Danish Business Authority. Here, we look at the development of single-person companies working within industries that we suspect are heavy on platform firms.

#### **3) Online data gathered from the web pages of the platforms**

Platform companies are online by nature, since customers use their web pages to order goods and services. Therefore, a lot of information is available directly from the web pages of the platform companies. Some of this data contains information about workers' employment terms.

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# **POLICY IMPLICATIONS OF THESE FINDINGS**

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*The precarious working conditions of platform workers have placed the topic on the agenda of policymakers at the European level and in several member states. Legislators are looking into ways to regulate the platform workers' employment relationship and address the automatic or algorithmic management systems that steer the platform workers*



Within the Danish context, it is important to realise that in the Nordic model a large part of the employment conditions are governed by collective agreements between employers and employee representatives. In Denmark, trade unions have already negotiated several collective agreements for platform workers within the Danish gig economy sector.

For the platform Hilfr, the trade union 3F struck a collective agreement<sup>4</sup> for the platform workers, introducing the “Super Hilfr” category, which cleaners could opt into, and all workers who had worked at least 100 hours through the Hilfr platform were included. Super Hilfrs are employed according to this agreement and have a minimum hourly wage, paid annual leave, a pension and sick leave.

Another collective bargaining agreement between Nemlig.com couriers and the Danish trade union 3F was agreed in February 2023. This agreement is binding for couriers employed by Nemlig.com and subcontractors hired by Nemlig.com, which is important because, historically, couriers delivering groceries for Nemlig.com were engaged through subcontractors. As we will see in this study, this

agreement led to a sharp rise in the number of employees of Nemlig.com.

In the meantime, the precarious working conditions of platform workers have placed the topic on the agenda of policymakers at the European level and in several member states. Legislators are looking into ways to regulate the platform workers' employment relationship and address the automatic or algorithmic management systems that steer the platform workers.

Recently, for example, the Spanish government introduced a rider's law that, for a subset of the platform workers in the delivery of food and ride-hailing services, has created legal clarity, for example, on the employment relationship.<sup>5</sup> The riders are presumed to have an employment relationship with the platform they work for, resulting in a de facto ban on the construction of self-employed riders in Spain.

At the EU level, the European Commission has proposed a Platform Work Directive.<sup>6</sup> At the time of writing, this directive is in the final stages of the legislative procedure; negotiations between the EU member states and the European Parliament have led to a political agreement on the content of the





*When it comes to working conditions and precarious labour market position, employment status is an important right, and a starting point of organized labour.*



Directive, but Member states' ambassadors failed to find a majority to confirm this deal, which means that the future of the directive is uncertain.<sup>7</sup> The proposed Platform Work Directive has two main chapters: one on the presumption of an employment relationship and one on the algorithmic management systems.

For the employment status and the legal presumption of a labour relationship in a contractual relationship between a platform and a worker, several aspects will determine if a digital labour platform controls the work performance of the platform worker. A list of criteria is being made with elements that point to an employment relationship, which is included in the Directive:

- If the platform sets upper limits to the amount of money workers can receive;
- If there is an effective supervision of their performance, including by electronic means;
- If the platform controls the distribution or allocation of tasks of the worker;
- If there is control over working conditions by the platform and there are restrictions on choosing working hours for the worker;
- If the platform puts restrictions on workers their freedom to organise their work and sets rules on their appearance or conduct while working for the platform.

Member States can add other criteria to this list, and a minimum of two out of five of these criteria should be met before an employment relationship is legally presumed. Once this legal presumption applies, it can be relied on in all relevant administrative and legal proceedings, and national authorities verifying compliance with or enforcing labour legislation can

work based on that presumption of a worker-employer relationship. It will be up to the national labour laws of the member states to determine and govern the employment relationship of platform workers. The creation of a presumption of an employment relationship could help take away ambiguities and support workers and their representatives to object to bogus self-employment constructions.

As we have seen, there has been a sharp rise in Denmark's self-employed, remunerated platform workers that these new rules will potentially impact. In a positive scenario, this group of remunerated workers could more easily be brought under an employment contract with the platforms. In the Danish context, the presumption of an employment contract could help in the question of collective agreements with new platforms companies and force the platforms to take on the role of an employer, with the social security obligations that come with it. Collective bargaining will allow trade unions to organise the platform workers and discuss fair pay and other employment conditions.

When it comes to working conditions and precarious labour market position, employment status is an important right, and a starting point of organised labour. Hopefully, the proposed European Platform Work Directive will help clarify employee status, so that "false" self-employment is avoided.

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# **RESULTS ON REMUNERATION USING NON-PUBLIC ADMINISTRATIVE DATA**

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*Many platforms claimed to merely establish contact between customers and service providers and, therefore, did not look at themselves as classic employers. This has led many platform companies – for example, Wolt – to pay workers remuneration or demand that they start a company (typically a single-person firm) to which the salary is paid.*



## Background

In this part of this policy study, we examine the development of remuneration in Denmark. The Cambridge Dictionary defines remuneration as “payment for work or services”.<sup>8</sup> In this setting, it is contrasted to wage (“an amount of money that is paid, usually every week, to an employee for their work”).<sup>9</sup>

Remuneration is traditionally associated with single services, such as consultancy work or freelance tasks, and thereby associated with a looser connection to the employer. Conversely, wages are associated with a more traditional employer/employee relationship, where salaries are paid on fixed contracts in fixed periods (e.g., weekly or monthly).

In Denmark, as in many countries, many workers’ rights are connected to being employed and earning wages. For example, in Denmark, all workers employed for more than eight hours a week, on average, have the right to an employment contract specifying weekly or daily work hours, annual leave rights, wage and rules for terminating employment,

among other things. The combination of remuneration and wages has been a way of having, on one hand, flexibility for employers and employees to take on smaller tasks and work as independent contractors, and on the other hand, securing worker rights for employees in regular employment.

In Denmark, only the most basic worker rights are determined by law, whereas the backbone of workers’ rights is secured by collective agreements between workers’ unions and employers.

Since the start of the 2010s, there has been a rapid rise in platform companies that engage labour through online platforms. Many platforms claimed to merely establish contact between customers and service providers and, therefore, did not look at themselves as classic employers. This has led many platform companies – for example, Wolt – to pay workers remuneration or demand that they start a company (typically a single-person firm) to which the salary is paid.

Generally, a person receiving remuneration below 50,000 Danish krone (DKK) a year is exempt from paying value-added tax (25% in Denmark). People receiving remuneration over 50,000 DKK yearly are

treated as self-employed business owners and are subject to paying value-added tax.

For Wolt couriers in Denmark, this has led to controversy over whether they are seen as employees or self-employed business owners. In May 2023, a verdict from the Danish Tax Council<sup>10</sup> established that Wolt couriers were employees and not self-employed business owners. The Danish Tax Council clearly states that Wolt couriers are not to be regarded as self-employed business owners and Wolt must change its practice. This has consequences for who is responsible for paying taxes on the salaries and potentially for terms of work. In 2021, Wolt in Finland received a similar verdict, which has since been taken to court and is yet to be decided on at the time of writing. At the time of writing, it is also

unclear whether Wolt Denmark will take the verdict from the Danish tax authority to court.

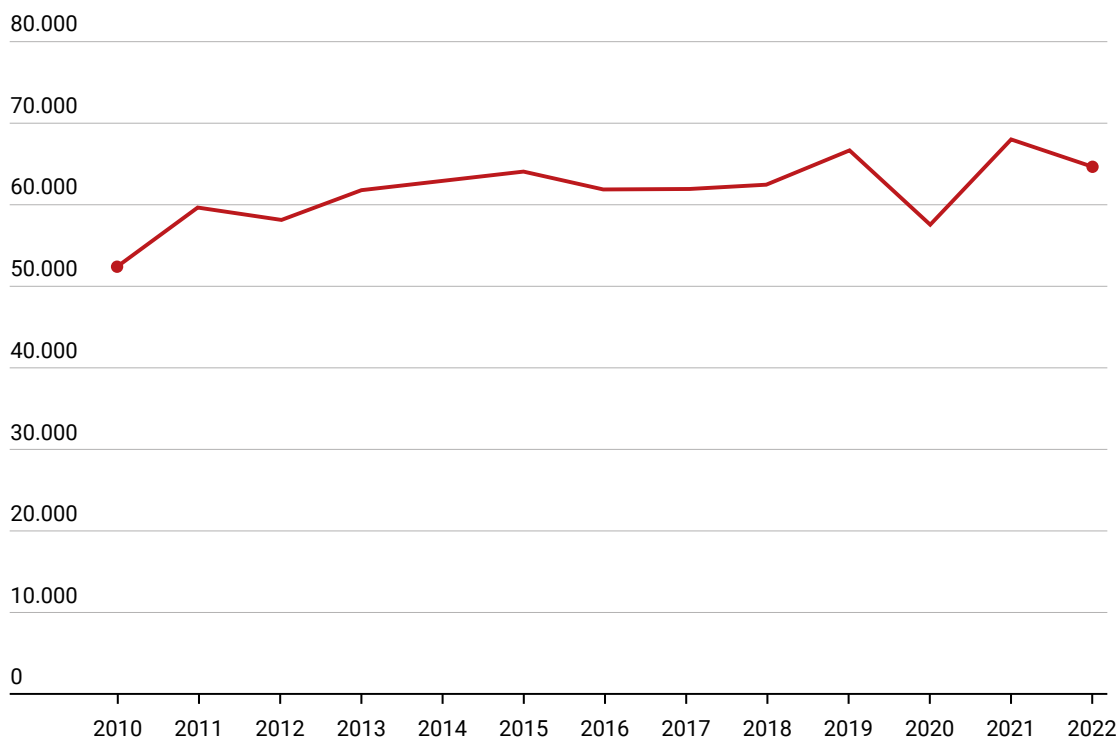
## Results

The following reviews the remuneration results extracted from non-public administrative company data. The main findings are as follows:

- The general number of remuneration recipients in Denmark has been stable since 2010, with only a modest increase.
- The number of remuneration recipients has been stable in most industries, but within the transport, information and communication industry, in which we expect many platform companies, there has been a sharp increase since 2017.

**Figure 1. The development in the number of people who received remunerations of between 5,000 DDK and 1,000,000 DDK per year in Denmark.**

### Modest increase in number of workers on remuneration



Source: ECLM based on data from Statistics Denmark

- The increase in remuneration within the transport, information and communication industry is primarily driven by younger people under 30 years of age and people of non-Danish origin. Furthermore, the value of the remunerations paid in the industry has risen by about 80% since 2017.

### General development in remunerations

Firstly, we examine the overall trend in remunerations in Denmark. Since 2011, the number of people who received between 5,000 DDK and 1,000,000 DDK in remuneration each year has been relatively stable, at around or a little over 60,000 people (Figure 1). There might be a slight tendency for an increase since, but no dramatic changes have been seen. In 2022, around 65,000 people received remuneration in Denmark.

### Heterogeneous development for education

The relatively stable development hides some differences in the development of specific groups. Figure 2 shows that remuneration has increased among people without vocational education. At

the same time, it has been stable or decreasing for people with vocational or further education.

### Heterogeneous development for the country of origin

Likewise, the number of remuneration recipients of Danish origin has been relatively stable for most of the period but has dropped since 2020 (Figure 3). In contrast, the remuneration recipients of non-Danish origin have increased from 6,800 in 2018 to 13,240 in 2022, almost doubling.

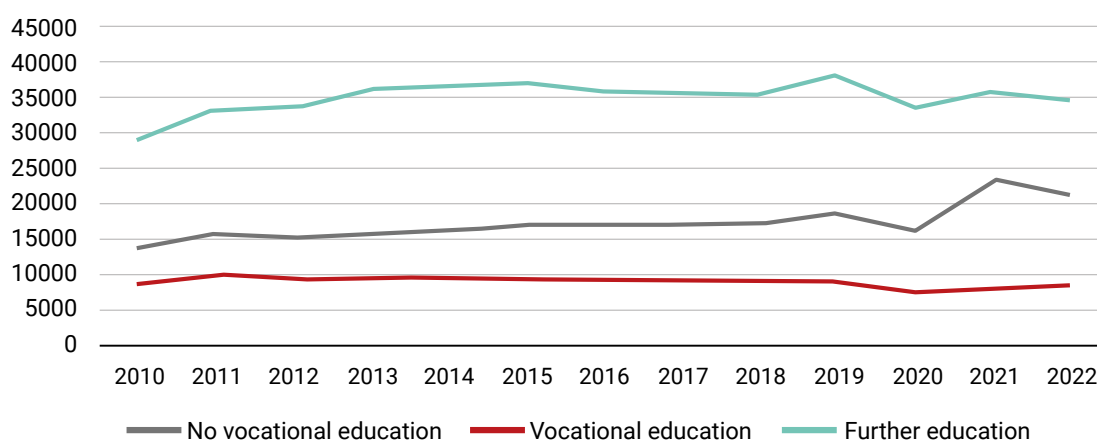
### Heterogeneous development for age

Looking at how the number of remuneration recipients is distributed by age, we see that the number of remuneration recipients within most age groups has been relatively stable. However, for those under 30 years old, there has been a significant increase over the period from 8,910 people in 2010 to 18,110 in 2022, corresponding to more than doubling.

Overall, these findings point to the fact that, although there has not been a general increase in remuneration recipients in recent years, there has been a large

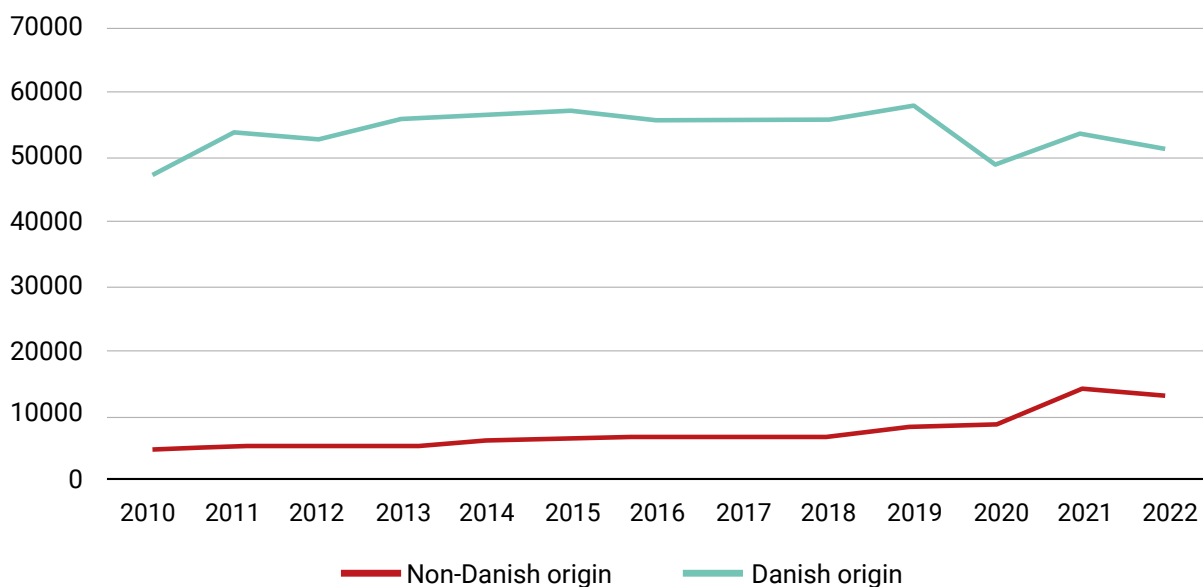
**Figure 2. Development in remuneration based on workers' education level.**

Largest increase in remuneration recipients among lower educated workers



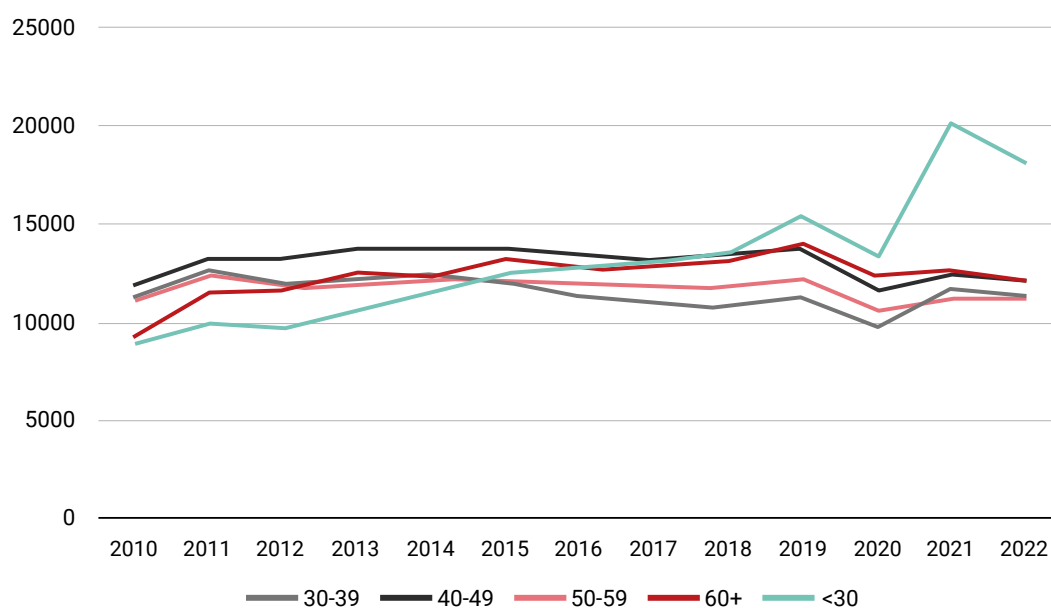
**Figure 3. Development in remuneration for Danish and non-Danish workers.**

Increase in remuneration recipients mainly driven by workers of non-Danish origin



**Figure 4. Development in remuneration based on age of recipients.**

Largest increase in remuneration recipients among young people





increase among the young, the non-Danish and the lower-educated part of the population.

### Development in remuneration by industry

We now look at the development in remuneration for selected industries. As described in the Annex, some industries have been amalgamated due to discretionary concerns.

Figure 5 shows the development in people receiving remuneration in selected industries. The development in most industries has been relatively stable. The one industry that stands out is transportation, information and communication. Here, we see a significant increase since 2017, with 5,320 remuneration recipients, which had risen to 11,610 in 2022.

Although there is no industry code for platform companies, we expect many platform companies will fit in the transportation, information and communication category. Therefore, we take this as a signal that platform industry remuneration has increased.

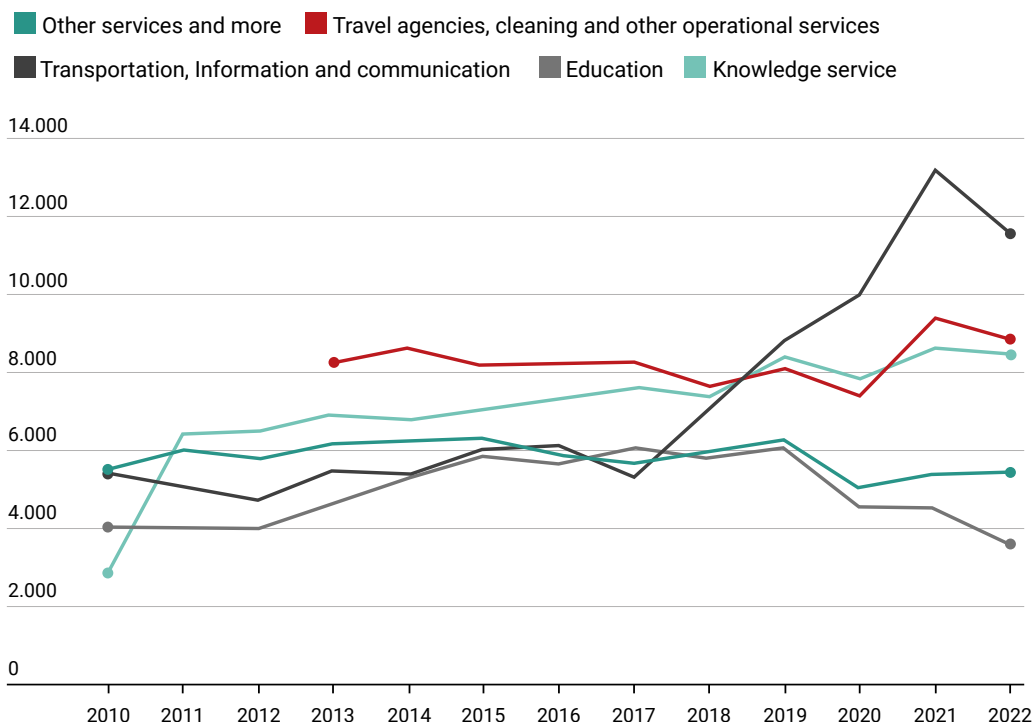
### Heterogeneous increase within the “transport, information and communication” industry

Zooming in on the transport, information and communication<sup>11</sup> industry, we examine the education level of people who have received remuneration from this industry. We see that most recipients have either no vocational training or further education. However, since 2017, there has been a sizable increase for all education levels. The most significant growth has happened for people with no vocational training, where the number of remuneration recipients more

**Figure 5. Development in remuneration based on selected industries.**

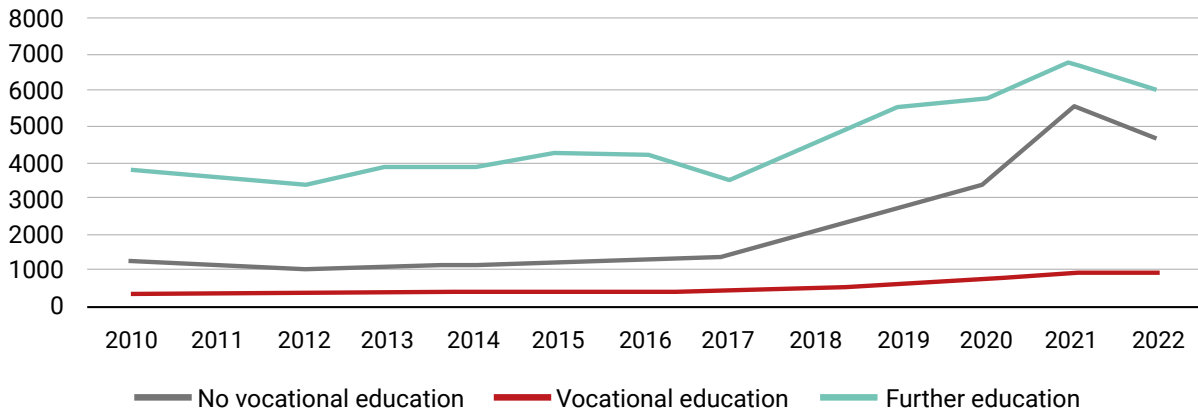
#### Large increase in the transport, communication and information industry since 2017

The figure shows the development in the number of remuneration recipients by selected industries.



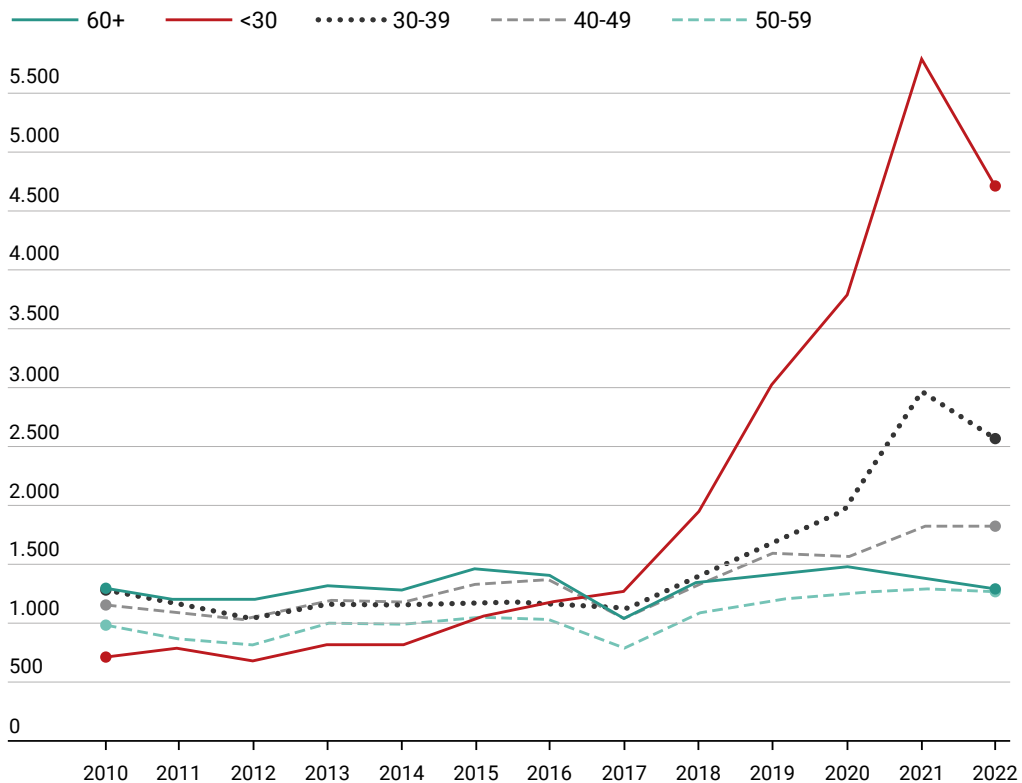
**Figure 6. Education level within the transport, information and communication industry.**

Largest increase in remuneration recipients among both lower educated and higher educated workers



**Figure 7. Development in the number of remuneration recipients by age.**

Largest increase among young people receiving remuneration in the industry transport, communication and information



Note: Number of people who received remuneration between DKK 5,000 and 1,000,000 in the year (2022 prices) divided by age group. Remuneration without age information has been combined with the group of people under 30 for reasons of dominance criteria. People with undisclosed ages make up approximately 10% of the group during the period. It is assessed that this amalgamation gives a fair picture. Source: ECLM based on data from Statistics Denmark

than tripled from 1,390 in 2017 to 4,620 in 2022 (Figure 6).

### Age within the transport, information and communication industry

Looking at the development within age groups, we see that the most significant increase has happened for the younger part of the population, especially for those under 30 years old, which more than tripled from 1,270 remuneration recipients in 2017 to 4,690 in 2022. The remuneration recipients in the group aged 30-39 more than doubled, from 1,120 in 2017 to 2,560 in 2022.

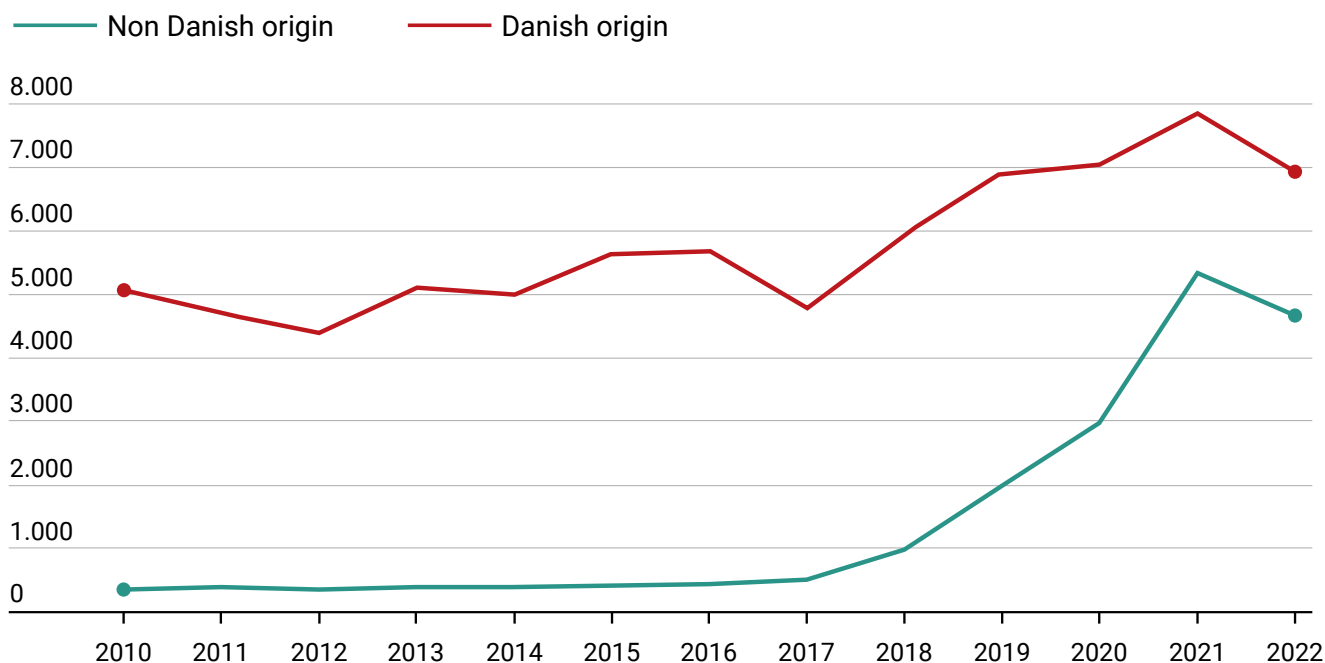
### Country of origin within the transport, information and communication industry

As shown in Figure 8, there has been an increase in remuneration recipients of both Danish and non-Danish origin. The most dramatic increase for people of non-Danish origin rose almost nine-fold from 530 in 2017 to 4,670 in 2022. The group of Danish origin rose by 45% from 4,790 remuneration recipients in 2017 to 6,940 in 2022.

**Figure 8. Development in the number of remuneration recipients by country of origin.**

### Large increase among remuneration recipients with non-Danish origin in the transport industry and the communication and information industry

The figure shows the development in the number of remuneration recipients within the transport industry and the communication and information industry, broken down by origin.

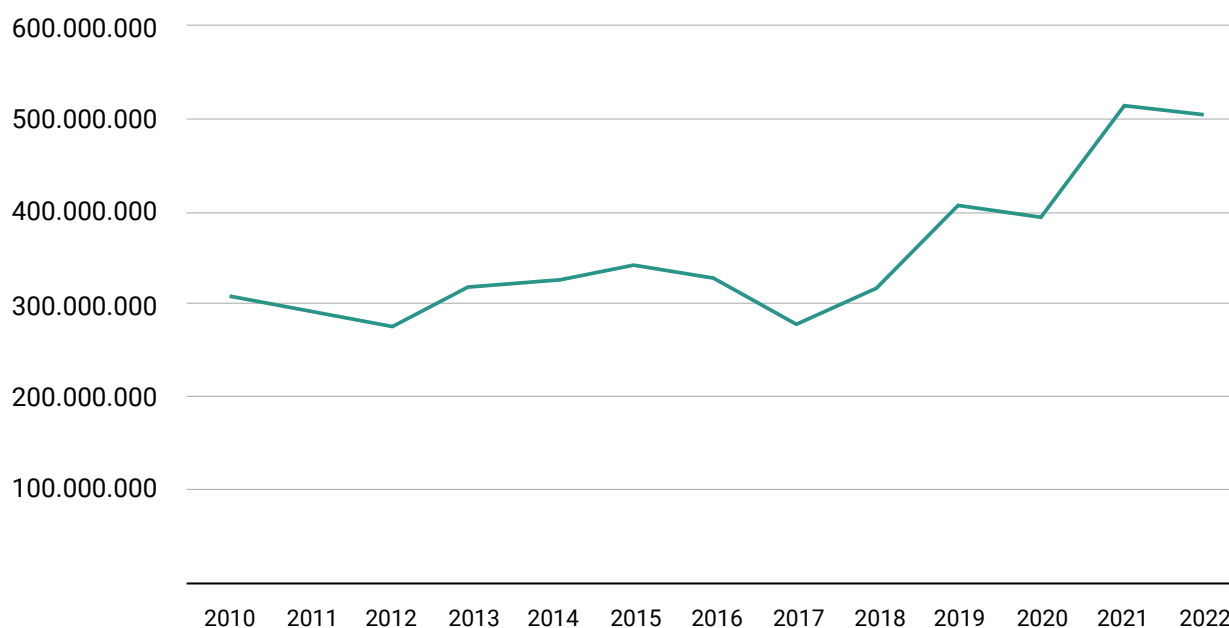


Anm.: Number of remuneration recipients in the transport industry and the communication and information industry who received between DKK 5,000 and 1,000,000 in fees in the year (2022 prices) divided by country of origin

Source: ECLM based on data from Statistics Denmark

**Figure 9. Development in the total amount of remuneration paid.**

### Development in total value of paid remunerations in the industry “Transport, Information, and Communication”, DKK (2023-prices)



Note: All prices have been regulated to 2023 prices. Only remunerations for people receiving remunerations between 5,000 DDK and 1,000,000 DDK in the year are included.

#### The total amount of remuneration paid within the transport, information and communication industry

As we have seen, the number of remuneration recipients within the transport, information and communication industry more than doubled from 2017 to 2022. However, this does not say anything about the total amount of remuneration paid in the industry. Therefore, Figure 9 shows the development in the total amount of remuneration paid. We see that the total remuneration payments were relatively stable, around 300 million DKK from 2011 to 2017 and that it has since increased and was more than 500 million DKK in 2022, an increase of 80%.

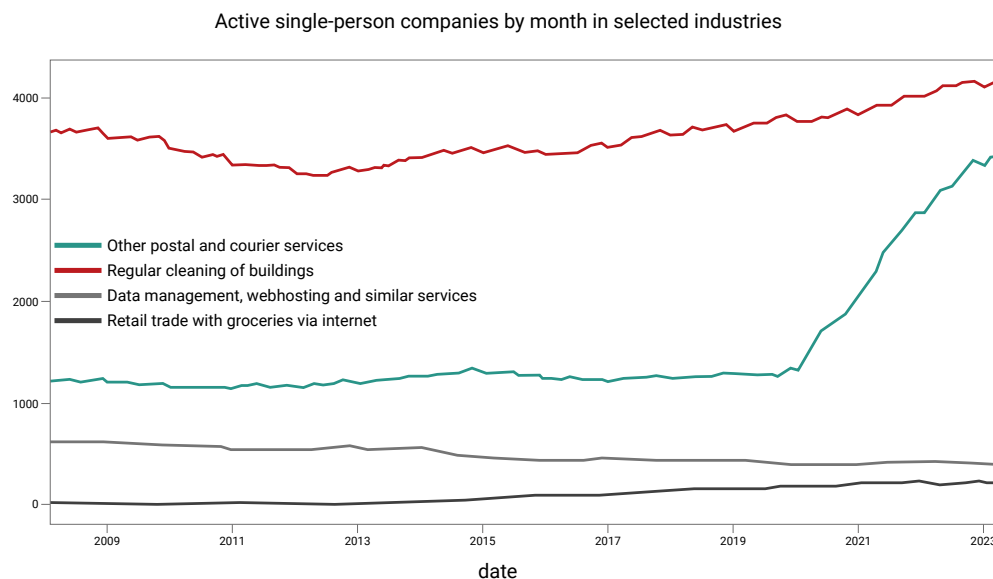
#### Results from publicly available company data

In this part of the analysis, we examine the platform industry and companies by utilising publicly available company data supplied by the Danish business authorities.

#### Development in single-person companies

In Denmark, certain platform companies have tended to engage workers as independent contractors instead of wage-earning employees. Since the companies do not formally employ these workers, the scope and development of this practice can be hard to examine. Since these workers will typically set up single-person companies, one way to explore the development is to look at the number of single-

**Figure 10. Development of active single-person companies by industry.**



person companies in selected industries, which is available from Virk.dk.

We focus on industries we suspect could have many platform workers. We examine the following industries:

- “Other postal and courier services” (DB07-code: 532000)
- “Data management, web hosting and similar services” (DB07-code: 631100)
- “Regular cleaning of buildings” (DB07-code: 812100)
- “Retail trade with groceries via the internet” (DB07-code: 479111)

Platform workers can, of course, also work in other industries, so this should not be seen as an exhaustive list but as an illustrative example. Examining more industries would be possible, but it is outside the scope of this study.

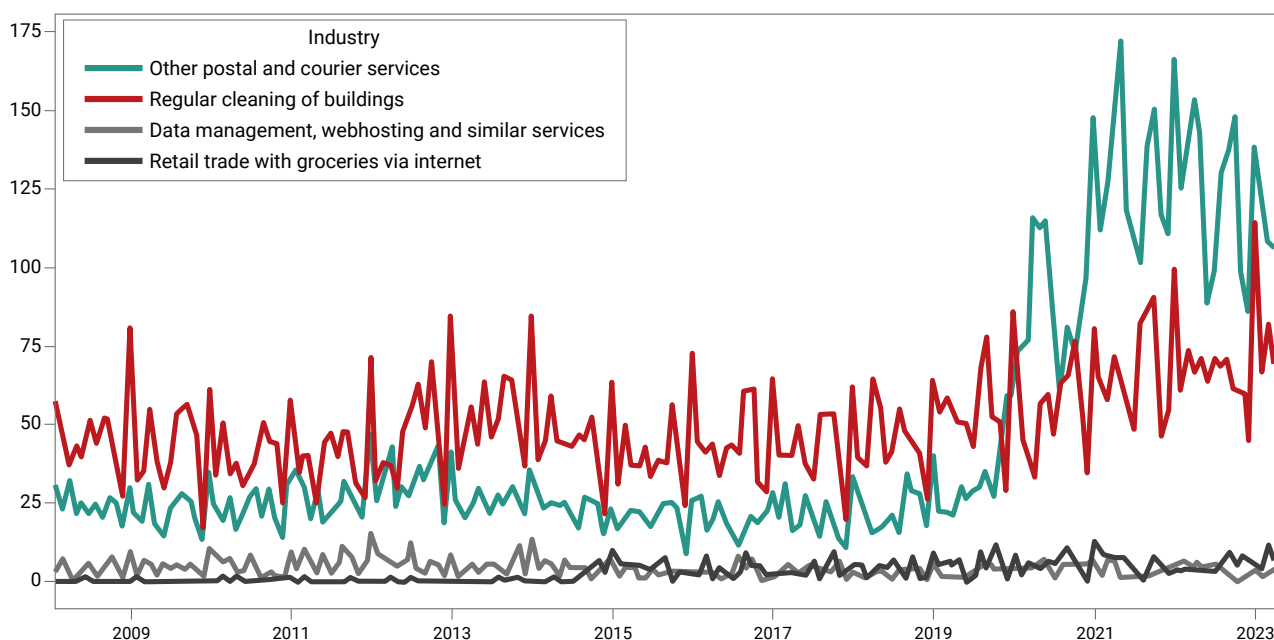
Firstly, we look at the development of active single-person companies for the selected industries.

### Active single-person companies in selected industries

The most eye-catching development has happened within the industry “other postal and courier services”, where the number of active single-person companies was relatively constant from 2008 until the end of 2019 at around 1,300, but from there increased dramatically to about 3,200 at the end of 2022, an increase of about 250%. It looks like the numbers stabilised at the start of 2023.<sup>12</sup>

There has also been an increase in single-person companies within the industry “regular cleaning of buildings”, but this increase has been relatively stable over the last ten years. In the sector “data management, web hosting and similar services”, there has been a steady decline in single-person companies over the period. In contrast, there has been a constant but modest increase in single-person companies in the industry “retail trade with groceries via internet” since it was created in 2014.

**Figure 11. Number of new single-person companies within selected industries by month.**



**Figure 12. Results for a search of the word Wolt in publicly available company data.**

**Vi fandt 101 resultater**

Vis alle 
  Virksomheder (101) 
  P-enheder 
  Personer 
 ▼ Sortering

<b>wolt</b> Læssøgade 19, 3 th 5000 Odense C	<b>CVR-nummer:</b> 41572442	<b>Status:</b> Aktiv	<b>Virksomhedsform:</b> Enkeltmandsvirksomhed	<a href="#">→</a>
<b>wolt</b> Studekrogen 1 3500 Værløse	<b>CVR-nummer:</b> 42899224	<b>Status:</b> Aktiv	<b>Virksomhedsform:</b> Enkeltmandsvirksomhed	<a href="#">→</a>
<b>pocha wolt</b> Gyldenløvesgade 14, 2. th 1369 København K	<b>CVR-nummer:</b> 42707198	<b>Status:</b> Aktiv	<b>Virksomhedsform:</b> Enkeltmandsvirksomhed	<a href="#">→</a>
<b>Noah wolt</b> Fuglebakkevej 92, 1. th 8210 Aarhus V	<b>CVR-nummer:</b> 43591479	<b>Status:</b> Aktiv	<b>Virksomhedsform:</b> Enkeltmandsvirksomhed	<a href="#">→</a>
<b>wolt delivery</b> Dalumvej 14 2650 Hvidovre	<b>CVR-nummer:</b> 43065092	<b>Status:</b> Aktiv	<b>Virksomhedsform:</b> Enkeltmandsvirksomhed	<a href="#">→</a>
<b>Ibish Wolt</b> Fabersvej 44, 4. th 8900 Randers C	<b>CVR-nummer:</b> 42576107	<b>Status:</b> Aktiv	<b>Virksomhedsform:</b> Enkeltmandsvirksomhed	<a href="#">→</a>
<b>wolt/mahmoud</b> Hovedgaden 27 9330 Dronninglund	<b>CVR-nummer:</b> 43239732	<b>Status:</b> Aktiv	<b>Virksomhedsform:</b> Enkeltmandsvirksomhed	<a href="#">→</a>
<b>WOLT VICTOR</b> Edwin Rahrs Vej 26, 2. tv 8220 Brabrand	<b>CVR-nummer:</b> 43373072	<b>Status:</b> Aktiv	<b>Virksomhedsform:</b> Enkeltmandsvirksomhed	<a href="#">→</a>



## New single-person companies in selected industries

Looking at the number of new single-person companies by month, we see some natural fluctuation from one month to the next (Figure 11). However, it is clear that the number of new single-person companies in the industry “other postal and courier services” started to increase at the end of 2019. Before the end of 2019, the number of new single-person companies within the industry had been relatively stable at around 25 per month. However, this number increased through 2022 and has been fluctuating around 125 new companies per month.

We do not see a similar development in the other industries. However, there has been a slight tendency within the “regular cleaning of buildings” sector that more new single-person companies have been created in recent years.

## Indications of engagement through platforms

To dig a little deeper and show some of the possibilities within publicly available company data, we examine how many active single-person companies within the industry “other postal and courier services” contain the word “Wolt” (a Finnish-based delivery platform). Of about 3,000 active single companies within the industry, 101 have Wolt in their name. Many of the names of these companies

indicate that they are independent Wolt couriers, for example, “Noah Wolt”, “wolt/Mahmoud” and “WOLT VICTOR” (Figure 12). We take this as an indication that many companies work as Wolt couriers.

## It is hard for platform companies to make a profit

The public company data also contains information about companies’ financial reports. Here, we look at the companies’ earnings before taxes to get an idea of the profitability of the platform companies’ business. This is not meant to be an in-depth analysis of the companies’ financial reports but a quick indicator of the sector’s profitability.

Table 1 shows that Hilfr, Happy Helper and Nemlig.com have had pre-tax deficits in all recorded years since 2017. The accumulated Nemlig.com pre-tax deficit from 2017 to 2022 was about 430 million DKK, 47 million DKK for Happy Helper and around 2 million DKK accumulated for Hilfr. Only Wolt has had a pre-tax surplus in most years, accumulating to 9 million DKK from 2017 to 2021.

This shows that starting a platform company is not the path to immediate wealth, but it does not mean that they cannot become profitable with time.

**Table 1. Pre-tax results for selected platform companies (in DKK).**

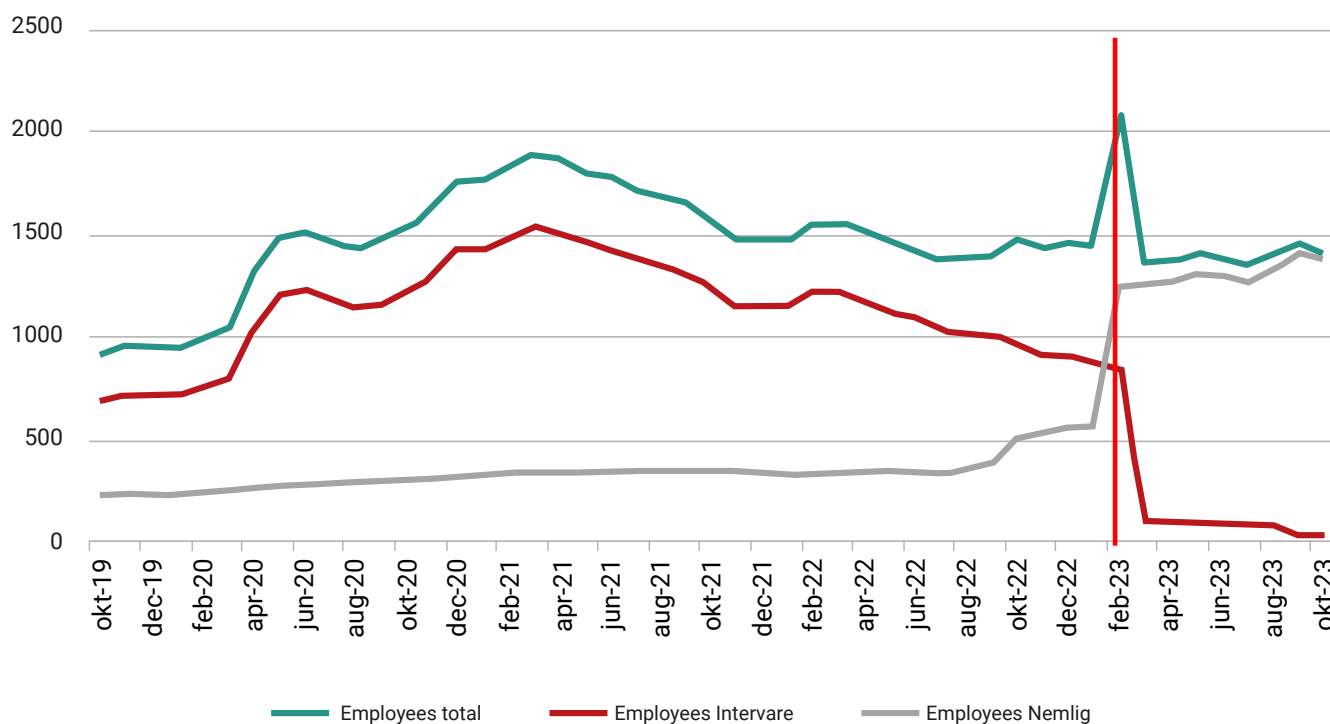
Table 1. Pre-Tax results for selected platform companies (in DKK)						
	2017	2018	2019	2020	2021	2022
Wolt	-234.419	650.228	1.600.037	2.673.709	4.525.770	
Hilfr	-175.884	-312.023	-753.837	-561.698	-178.721	-159.413
Happy Helper*	-3.766.507	-13.937.892	-9.079.702	-6.968.136	-5.546.364	-7.881.185
Nemlig.com**	-62.286.000	-78.207.000	-64.976.000	-14.614.000	-11.789.000	-197.591.000

Note: Results before taxes in DKK according to the company's yearly reports. Happy Helper's accounting year spans from September to August.

Nemlig.com's accounting year spans from August to July. Both are in the table listed by the end of the year.

Source: ECLM from data from virk.dk

**Figure 13. Development of Nemlig.com and Intervare employee numbers.**



Note: The red line indicates the month that Nemlig.com signed a collective agreement.

### Sharp rise in Nemlig.com employees around the time of implementing the collective agreement

Finally, we use the public company data to examine the number of workers employed at Nemlig.com.

The collective bargaining agreement between Nemlig.com couriers and the Danish workers union 3F came into force in the middle of February 2023, and the agreement is binding for both couriers employed by Nemlig.com and subcontractors hired by Nemlig. Historically, couriers delivering groceries for Nemlig.com have been engaged through subcontractors, and there have been several reports of poor working conditions in the media.<sup>13</sup>

The collective agreement covering Nemlig.com couriers came into effect on 21 February. Looking at data from Virk.dk, this could have impacted the number of employees employed by Nemlig. In January 2023, there were 571 employees at Nemlig; in February, there were 1,251 employees – more than doubling in one month. At the same time, the number of employees at the Nemlig subsidiary Intervare went down, with a similar number of workers pointing at a restructuring within the company rather than an increase of couriers with an employment contract.

The sharp rise in employment at Nemlig.com cannot be interpreted as a sign that many couriers working as subcontractors have been formally employed at Nemlig as a consequence of the collective agreement. However, from the data available on

Virk.dk, it is impossible to separate the employment growth attributed to the signing of the collective agreement and the personnel restructuring between Intervare and Nemlig. In January 2023, the Danish grocery store Føtex closed for home delivery, and at the end of February 2023, Danish COOP did the same. Therefore, we also cannot exclude the possibility that some growth might stem from development due to higher demand.

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# **RESULTS OF SCRAPING DATA**

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# RESULTS OF SCRAPING DATA

Online platforms are – of course – online in nature. Customers visit the service’s web page (or app) to book services. The platform company offers services on the web page, requiring information targeted at the customer. However, this information can also be interesting for researchers wanting to examine the platform and its workers’ conditions.

This part of the policy study seeks to utilise the data from the platforms’ websites to extract information about workers’ conditions. The data is extracted programmatically. Extracting data from web pages in this way is called “scraping”.

The plan for the analysis was to examine the web page of the following five platform companies operating in Denmark:

- Nemlig.com (grocery delivery service)
- Wolt (fast food and grocery delivery service)
- Gorillas (grocery delivery service)
- Hilfr (cleaning service provider)
- Happy Helper (cleaning service provider)

## Types of platforms classified by the services they provide

Available information relating to workers varies widely, depending on what kinds of services the platform provides. Therefore, it was only possible to scrape some websites.

### Gorillas

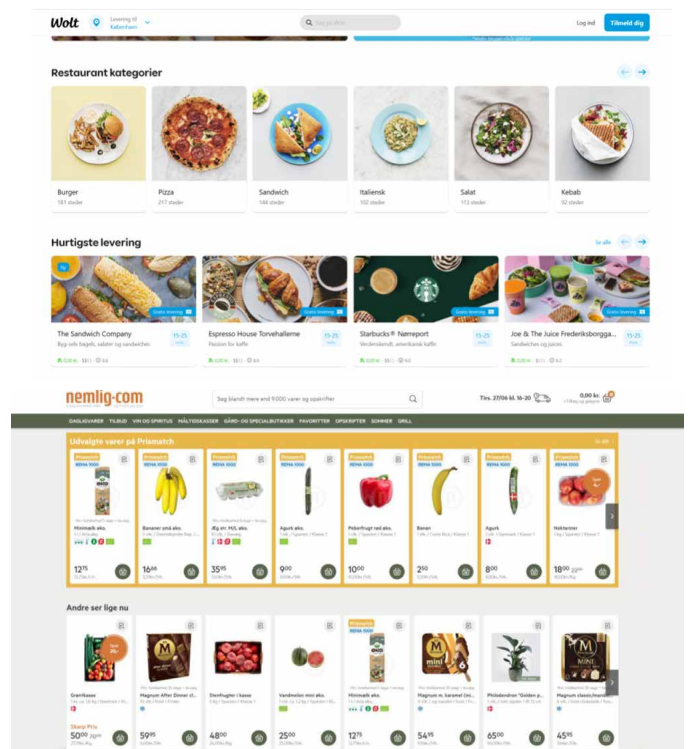
Since the start of the project, Gorillas has gone bankrupt in Denmark (end of February 2023), and the Danish web page has closed. Therefore, Gorillas was not relevant to access.

## Nemlig.com and Wolt

The web pages belonging to Wolt and Nemlig.com were also examined, and it was concluded that, when it came to examining workers’ conditions, no relevant information was available. The reason is that the customer chooses goods, not services, on the website. The customer, therefore, has no influence on which courier delivers the goods, and therefore, no information about the courier is provided.

Figure 14 provides examples of how the web pages of Wolt and Nemlig.com look. For Wolt, the focus is on the specific type of fast food. For Nemlig, it is on the particular grocery item offered. Therefore, the workers who provide the service are not visible on the website; thus, no information about workers can be extracted.

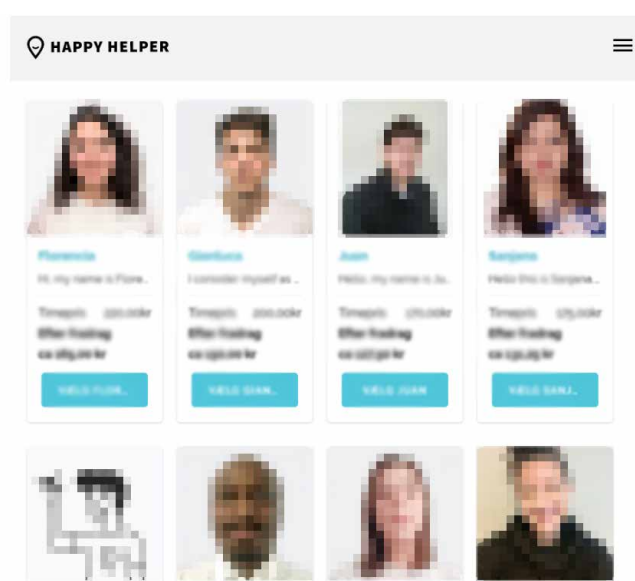
Figure 14. User interfaces of the Wolt and Nemlin.com websites.



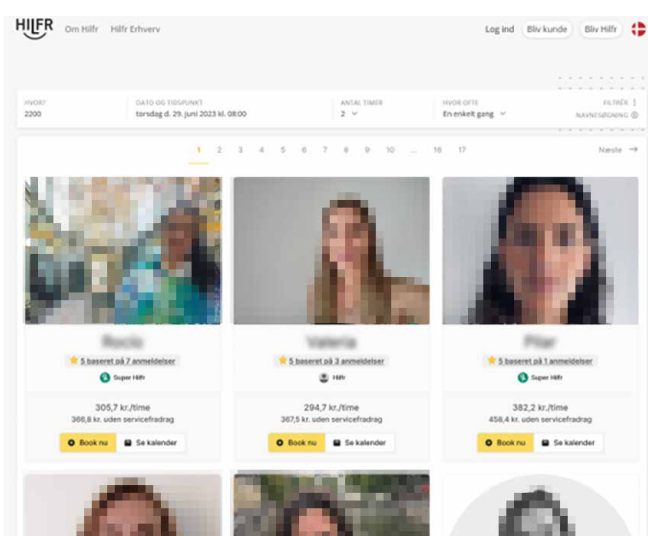
## Happy Helper and Hilfr

The cleaning platforms Happy Helper and Hilfr connect customers directly to cleaners. Customers order a service and choose which worker they want to deliver the service. Therefore, the workers are front and centre on the web page, making extracting information about workers' conditions possible (Figure 15).

**Figure 15. User interfaces of the Happy Helper and Hilfr websites.**



Note: Faces and names have been blurred.



Note: Faces and names have been blurred.

## Hilfr – results

When booking a cleaner at Hilfr, a lot of information is provided. Figure 16 provides an example of a cleaner's page for the following week. Here, we can see the following information about the cleaner:

- Name
- Average rating
- Hourly wage
- Badges (e.g., "Super Hilfr" and "Top performer")
- The cleaner's schedule for the following week (both vacant and booked hours)
- A description written by the cleaner

Using web scraping, we can collect and organise this data to extract information about the scope of work and working conditions.

## Hilfrs on Hilfr.dk

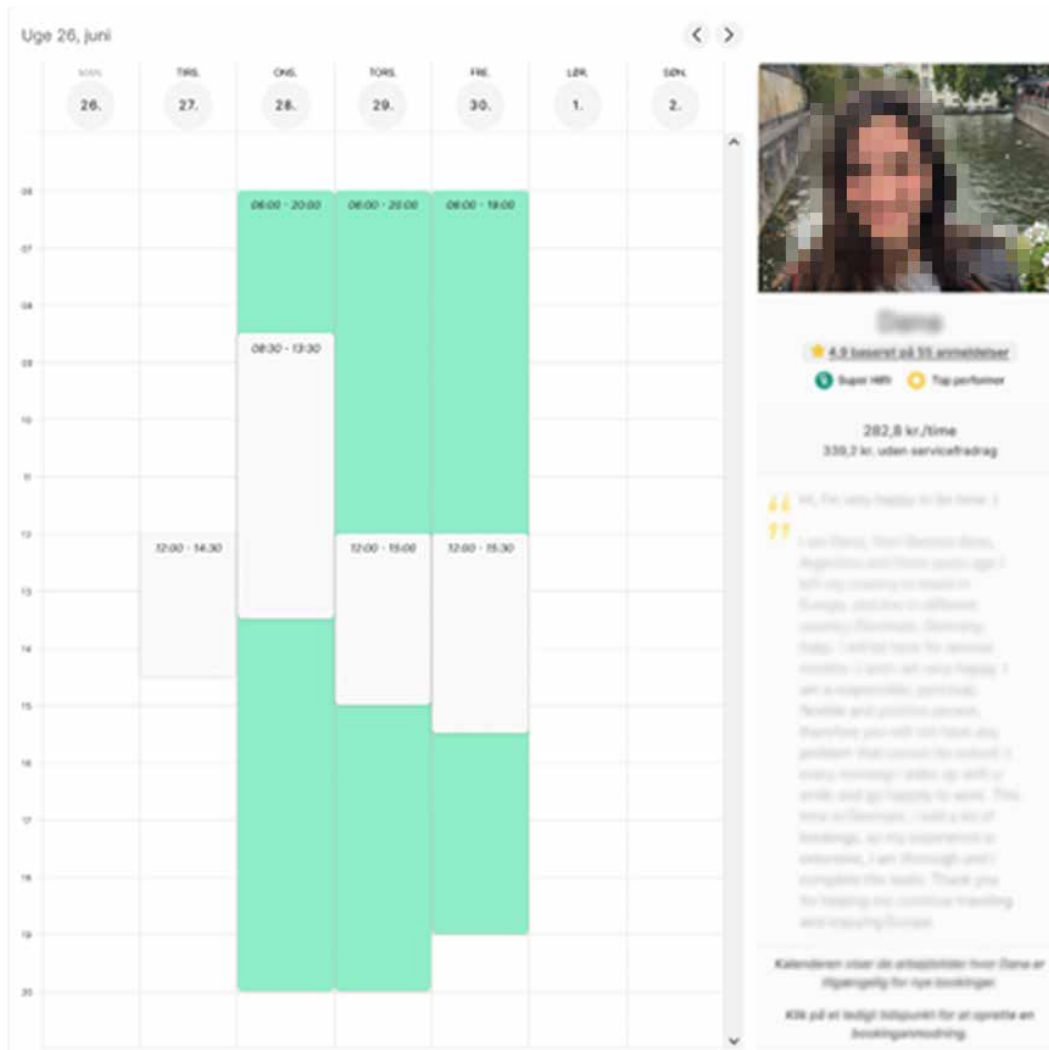
In this analysis, we collect data on Monday mornings. This gives us the full schedule for the week from the cleaners' perspective.

Firstly, we look at a homepage snapshot from 12 June 2023. As described in Table 2, we found 197 cleaner (Hilfr) profiles. Of these, only 66 – corresponding to a third – were active; this is defined by the ability to book these cleaners for the following week.

Of the active profiles, 85% were identified as women, and over 90% were based in the Copenhagen area. Twenty-one out of 66 active Hilfrs – or one in three – were Super Hilfrs, and thereby covered by the collective agreement. This also gives an indication that many of the active Hilfrs have not worked many hours for the platform, since Hilfrs automatically become Super Hilfrs when they have worked 100 hours (corresponding to less than 3 weeks of full-time employment) on the platform.

Only 23 Hilfrs had a booking for the following week. This corresponds to one in three active Hilfrs and one in eight of all Hilfrs with a profile. Most active

Figure 16. Example of a cleaner's page on the Hilfr website.



Note: Personal information has been blurred.

Hilfrs were only booked for a few hours the following week (Figure 17).

The most booked Hilfr was booked for 23 hours the following week, and only three were booked for more than 15 hours the following week. The median number of booked hours for Hilfrs with bookings the following week was 7 hours.

Looking at active Hilfrs with bookings for the following week, the expected income (hourly wage times booked hours) was 2,055 DDK, on average,

with the maximum being 6,475 DDK (Table 3). In Denmark, the weekly minimum wage for a service worker with no vocational training in retail (working under the HK collective bargaining) is about 4,800 DDK.<sup>14</sup> The hourly wage for booked Hilfrs ranged from 150 DDK to 350 DDK (Figure 18).



## Development over time

To examine if the week of 12 June 2023 was an outlier, we scraped the Hilfr website six times in the first half of 2023. This indicates that, although there

are some variabilities in the number of active Hilfrs, the week beginning 12 June 2023 is not an outlier. The number of active Hilfrs in the following week (19 June 2023) vary between 18 and 26 over the observed period (Figure 19).

**Table 2. Description of Hilfrs for the week starting 12 June 2023.**

Description of Hilfrs -the week starting June 12, 2023			
	Active	Inactive	Total
All Hilfrs	66	131	197
Women	56	92	148
Men	6	34	40
Non-binary/ambiguous	4	5	9
Copenhagen	62	117	179
Aarhus	3	11	14
Other	1	3	4
Super Hilfr	21	19	40
Normal Hilfr	45	112	157
Booked the following week	23	0	23
No bookings the following week	43	131	174

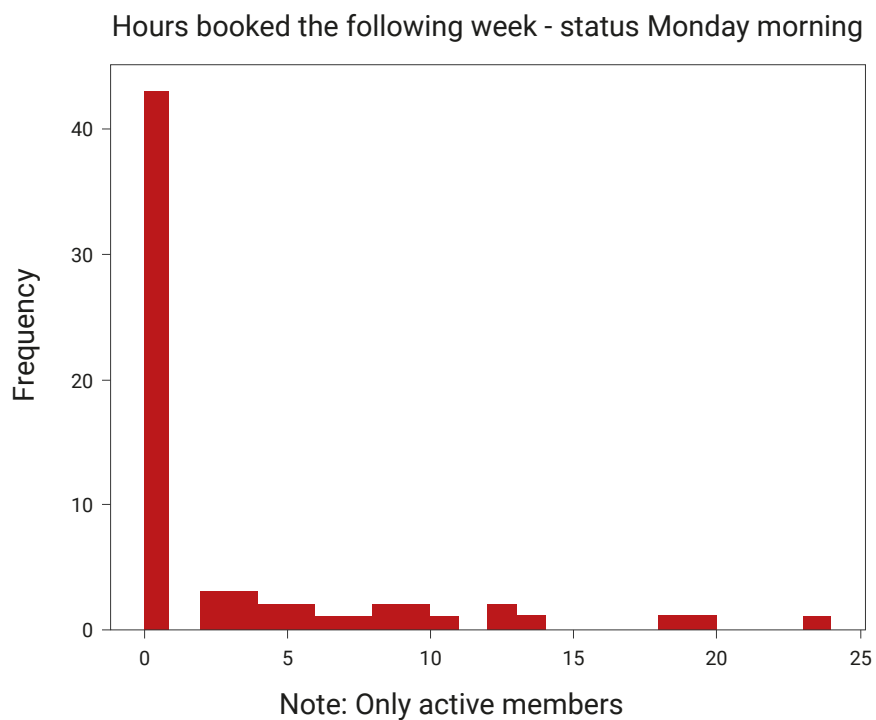
Source: ECLM from data collected from Hilfr.dk

**Table 3. Income of Hilfrs booked for the week starting 19 June 2023 (in DKK).**

Income the following week for booked Hilfrs, DKK					
	Mean	Min	Median	Max	N
Total income for booked	2,055	360	1,980	6,475	23

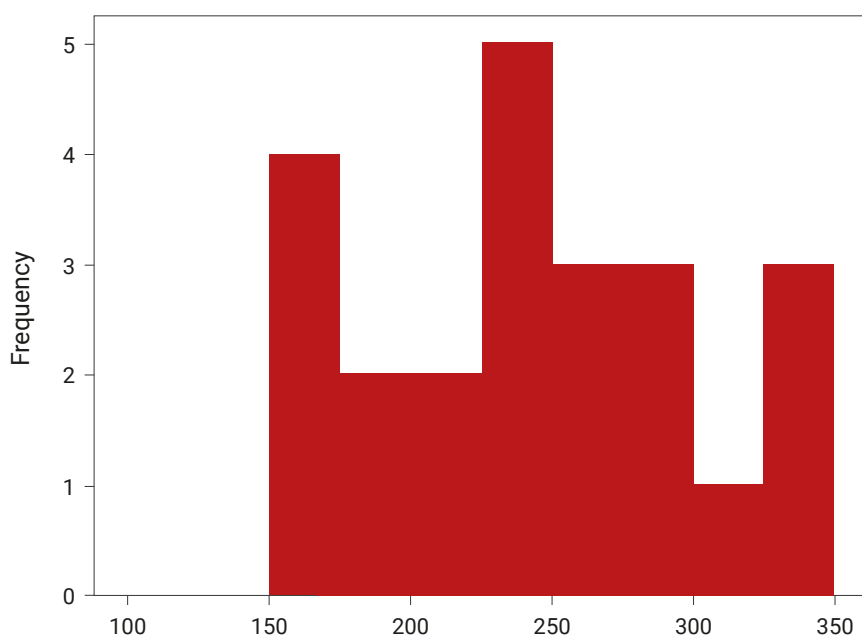
Source: ECLM from data collected from Hilfr.dk

**Figure 17. Hours booked for active cleaners in the week starting 19 June 2023.**

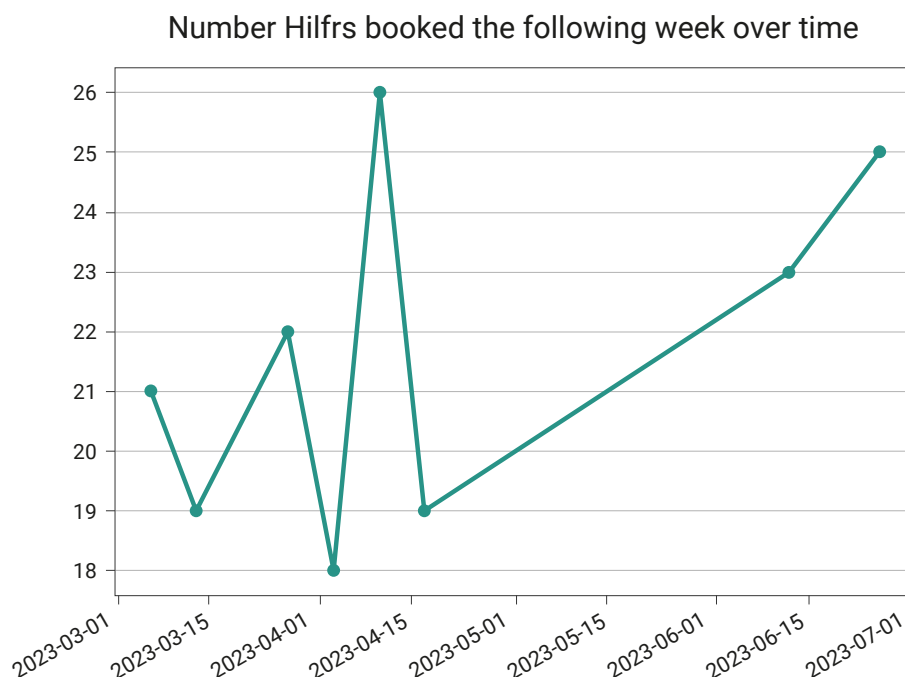


**Figure 18. Wage distribution of Hilfrs booked for the week starting 19 June 2023 (in DKK).**

Histogram showing wage distribution for Hilfrs booked the following week, DKK



**Figure 19. Number of Hilfrs booked for the week after initial data scraping over time.**



### Happy Helper – results

The Happy Helper web page works a bit differently from the Hilfr one. Therefore, it was not possible to see the schedule of the cleaners engaged through Happy Helper. However, we can still extract some information. The following findings cannot – as we could in the Hilfr case – account for whether the cleaner is actually booked for the next week.<sup>15</sup>

There were 336 profiles for cleaners (Happy Helpers) on the Happy Helper website and the median hourly wage for the cleaners was 210 DKK. The minimum was 130 DKK, and the maximum was 450 DKK.

71% of Happy Helpers were identified as women, and 22% were identified as men. For 6%, it was not possible to identify a gender. Most Happy Helpers were based around the larger cities in Denmark, especially Copenhagen.

**Table 4. Happy Helper hourly wage (in DKK).**

Hourly wage for Happy Helpers (inactive not removed)					
	Mean	Min	Median	Max	N
Total income for booked	219	130	210	450	336

Source: ECLM based on data collected from Happyhelper.dk

**Table 5. Characteristics of Happy Helpers.**

Characteristic of Happy Helpers	
	Count
Women	240
Men	75
Non-binary/ambiguous	21
Copenhagen	236
Aarhus	62
Odense	17
Aalborg	16
Zealand (outside Copenhagen area)	5
Total	336

Source: ECLM based on data collected from Happyhelper.dk

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# **CONCLUSIONS BASED ON THE FINDINGS FROM THE DATA**

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# CONCLUSIONS BASED ON THE FINDINGS FROM THE DATA

*“The administrative data shows an apparent rise in the number of remunerated workers in specific sectors in Denmark over the past years. In the transport, information and communication industry, we see a significant increase, which is explicitly comprised of young, non- Danish workers with limited education.”*

While the overall number of remunerated workers was relatively stable in Denmark, the administrative data shows an apparent rise in the number of remunerated workers in specific sectors in Denmark over the past years. In the transport, information and communication industry, we see a significant increase, which is explicitly comprised of young, non-Danish workers with limited education. Traditionally, this group of more vulnerable workers is now being put to work in the platform economy on precarious employment terms.

When we put this next to the data for the Danish company register, you can see that many single-person companies are platform workers. Looking at the platform company data, these companies are, as expected, not very profitable. However, it is interesting to see that, in the case of Nemlig.com, the number of employees doubled in one month after a collective agreement allowed remunerated workers to secure an employment contract.

Scraping the online data of platform companies did not always give insights into the employment terms of the platform workers. But in the case of Happy Helper and Hilfr, we were able to analyse the kind of workers, the hourly wage, the availability for work and even the hours worked per platform worker. What we found on the websites of the two platform companies might not give us a complete picture of household-help workers.

All of this data shows us that, even in one of Europe’s most organised labour markets, platform companies are trying to avoid labour and tax regulations by hiring platform workers through remuneration contracts. It will be interesting to see what the proposed European Platform Work Directive would do to change this situation. In many instances, the platform controls the work performance of these workers, which could lead to a presumption of an employment relationship. This will clarify the social rights of these workers and could lead to more collective agreements with these platform workers. As we already have seen in the case of Nemlig.com and Hilfer, this can be a path to improving these workers’ working conditions and employment terms.

*“All of this data shows us that, even in one of Europe’s most organised labour markets, platform companies are trying to avoid labour and tax regulations by hiring platform workers through remuneration contracts.”*

We are dealing with a group of workers in a more vulnerable position who must be protected against precarious working conditions. Also, the Danish welfare state depends on the inclusion and contributions of all workers, which is a reason to bring these workers under collective agreements.





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# **ANNEX: RESEARCH METHODS**

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# ANNEX: RESEARCH METHODS

As stated in the analysis, employment terms for platform workers have most often been investigated using qualitative data (such as interviews) and surveys. This study seeks to contribute knowledge about platform companies and the terms of employment for workers engaged through them by using different kinds of existing quantitative data. The hope is that the results will enlighten the field and that the methods can inspire other researchers to use quantitative methods to examine platform companies.

Since this study seeks to contribute by showing other methods than those most used, it is, to a large extent, explorative, meaning that considerations on how data can and cannot be used will be part of the contribution. Also, practical considerations on what can and cannot be done will be part of the contribution.

In the analysis, the following three data sources are used:

## 1) Administrative data, which required privileged researcher access

Here, we use administrative data from Statistics Denmark, which contains individual data for the Danish population. We examine how remuneration as payment has developed in Denmark since 2010, focusing on industries we suspect have many platform workers.

## 2) Publicly available administrative data from the Danish company register

Here, we use data from the publicly available company register hosted at [www.virk.dk](http://www.virk.dk) by the Danish Business Authority. Here, we look at the development of single-person companies working within industries that we suspect are heavy on platform firms.

## 3) Online data gathered from the web pages of the platforms

Platform companies are online by nature since customers use the web page to order goods and services. Therefore, a lot of information is available directly from the web pages of the platform companies. Some of this data contains information about workers' employment terms.

The following explores the methods used to analyse each data source.

## Administrative data, which requires privileged researcher access

Some platforms pay workers by remuneration. Typically, workers are not classically employed by the platform but are paid for each task they complete. This potentially give companies fewer commitment to the workers (though several rulings show this is not necessarily true).

We examine the development of remunerations in Denmark from 2010 to 2022, using the Statistics Denmark register for non-wage-earner income (ILME) and restrict to only covering remuneration payments.<sup>16</sup> We have limited the analysis to people who have received remunerations between 5,000 DKK and 1,000,000 DKK in a year. All prices and amounts have been calculated for 2023 prices.

The data in the analysis is on the individual level for the Danish population and therefore not age restricted. Education has been grouped by highest completed education level. People with no vocational training include individuals with no registered education.

## Rules of discretion for Danish company data

Company data from Statistics Denmark gives access to anonymised data about all companies in Denmark. To ensure that specific companies cannot be identified, Statistics Denmark requires that statistics

can only be used if less than 85% of the payments stem from the two most prominent companies in the cell. This means we must amalgamate the groups we examine if few companies dominate. This has led to some industries being amalgamated in the analysis. All cells in all reported data have been examined to ensure that Statistics Denmark rules are complied with.

To meet the discretionary rules, the industries “transport and cargo handling” and “information and communication” have been amalgamated and are called transport, information and communication in the analysis.

### **Publicly available administrative data from the Danish company register (Virk.dk)**

Information about companies in Denmark is available from the website Virk.dk, hosted by the Danish Business Authorities (*Erhvervsstyrelsen*), where you can look up registered Danish companies. Data can also be accessed through an application programming interface (API) through The Data Distributer (*Datafordeleren*), which makes it feasible to extract information for large groups of companies.

It is possible to follow companies over time in the register. Data about the companies’ accounting, number of employees, industry classification and registration history are, among other information, publicly available. In this study, we use data on registration history, accounting, number of employees and so forth.

The analysis includes data starting from 1 February 2008, since this was when the current standard for industry codes (DB07) was implemented in Denmark. Some companies can be shut down for periods. In these cases, we only include company data for the latest period. We only include companies that are registered as active. While this removes companies that have closed down, it may still contain some companies without any activity.

### **New and active companies**

The first part of the analysis focuses on specific industries that we suspect might be relevant when examining platform work. Specifically, we look at the following sectors:

- “Other postal and courier services” (DB07-code: 532000)
- “Data management, web hosting and similar services” (DB07-code: 631100)
- “Regular cleaning of buildings” (DB07-code: 812100)
- “Retail trade with groceries via the internet” (DB07-code: 479111)

Within platform companies, there has been a tendency to employ workers who would otherwise have been engaged in wage-earner contracts as self-employed. Therefore, we examine the development of single-person firms in Denmark within selected industries.

The industry “retail trade with groceries via the Internet” was added to the Danish industry code nomenclature in 2014, meaning there were no active single-person companies in this industry before 2014.

We examine both the total number of active companies each month and the number of newly started companies each month. The number of active companies shows the number of active single-person companies within the industry by regulating for formally inactive firms.<sup>17</sup> The number of newly started companies each month shows the flow of new companies entering the industry but does not account for those exiting.

A company can have several industry codes. We use the primary one reported for companies with more industry codes. Also, a company can change its industry code. We categorise companies that have changed industry codes by the newest industry code.

To test the hypothesis that many of these single-person companies work as couriers for food delivery services, we use virk.dk to search for single-person companies within the industry “other postal and courier services” with “Wolt” in the name. This is meant to indicate that a substantial portion of single-person companies within the industry work as Wolt couriers. However, it is by no means a guarantee that the single-person company performs tasks for Wolt, nor can it be seen as an exhaustive list of companies delivering for Wolt.

### Profits and financial reports

We examine the development in profits for four platform companies. This is done by examining their earnings before taxes and interest, as reported in their official financial accounts available at Virk.dk. Earnings before taxes and interest have been assessed as a transparent measure for these companies. However, no in-depth analysis of the companies’ financial situation has been done, so these are only to be taken as superficial indicators of the companies’ financial situation.

Furthermore, we do not account for potential parent or daughter companies within the company group.

### Development in employees

We make a case study for Nemlig.com to examine the number of employees found on Virk.dk. Virk.dk has quarterly employment data since 2004, but only detailed data from October 2019, where the exact number of employees (in number of persons and in full-time persons) can be seen. Therefore, we only use this data. This is also the most relevant period for Nemlig.com.

### Web scraping: Online data gathered from the web pages of the platforms

The web pages of online companies are used to connect customers to services. To make this connection, some information needs to be provided. The customer will typically only access some of the information, but it is often possible to access all the data programmatically. This is often called “web

scraping”. As we see in the analysis, this information can, in some cases, be used to access information about workers’ terms.

There are several ways to do web scraping. Two of the main methods are what we here call “browser-based” and “request-based”. The two are often used in combination.

Browser-based web scraping imitates a web browser like Google Chrome or Microsoft Edge to access the requested pages programmatically. This gives the advantage of being able to interact with the web page. However, this can also take a long time, compared to request-based web scraping, since browsers are typically slow relative to requests.

Request-based web scraping sends commands directly to the server hosting the websites, thereby circumventing the browser. This method is usually faster, but not all information will be available for many web pages, since the actual website is not loaded. Therefore, some data cannot be fetched from the backend database. Request-based web scraping is especially powerful when it is possible to access the web page API, which makes it possible to access data. This is, for example, the case for the data provided by the Danish Business Authorities through The Data Distributor.

During data gathering, it was assessed that only the web pages of Happy Helper and Hilfr provided valuable data. These websites were scraped using the Python packages Request (for request-based web scraping) and Selenium (for browser-based web scraping).

### Calculation of hourly wages

The websites contain information about the hourly price for workers, which we have operationalised as the hourly wage for Happy Helper.

For Happy Helpers who are VAT registered in Denmark, VAT should be paid from the price, which will lead to an overestimation in the hourly wage. It has not been possible to control for this. However,

it is assumed that most Happy Helpers are not VAT registered.

There are different terms for the platform Hilfr, depending on whether you are a “Super Hilfr” or “Normal Hilfr”. According to the collective agreement between Hilfr and 3F, if cleaners have worked at least 100 hours through the Hilfr platform, they are automatically covered by the collective agreement and become Super Hilfrs.

Super Hilfrs are employed according to the collective agreement between 3F and Hilfr<sup>18</sup> and have a minimum hourly wage of 152 DKK and get pension (4.15% of wage), paid annual leave (12.5% of salary) and paid sick leave entitlements. Normal Hilfrs get their listed price, plus a mandatory “welfare supplement” of 20 DKK per hour. To better be able to compare wages of Normal Hilfrs and Super Hilfrs, the reported salaries for Super Hilfrs account for pension and annual leave payments (hourly rate times 116.65%) and Normal Hilfrs account for welfare supplements (hourly rate plus 20 DKK), when calculating the mandatory welfare supplement.

For the reasons stated above, the reported wages of Super Hilfrs cannot directly be compared to the salaries of Normal Hilfrs and Happy Helpers.

## Gender identification

Since the services on cleaning platforms are most often done by a specific individual, information about the individual’s name is available. From the name, it is possible to guess the gender of the person, which can be used to examine gender balances on the platform.

To identify gender, we use a complete list of names for Danish residents on 1 January 2022. The list is provided by Statistics Denmark and contains a count of how many people have a specific first name by gender. Many names can be both male and female. In this case, we identify the names as a particular gender if at least 60% of the individuals with the name have a specific gender. Names where less than 60% are identified as a particular gender and first names that are not on the list from Statistics Denmark are

labelled as “non-binary/ambiguous”. This might lead to some misclassifications, for example, we identify all persons named Michele as female, although 117 out of 580 people living in Denmark with that first name are registered as male.

Furthermore, registered gender and the gender a person identifies as may differ. Thus, there is an element of uncertainty in the identification of gender. However, it is assessed that the level of certainty is sufficient for the purpose of the study.

# ENDNOTES

- 1 European Commission (2021) "Commission proposals to improve the working conditions of people working through digital labour platforms". Press Release, 9 December.
- 2 For more information on the Digital Programme of FEPS, together with Tankesmedjan Tiden, Kalevi Sorsa Saatio, Tankesmien Agenda, CEVEA, Arbejderbevægelsens Erhvervsråd (ECLM), Friedrich-Ebert-Stiftung Nordics, Cooperation Committee of the Nordic Labour Movement (SAMAK) and with the support of Nordic Trade Unions, you can consult the Digital programme: Algorithms at the workplace website.
- 3 In many cases, such a presumption will not necessarily change the legal status of workers, but clearer rules can make it harder for employers to avoid their obligations by (falsely) claiming that workers are self-employed.
- 4 "Hilfrs overenskomst med 3F". HILFR website.
- 5 For information on Ley rider (the riders' law), see: Gobierno de España (2021) "Legislación consolidada". Boletín Oficial del Estado, 30 September; also see L. Rodrigues (2022) "First collective agreement for platform workers in Spain". Social Europe, 13 January.
- 6 European Commission (2021) "Commission proposals to improve the working conditions of people working through digital labour platforms". Press Release, 9 December.
- 7 Council of the EU, Press release, 13 December 2023, 'Rights for platform workers: Council and Parliament strike deal', <https://www.consilium.europa.eu/en/press/press-releases/2023/12/13/rights-for-platform-workers-council-and-parliament-strike-deal/>, and, Théo Bourgery-Gonse, Euractiv, 22 December 2023, 'Member states deal heavy blow to platform work deal', <https://www.euractiv.com/section/economy-jobs/news/member-states-deal-heavy-blow-to-platform-work-deal/>
- 8 "Remuneration". Cambridge Dictionary website.
- 9 "Wage". Cambridge Dictionary website..
- 10 Schneider (2023) "Myndighed kører Wolt hårdt over: Skæbneafgørelse sætter punktum efter fire år". Berlingske, 2 May.
- 11 To meet the discretionary rules, the industries "transport and cargo handling" and "information and communication" have been amalgamated and are called "transport, information and communication" in the analysis.
- 12 Some of the rise coincided with the Covid-19 pandemic, where food delivery services flourished. However, the rise within the industry already started before the pandemic hit, which indicates that other factors are also at play.
- 13 For example, see: J. Pröschold (2021) "Nemlig.com's bødesystem straffer chauffører for tre minutters forsinkelser". Politiken, 19 March.
- 14 "Sådan stiger minimallønnen på butiksområdet". HK website. The minimum wage for workers with no vocational training is 130 DKK per hour, corresponding to 4,825 DKK per week for a working week of 37 hours (full time in Denmark).
- 15 Data from Happy Helper was collected on 27 June 2023.
- 16 We only include payments where the person has only received b-income from the company (VMO\_INDKOMST\_TYPE\_KODE = 5) and without any specific income code (VMO\_INDKOMST\_ART\_KODE has no value). Furthermore, we only include income that is subject to labour-marked contributions (VMO\_B\_INDK\_AM\_BIDRAG\_BETAL > 0) to filter out payments such as compensation and library payments. Suppose a person during a year has received remuneration from several companies, in this case, we attribute all remunerations paid during the year to the company that paid the highest remunerations to the person that year.
- 17 Since firms can be formally active, but still have no activity, there is no guarantee that the person owning the firm is employed through the firm for the specific period. However, since having an active firm comes with the responsibility of reporting company data, which can be burdensome, there is an incentive to close inactive companies.
- 18 "Collective agreement between Hilfr ApS. CBR.no.: 37297267 and 3F Private Service, Hotel and Restaurant". Translated by the Danish Confederation of Trade Unions.

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## ABOUT THE FOUNDATION FOR EUROPEAN PROGRESSIVE STUDIES (FEPS)

The Foundation for European Progressive Studies (FEPS) is the think tank of the progressive political family at EU level. Its mission is to develop innovative research, policy advice, training and debates to inspire and inform progressive politics and policies across Europe.

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Research on platform workers' employment terms is often done using surveys or qualitative data like interviews. As part of the FEPS and its Nordic partner's Digital Programme on algorithms in the workplace, this policy study seeks to contribute knowledge about platform companies and the terms of employment for workers engaged through them by using different kinds of existing quantitative data in Denmark. The precarious working conditions of platform workers have placed the topic on the agenda of policymakers at the European level, and legislators are looking into ways to regulate the employment relationship of platform workers. In the Danish context, the presumption of an employment contract could help in the question of collective agreements with new platform companies and force the platforms to take on the role of an employer, with the social security obligations that come with it. Many platforms claimed to merely establish contact between customers and service providers and, therefore, did not look at themselves as classic employers. This has led many platform companies to pay workers remuneration or demand that they start a company, typically a single-person firm, to which the salary is paid. The administrative data shows an apparent rise in the number of remunerated workers in specific sectors in Denmark over the past years. In the transport, information and communication industry, we see a significant increase, which is explicitly comprised of young, non-Danish workers with limited education. This data shows us that, even in one of Europe's most organised labour markets, platform companies are trying to avoid labour and tax regulations by hiring platform workers through remuneration contracts.

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