



# The knowledge-intensive platform economy in the Nordic countries



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## **The knowledge-intensive platform economy in the Nordic countries**

*Economics Norway and the Research Foundation Fafo*

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Nordic Innovation and the five national Federations of Professional Associations have commissioned Economics Norway, the Research foundation Fafo and a supporting panel of Nordic experts to study opportunities and barriers for Nordic countries to take advantage of benefits created by the platform economy.

The analysis has a specific focus on the platform economy in the knowledge-intensive labour market.

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# Preface

Digital labour platforms represent new ways of organising labour and novel opportunities. The Nordic region is recognised for being at the forefront of technology, but digital platforms are currently used to a limited extent. Nordic Innovation and the five national Federations of Professional Associations have commissioned Economics Norway, the Research foundation Fafo and a supporting panel of Nordic experts to study opportunities and barriers for Nordic countries to take advantage of benefits created by the platform economy. The analysis has a specific focus on the platform economy in the knowledge-intensive labour market.

We would like to thank Nordic Innovation, the Federation of Norwegian Professional Associations, the Danish Confederation of Professional Associations, the Confederation of Unions for Professional and Managerial Staff in Finland (Akava), the Swedish Confederation of Professional Associations (Saco) and the Icelandic Confederation of University Graduates (BHM) for useful feedback and good discussions for the duration of the project, which have had positive impact on the final product.

We especially thank the expert panel for providing valuable input to the analysis and comments throughout the duration of the project. The expert panel has been Katrín Olafsdóttír (Reykjavik University), Stine Rasmussen (CARMA, Aalborg University), Natalie V. Munkholm (Aarhus University), Bertil Rolandsson (Gothenburg University), Annamaria Westregård (Lund University), Marjo Ylhäinen (University of Eastern Finland), Antti Saloniemi (University of Tampere).

A workshop was also arranged as a part of the project. The aim of the workshop was to gather input to the analysis from relevant stakeholders and first-hand experiences from Nordic platform companies. We would like to thank everyone who participated at the workshop, and especially representatives from Testbirds, eWork, Meploy, Solved, Ahum, Luado, TribeTampere, Voocali and Worksome who presented their platform solutions.

We would also like to thank those who have shared their perspectives and experiences in interviews, and especially representatives from Worksome, BrainBase, Lionbridge and Solved which are four case-studies in the report.

*Oslo, 31 May 2019*

Rolf Røttnes  
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# Executive summary

Online labour markets are growing, although from a very low level. In the Nordic labour markets, the phenomenon is even more marginal than in the rest of Europe. Recent estimates find that between 0.3% and 2.5% of the Nordic labour force currently works via platforms.

This report discusses the development of digital platforms for organising and solving knowledge-intensive tasks, in the context of existing labour market and welfare models in the Nordic countries. Knowledge-intensive platforms are a subset of the overall platform economy, connecting workers with clients. Knowledge-intensive platforms organise tasks and projects that are primarily relevant for professionals with a long tertiary education.

**The main objective is to:**

**'Identify opportunities, bottlenecks and possible solutions for growth, innovation and new ways of organising work using digital platforms in all five Nordic countries'**

The report is commissioned by Nordic Innovation in close cooperation with the Federation of Norwegian Professional Associations, the Danish Confederation of Professional Associations, the Confederation of Unions for Professional and Managerial Staff in Finland (Akava), the Swedish Confederation of Professional Associations (Saco) and the Icelandic Confederation of University Graduates (BHM).

Digital platforms create value for their users by providing an efficient infrastructure for matching supply and demand for skills and labour. Platforms act as a marketplace where professionals and clients can meet, bargain and agree on a contract to solve a task or project, using a standardised contractual framework. Transactions in the platforms involve three parties: the platform, the client and the platform worker.

There is a paucity of literature on high-skilled platform work. Our literature and data search found that at the start of 2019, there are about 30 platform companies mediating high-skilled platform work in the Nordic countries. However, the platform economy remains a moving target, and this number seems likely to increase. While research on platform work from Europe shows that platform workers in general are highly educated, statistics reveal that this is not necessarily the case for the platform workers in the Nordic countries.

About 4% of professionals in the Nordic countries are self-employed without employees. Over time, aggregate statistics on self-employment, under-employment and professionals holding two jobs do not indicate significant changes in favour of independent work since the turn of the millennium. Nevertheless, the number of independent, as well as temporary and part-time employed professionals, indicates that the knowledge-intensive platform economy has the potential to organise a significant aggregate labour supply.

In order for digital platform use to grow, firms' demand for independent professional services must increase, and they must perceive digital platforms as useful tools for buying these services.

Several factors suggest that this will be the case. Economic theory states that firms will choose to outsource tasks if the internal organisational costs associated with in-house production are higher than the transaction costs associated with sourcing labour in the market. Dynamic models for firm organisation show that firms can hire a core team of employees, which is supplemented with independent workers in times of need. The share of tasks that are considered core therefore limits the number of tasks that can be outsourced. In periods of company expansion, however, independent professionals can be utilised to reduce risk and enhance flexibility. Knowledge-intensive digital platforms make the competence, costs and availability of independent professionals more transparent to clients. Use of digital platforms will therefore lower the barrier to replacing employees that are not considered to perform core tasks with external professionals. If the firms' core tasks change, work that is currently regarded as a core task may also be performed by external independent professionals in the future.

Even though potential clients can benefit from digital platforms, platform growth is also dependent on the platforms' usefulness to professionals. Relatively tight labour markets for professionals in the Nordic countries suggest that digital platforms and conventional employers must compete for the same professional workers.

This means that the working conditions take on a relatively greater importance than the mere opportunity for employment among professionals. In practice, there will probably primarily be tougher competition between independent professionals organised on platforms on one side and traditional consultancy firms on the other.

Case studies and a workshop conducted as a part of this study indicate that independent professionals put a relatively high value on flexibility in working hours and location, but a relatively low value on the social aspects of the workplace. Survey data from the Danish platform Worksome supports this assessment. Many independent professionals also report higher job satisfaction than other groups of workers and value autonomy in the choice of projects and clients they work for. Digital platforms may make it easier to work as an independent professional, and in so doing increase the attractiveness of this form of employment.

On the other hand, independence is associated with several costs for the individual professional. Income uncertainty and more administrative responsibilities are among the most important barriers to being self-employed. Digital platforms may reduce those barriers.

Actual choices between working as an employee or an independent professional are likely to vary significantly, depending on types of skills, experience and specific conditions and business models of platforms. Nevertheless, if work through digital platforms is driven by choice, this implies that individual professionals can evaluate benefits and costs associated with the alternatives and make the appropriate choice for themselves. Still, characteristics of digital platforms make the option of independent employment more attractive.

For society as a whole, digital platforms can help increase both labour supply and knowledge-sharing in the economy. The market for independent professionals is characterised by substantial costs of hiring and sourcing in relation to tasks.

These transaction costs make less use of independent professionals' expertise than would otherwise have been the case. Knowledge-intensive digital platforms reduce transaction costs, making it profitable for both clients and professionals to complete more tasks in the digital marketplace. Reduced transaction costs may make professional services that are currently unprofitable profitable. Some professionals are also likely to migrate from other kinds of work to knowledge-intensive digital platforms. Overall, economic growth is stimulated by more knowledge-intensive services being carried out.

The economic impact of a more effective market for knowledge-intensive tasks may also be significant, and even exceed the impact of more services performed. Learning and innovation are driving forces for economic growth. If knowledge-intensive digital platforms contribute to more knowledge dissemination, learning and innovation in the economy, they will have a major positive economic impact. However, traditional consultancy firms face the same economic problem as platforms – organising professionals to reduce transaction costs associated with temporary hiring (in and out) in relation to temporary tasks. At present, it is unclear if knowledge-intensive digital platforms invest in knowledge-sharing and knowledge accumulation for connected professionals to the same degree as traditional consultancy firms do for their employees. The economic impact of platforms will be dependent on their ability to do so.

In addition to potentially affecting productivity and efficiency for other economic actors, knowledge-intensive digital platforms are innovations in the labour market in and of themselves. Their scope and relevance in the economy, however, will be

decided by the market interactions between clients and workers in the market. Innovation policies should therefore be limited to making sure that digital platforms evolve through their own competitiveness in the market. Technology-neutral innovation policies ensures that digital platforms compete on equal terms with other service providers in the market to realise a new competitive equilibrium.

Given that the knowledge-intensive platform economy continues to grow, it will over time have a larger impact on the composition of the labour market. The possibility to combine hiring employees with buying services for independent professionals implies that this compositional effect is likely to affect groups of professionals differently. Professionals currently working independently may experience increase income. Professionals that have outsourceable jobs in client organisations will experience downward pressure on their wages, as a result of more effective markets for professional services.

If the platform economy starts to grow significantly, it might challenge some of the basic facets of the Nordic labour market models. The Nordic labour market models are characterised by high levels of unionisation, collective regulation, trust, egalitarian distribution of wages and a well-developed welfare state. If a high proportion of professionals work in an independent capacity through digital platforms, it can be difficult to maintain high levels of unionisation, collective regulation and egalitarian distribution of wages, and there may potentially also be adverse effects on career development and training. However, the Nordic working life models may also show their capacity to adapt to new ways of organising work, as they have done in the past.



In the absence of collective bargaining and with increasing and in some cases global competition, increasing wage polarisation should be expected, both within and between professions. Platform work could thus turn out to be a lucrative source of income for a select group of professionals, an addition to their main income for some and an employment of last resort for others.

To avoid undermining the Nordic labour market models, trade unions in all Nordic countries have taken several steps to counteract the negative effects of platform work. The most important of these are active initiatives to unionise independent professionals, initiatives to prevent downward pressure on pay and working conditions, and efforts to safeguard social rights also for platform workers.

The timing of initiatives for the unionisation of independent professionals in the platform economy appears to fit well with the emergence of this economy. Based on our analysis of how digital platforms reduce transaction costs for both independent professionals and their clients, our conclusion is that the knowledge-intensive platform economy will grow, but from a low level. If we limit the analysis to the Nordic labour markets, there are currently professionals that are not self-employed, but would prefer to be so under the right conditions. If digital platforms can provide the right conditions for independent professionals, then a simple calculation of survey results on professionals' preferences for self-employment show that the share of independent professionals in the Nordic region may double, from about 5 per cent to 10%.

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# 1 Introduction

## **Freelancers are expected to be the majority of the U.S. workforce by 2027, based on growth rates witnessed in the past year** Upwork (2017)

Enabled by recent technological advances, digital platforms bring disruptive innovation to both society and business. After becoming mainstream through Uber and Airbnb, digital platforms are also gaining a significant footprint in other markets. Recent growth trends suggest that online labour through digital platforms is already affecting the labour market and how work is organised. Using digital solutions, both businesses and consumers can have food delivered by Foodora, buy a logo designed by an independent creative consultant through Fiverr, or hire a social marketing professional through Upwork.

The USA is currently the epicentre of this digital disruption. Online labour markets are also gaining a stronger foothold in Europe (Pesole, Brancati, Macias, Biagi, & Vázquez, 2018). In the Nordic labour markets, however, digital platforms have remained a marginal phenomenon. Recent estimates find that between 0.3 and 2.5% of the Nordic labour force currently works via platforms (Alsos, Jesnes, Øistad, & Nesheim, 2017; SOU 2017:24, 2017; Ilsøe & Madsen, 2017; Statistics Finland, 2017; Pesole, Brancati, Macias, Biagi, & Vázquez, 2018). In the USA, the Bureau of Labor Statistics estimated that 1% of the workforce was working via platforms (U.S. Bureau of Labor Statistics, 2018), indicating that the size of the economy and labour force may play an important role for how changing preferences and overall organisation of work are perceived. On the other hand, Upwork (2017) found that 35% of the US workforce *tried* freelancing in 2017.

The platform economy is an online marketplace with three actors: platform companies, workers and clients (buyers of tasks). While digital platforms are enabled by new technology, the existence of a platform-based market relies on participation from all three market participants.

A wide range of work that requires different skill sets and qualifications is, or can potentially be, organised and completed through digital platforms. The platform economy can mediate anything from simple manual tasks to large and complex projects lasting for years. In this project, we analyse potential opportunities and barriers for organising knowledge-intensive work through digital platforms in the Nordic countries.

## 1.1 Objective

This report serves as a knowledge base for social partners to prepare and adapt to the changing future of work and business, with a specific focus on the knowledge-intensive labour market.

The main objective is to:

### **Identify opportunities, bottlenecks and possible solutions for growth, innovation and new ways of organising work using digital platforms in all five Nordic countries**

In order to understand the platform economy, it is necessary to understand that the development of (different) digital platforms is part of a larger global megatrend of digitalisation in the labour market.

Digital platforms promise new ways of working with high flexibility, new sources of income and potentially better labour market matching for workers and firms. However, changing the way work is managed and conducted can potentially have important consequences for how rights and responsibilities are allocated between economic partners, as well as how labour market and welfare models in the Nordic region are designed. The analysis seeks to identify success criteria for stimulating sustainable growth in the best interest of all stakeholders in the economy. Ideally, society could subsequently be able to reap the benefits of the platform economy, whilst avoiding potentially negative or unwanted social outcomes.

The report is commissioned by Nordic Innovation in close cooperation with the Federation of Norwegian Professional Associations, the Danish Confederation of Professional Associations, the Confederation of Unions for Professional and Managerial Staff in Finland (Akava), the Swedish Confederation of Professional Associations (Saco) and the Icelandic Confederation of University Graduates (BHM). The project has a specific focus on the potential for organising and solving knowledge-intensive tasks via platforms, in the context of existing labour market and welfare models in the Nordic countries.

## 1.2 Definitions and terminology

Throughout this report, we use both new and established terminology to describe digital platforms and the labour market. In this section, we define the most important terms and classifications that we use throughout the report.

The knowledge-intensive labour market is defined as work that requires specialised skills and is relevant for persons that have attained long tertiary education, who we refer to as professional workers.

The platform economy refers to economic and social activities facilitated by digital platforms. The analysis in this project is limited to labour platforms, which mediate work through digital platforms. In opposition to capital platforms which mediate sharing and renting of physical objects, like cars, apartments or tools.

This project is limited to organisation of knowledge-intensive work in the platform economy. We introduce the term knowledge-intensive platform economy (KIPE) to distinguish this segment from other digital platforms. Platform work refers to paid work that is organised and mediated through digital platforms. It has the following traits<sup>1</sup>:

- Paid work organised through platforms.
- Three parties involved: platform, client and worker.
- Aim is to solve specific knowledge-intensive tasks or problems.
- Form of outsourcing/contracting out.
- Break-down of 'jobs' into tasks or projects.

Transactions in the knowledge-intensive platform economy normally involve three parties:

- Platform companies that own the digital infrastructure matching professionals and clients. Platform companies are also referred to as digital platforms or simply platforms throughout the report.
- Clients who buy services via platforms. Clients in the platform economy may be firms, organisations, individuals or households.
- Platform workers are suppliers of skills and labour in the platform economy. In order to distinguish professionals supplying skills and labour in the knowledge-intensive platform economy from platform workers in general, we mainly refer to 'independent professionals' to describe the suppliers.

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<sup>1</sup>The definition is based on the definition of platform work in Eurofound (2018, p. 2).

The European Forum for Independent Professionals (EFIP) describe this group as:

**Independent professionals (often referred to as freelancers or contractors) are highly skilled self-employed workers without employers nor employees. They offer specialised services of a knowledge-based nature and work on a flexible basis in a range of creative, managerial, scientific and technical occupations, primarily in B2B [Business to business].**

EFIP (2019)

The term 'independent professionals' encompasses different groups of professionals that work independently, e.g. self-employed and freelancers. Independent professionals are not all platform workers, but some of them are. By using this term, we implicitly recognize that this group of platform workers differs from low-skilled platform workers as they have a stronger position on the labour market, and that the question of whether they are employees or not is not as pressing as for low-skilled platform workers. The findings of the report gives a certain indication that many 'independent professionals' who work through platforms do so because they choose to, often work with different clients and may to some extent set their own prices and terms, thus making them less subject to control by the platform. In other words, this group uses platforms as an additional way to find jobs and tasks that suit them. We are acutely aware that some professionals working through platforms are not as independent and are in a situation resembling standard employment and could possibly be categorized as employees if their status is tested in court.

Employees are workers in a traditional employment relationship with an employer/firm. Traditional employment, conventional employment and standard employment relationship are terms used interchangeably about this form of employment in the report. Employees may also participate in the platform economy, but their main income and work activities are as employees in a firm.

## 1.3 Methods

The analysis in this report is based on several different source materials and methodological approaches to exploring the knowledge-intensive platform economy and its potential for innovation and growth in the Nordic region.

First, we conducted a literature review of existing research on the scope and characteristics of the platform economy in the Nordic countries and other relevant literature, primarily from European studies. In relation to the literature review, the project group reviewed economics literature and held numerous meetings to discuss and analyse the conceptual aspects of how digital platforms operate and their role in the knowledge-intensive labour market.

The platform economy is a new and limited phenomenon in the economy, especially in the Nordic region. Although there is considerable research activity on the field, existing research is relatively limited. In order to gather new insight and first-hand experiences, we held a workshop in Copenhagen with 45 participants from all the Nordic countries. Trade unions, platform companies, employer confederations and authorities were represented at the workshop. The project team presented the preliminary literature review before opening up a discussion on the opportunities and barriers for the KIPE, based on the experiences and views of the participants. The workshop provided vital input to the final analysis.

After the workshop, we conducted interviews and collected new source material on selected knowledge-intensive platform companies from the Nordic region, which resulted in four case studies. In addition, we have reviewed available labour market statistics and surveys in order to investigate whether recent trends in the platform economy can be observed in aggregate data.

This form of methodological triangulation has allowed us to explore aspects of the KIPE from different perspectives. We have gained a deeper understanding of the role of the KIPE in the labour market, its potential to stimulate innovation and economic growth, as well as the potential consequences for labour markets and welfare models in the Nordic region.



## 1.4 Structure of the report

The structure of the report is as follows. In the next chapter, we define knowledge-intensive platform economy and give a brief introduction to how digital platforms create value for their users.

Chapter 3 examines existing literature on the scope and characteristics of the platform economy in the Nordic countries.

In chapter 4 we present the current composition of the knowledge-intensive labour markets in the Nordic countries, and discuss aggregate statistical indicators that can capture trends. We also measure the future scope and relevance of knowledge-intensive digital platforms.

Chapters 5, 6 and 7 discuss factors relevant to participation and potential growth of the platform economy. In chapter 5 we discuss factors that affect buyers' demand for services in the market for independent professional services. Chapter 6 looks at opportunities and barriers to professional workers joining the knowledge-intensive platform economy and supplying their labour. In chapter 7 we present business models and experiences of four active knowledge-intensive platforms in the Nordic countries, including which barriers they experience as intermediates in the market for independent professional services.

In chapter 8 we discuss how a knowledge-intensive platform economy can affect innovation and economic growth in the Nordic countries, pointing to effects such as productivity and knowledge transfer.

Chapter 9 discusses potential challenges facing the Nordic labour market models, especially in the event of continuous growth in the platform economy. The chapter discuss aspects such as legal categorisation of workers, access to social rights and employment benefits, risk of polarisation and collective agreements in a labour market with a high share of independent workers. Furthermore, the chapter examines trade union strategies related to the platform economy, as well as independent work in general.

Chapter 10 sums up the analysis and discusses the potential development of new trade union strategies in response to an increasing number of independent professionals.

## 2 How digital platforms create value for their users

**Chapter summary:** The knowledge-intensive platform economy is a subgroup of the overall platform economy. In the knowledge-intensive platform economy, clients and professionals organise tasks and projects that are primarily relevant for workers with a long tertiary education. Transactions in the knowledge-intensive platform economy involve three parties: a platform, a client and an independent professional.

Digital platforms create value for their users by supplying an efficient infrastructure for matching supply and demand for skills and labour. Platforms act as a marketplace where professionals and clients can meet, bargain and agree on a contract to solve a task or project, using a standardised contractual framework.



Digital platforms for organising work are enabled by recent technological advances, based on how both the local and global society are increasingly connected through the internet. The ability to efficiently gather, record and refine data is the foundation for these new business models (Srnicek, 2017). In the labour market, digital platforms provide a new infrastructure to mediate interactions and transactions between workers and clients. Like temporary employment agencies and consultancy firms, it is possible to think of digital platforms as an efficient service provider. These intermediaries match the supply of skills and labour from workers with the demand from clients.

Digital platforms rely on participation from both sides of the labour market. Platforms often cross-subsidise<sup>2</sup> across user groups and have a core architecture (app or website) that gives users access to information and facilitates user interactions. Platform owners refine recorded information from users into knowledge, which is used to increase the value of the platform. These characteristics make digital platforms key business models for facilitating economic activity and creating value for clients and workers in the independent labour market, and potentially for the economy as a whole.

Furthermore, digital platforms are often characterised by network effects, implying that the benefits and value associated with the platforms increase with the number of users (Eurofound, 2018). If one platform gets far more users than others, users on smaller platforms can increase their benefits by migrating to the largest platform. Therefore, network effects can contribute to some platforms gaining almost monopolistic power, until eventually another platform with significantly greater user benefits emerges. These patterns are easily recognisable on social media platforms, which are dominated by a few large actors.

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<sup>2</sup> Cross-subsidisation refers to the practice of charging one user group higher prices in order to artificially deflate prices for another user group. On digital labour platforms, a service fee is often deducted from the payment to the user, hence participation for the firm is free. However, workers can incorporate a price hike in the contract with the client to at least share the cost.

## 2.1 Defining the knowledge-intensive platform economy

The objective of this project is to analyse the platform economy in the Nordic countries, with a specific focus on the knowledge-intensive labour market. Consequently, the analysis is limited geographically to the Nordic labour market and to a subgroup of the labour force. Based on the objective, we operate with a relatively narrow definition of the knowledge-intensive platform economy (hereafter KIPE), which refers to platforms matching supply and demand for paid, high-skilled labour with the following traits<sup>3</sup>:

- Paid work organised through platforms.
- Three parties involved: platform, client and worker.
- Aim is to solve specific *knowledge-intensive* tasks or problems.
- Form of outsourcing/contracting out.
- Break-down of 'jobs' into tasks or projects.

The definition implies a specific focus on knowledge-intensive services. Hence, transactions of capital or goods (Airbnb, Ebay) are outside the scope of this definition. Furthermore, the fact that 'jobs' are broken down into tasks or projects means that social media platforms or platforms primarily aimed at recruiting permanent employees are outside the focus of the definition, while limited project-based employment is included<sup>4</sup>.

In practice, the KIPE as defined above limits the analysis to tasks that are primarily relevant for professionals with a long tertiary education.

### 2.1.1 Online and location-based platforms

As defined above, the KIPE is limited solely to knowledge-intensive tasks that are mediated through digital platforms. However, within this narrow definition there is variation in the requirements for specific qualifications and types of tasks that can be organised in the KIPE. For example, certain tasks require the physical presence of the worker while others can be entirely organised, completed and delivered virtually.

**Table 2.1** Categorisation of labour platforms in the platform economy

	Low skill <sup>5</sup>	High skill
Online	<b>Crowd-work</b> E.g. Amazon Mechanical Turk <sup>6</sup>	<b>Online platforms<sup>7</sup></b> E.g. Upwork, eWork <sup>8</sup>
Location-based	<b>Gig-work</b> E.g. Finn Småjobber, Luado, Meploy <sup>9</sup>	<b>On-site platforms</b> E.g. Legevisitt, BrainBase <sup>10</sup>

Table 2.1 illustrates how platforms can be categorised in the platform economy. In this project we are particularly interested in the right side of the table, where platforms mediate tasks that require specialised skills and higher formal education.

Online platforms mediate tasks in the online labour market where tasks are arranged, completed and delivered online. Online platforms give buyers access to a pool of workers and skills that is not limited to a local supply of professionals. Upwork, Worksome<sup>11</sup>, Graphiq<sup>12</sup> and eWork are examples of active online freelancing platforms in the Nordic countries. Online freelancing platforms reduce or eliminate geographical barriers in recruitment, and thus have the potential to increase international trade in knowledge-intensive tasks. Examples of knowledge-intensive tasks that can be delivered online are programming, web design, and translation services. The required skills and capital needs of clients and workers are however highly heterogeneous across platforms and tasks. While some tasks require specialised tools or software to be completed (e.g. software for statistical analysis or advanced image editing) others require only simple tools like Microsoft Word or Excel.

On-site platforms mediate work that requires the physical presence of the worker at a location. Examples include medical services and teaching (e.g. Legevisitt, KRY and Learnlink<sup>13</sup>). While on-site platforms also give clients access to a pool of workers, the size of the pool is limited to the number of workers that can complete the task locally.

Even within these two categories, several other characteristics may differ across specific platforms, like the type of tasks and/or skills necessary to provide the service. Work may also be outsourced to an individual professional or a group of connected platform workers. For example, Solved gives clients access to a group of highly skilled professionals in the cleantech industry in order to cocreate conceptual environmentally sustainable designs. Furthermore, registration on platforms may be restricted to certain groups of professionals, e.g. based on their skills or educational background (Schmidlechner, Peruffo, Contreras, & Molinuevo, 2017).

<sup>3</sup>The definition is based on the definition of platform work in Eurofound (2018, p. 2).

<sup>4</sup>E.g. LinkedIn as such are not included, but LinkedIn's ProFinder service is included.

<sup>5</sup>Names of low-skilled platforms are from de Stefano (2016).

<sup>6</sup>Amazon Mechanical Turk is a crowdsourcing platform that mediates simple virtual tasks to a distributed workforce. Tasks can be anything from simple data validation and research, to more subjective tasks like survey participation or content moderation.

<sup>7</sup>Several platforms in the online freelancing category could also be categorised as on-site freelancing. Technically, tasks solved through online freelancing platforms can be delivered virtually, however, in many cases these freelancers will work in the client's office in cooperation with the client's own personnel.

<sup>8</sup>Upwork is the largest global freelancing platform, all types of virtual tasks are mediated through Upwork. eWork mediates business consultancy services.

<sup>9</sup>Finn Småjobber, Luado and Meploy all mediate manual tasks that are completed locally, but where both the workers and clients have a flexible connection to the labour market, based on their needs.

<sup>10</sup>Legevisitt mediates personal medical services, while BrainBase is a platform for independent consultants in the ICT sector (see case description in section).

<sup>11</sup>Worksome is a Danish marketplace for freelancers and consultants, mainly in technology-related fields.

<sup>12</sup>Graphiq mediates creative work related to marketing and design.

<sup>13</sup>Learnlink offers personalised instruction and teaching to students.

## 2.2 Transactions in the platform economy

There are three types of actors in the digital labour markets in the platform economy: workers, clients and platform companies. In this labour market, the platform companies act as intermediaries of work, matching the supply of professionals' labour and skills with clients' demand for a task or project to be carried out. Figure 2.1 illustrates the flow of information and money on a typical digital platform. Although the specifics may vary, most work in the platform economy is organised and completed through four basic stages:

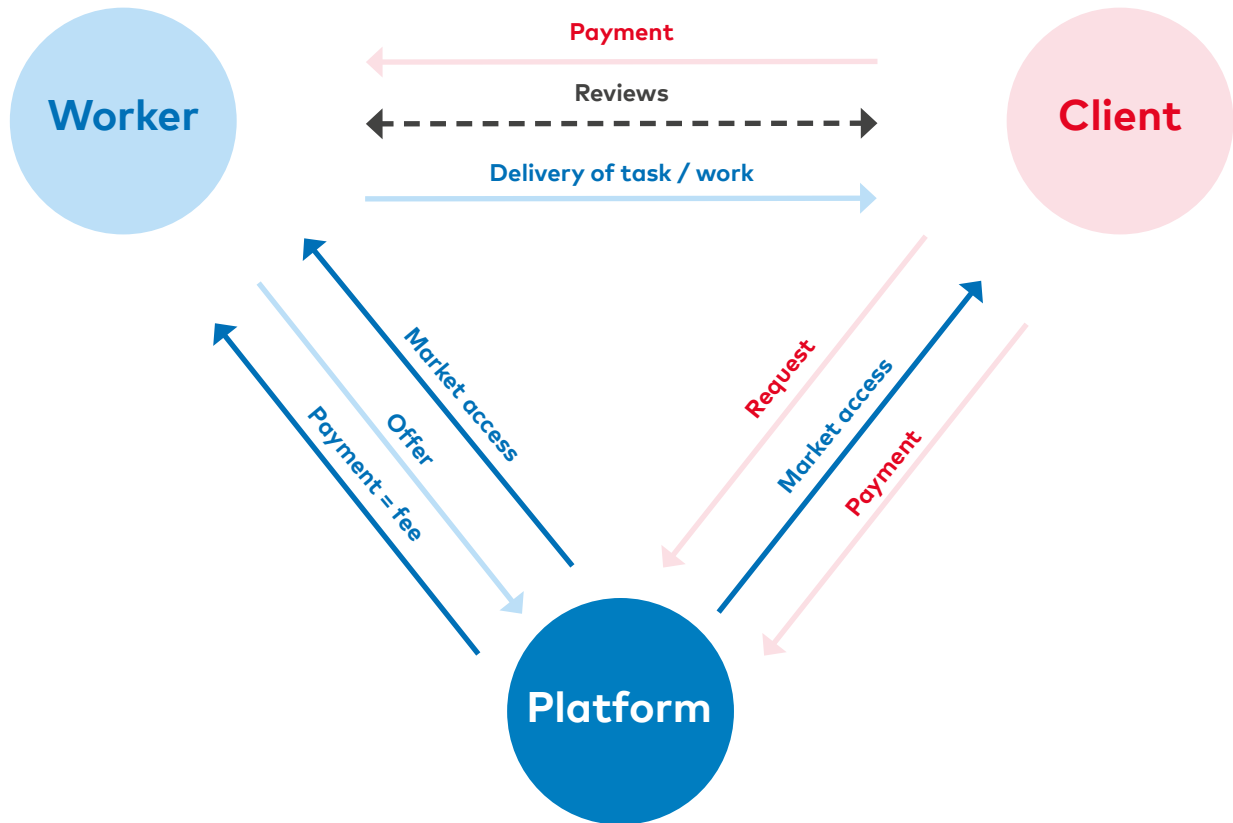
1. Clients demand labour and create a project description
2. Clients and workers interact on the platform
3. Selection, realisation and delivery
4. Finalisation

The first stage is when a client (individual, organisation, firm) identifies a need for skills or labour that can be outsourced through a platform. In the context of the KIPE, this is usually related to a form of specialised skills that the client does not have access to through its own employees. Depending on the type of project and platform, the client can choose whether to create and post a project description or to contact an individual professional directly. If choosing to post a project description, the client can usually also choose whether to post it publicly or only distribute it to a selected group of relevant professionals.

The second stage is when the client or workers have initiated contact. This is a negotiation stage, where workers can present themselves and their skills, and propose a process and solution to the project proposal. These interactions may be initiated by workers and clients themselves, although an algorithm often supports efficient and good matches for both parties. Most platforms in the KIPE also allow workers and clients to negotiate prices, in contrast to some platforms that mediate simpler, manual tasks (e.g. Uber and Foodora). The parties can also usually choose whether to negotiate hourly rates or a fixed price for the project.

In the third stage, the client decides which professional is assigned the task, based on an evaluation of the skills and project proposals offered. After the selection is made, the professional completes and delivers the task/project in line with the contract.

Figure 2.1 Illustration of information and money flow in the platform economy



Source: Economics Norway

The final stage of the interaction is the transaction itself, where remuneration takes place. Most platforms require that the transaction is completed through the platform's own internal system. This is in part because it provides security for both parties, but also because platform companies generate their revenues in this step. In practice, most platform companies take a cut of the payment between the client and worker as compensation for providing matching services and facilitating the completion of the project. The platform owner's cut may vary significantly across platforms.

Steps 2 and 3 illustrate why network effects are important for digital platforms. A large number of workers and clients ensures that the platform not only can create efficient matches, but also that clients are able to find relevant workers at all. The more workers available on the platform, the more likely it is that potential clients will find the talent they are demanding. At the same time, a large client base makes platform work a viable source of continuous income for workers. Hence, having many users on both sides of the market increases value for all parties.





## 3 Platform work in the Nordic countries

**Chapter summary:** Platform work is a marginal part of the labour market, and high-skilled platform work even more so. In order to shed light on high-skilled platform work, we begin by reviewing the limited literature on high-skilled platform work, before exploring platform work in the Nordic countries in general.

The main findings are as follows: There are about 30 platform companies mediating high-skilled platform work in the Nordic countries as of today. However, the platform economy remains a moving target, and this number seems likely to increase. While research on platform work from Europe shows that platform workers in general are highly educated, statistics reveal that this is not necessarily the case for the platform workers in the Nordic countries. A plausible explanation is that this is linked to the labour market position and employment rates of highly educated workers, which is high in the Nordic countries. However, it might also imply that high-skilled platform workers have not yet found their way to platforms. Platform work in general is still marginal in a Nordic context, and estimates range from 0.3% of the working age population in Finland to 2.5% in Sweden.

In this chapter, we explore the size and composition of platform work in the Nordic countries, with a particular focus on high-skilled platform work. In the first part, we establish a snapshot of the knowledge-intensive platform companies operating in the Nordic countries. We also review the limited literature on high-skilled platform work. In the second part, we turn to the platform economy in general and review statistics about platform work – both low-skilled and high-skilled platform work. We also review an alternative way to measure the scope of online labour, which includes more high-skilled platform work.



### 3.1 30 knowledge-intensive platform companies in the Nordic countries

Which knowledge-intensive platform companies operate in the Nordic countries? Through a review of a number of reports and articles (Eurofound, 2018b; Fabo, Beblavy, Lenaerts, & Kilhoffer, 2017; Alsos, Jesnes, Øistad, & Nesheim, 2017), as well as additional web searches, we have established a snapshot of the knowledge-intensive platform companies operating in the Nordic countries in early 2019. So far, there are around 30 knowledge-intensive platforms operating in the Nordic countries that we know of, see table 3.1 below. There might also be additional platforms that we have not covered. This is only a snapshot as platform companies are what Fabo et al., (2017) refer to as 'moving targets'. New platforms are established, they change their business models, and some platforms disappear rather quickly.

The platforms discussed below are sorted by industry, but online platforms that mediate services across a range of industries are treated as an industry of their own.

Platform companies mediating services online include platforms operating worldwide, such as Upwork, Freelancer, Guru, Peopleperhour and Fiverr, platforms operating more locally, such as Worksome. Several of these include both simple tasks and more skill-intensive tasks. The platforms mediate a wide range of services including marketing, IT, engineering, economics and finance, HR, administration and legal work. Konsus and eWork are two Nordic companies, which perhaps take a more active role in the mediation of work. Konsus was founded as a Norwegian company but is now American and operates worldwide. eWork, established in 2000, is a Swedish company mediating consultants mainly in the Nordic countries.

In addition, there are platforms operating within other industries such as Engineer.it within engineering and Legalhero, which offers legal services. Lionbridge and Voocali mediate translation services. Within media and communication, Bylineme, Graphiq, MBFlex and Pressworks mediate services.

In recent years, a range of platform companies specialising in mediating medical services operates in the Nordic countries. Kry, Min Doktor, Medicoo, Hjemmelegene and Legevisitt are the most well-known examples of such companies. Ahum, Mindler and WebPsykologen provide psychological services and support via Skype, mobile apps or online chat functions, and uWork provides childcare services.

Table 3.1 Snapshot of active, knowledge-intensive platforms in the Nordic countries

Name	Online or local	Services	Country of origin	Operates in
<b>Legevisitt</b>	Local and online	Healthcare – doctors	Norway	Norway
<b>Hjemmelegene</b>	Local	Healthcare – doctors	Norway	Norway
<b>Kry</b>	Online	Healthcare – doctors	Sweden	Norway, Sweden, Spain and France
<b>Mindoktor</b>	Online and local	Healthcare – doctors	Sweden	Sweden
<b>Medicoo</b>	Online	Healthcare – doctors (medical and psychology)	Sweden	Sweden
<b>Ahum</b>	Online and local	Healthcare – psychological services	Sweden	Sweden
<b>Mindler</b>	Online	Healthcare – psychological services	Sweden	Sweden
<b>Webpsykologen</b>	Online	Healthcare – psychological services	Sweden	Sweden
<b>Legalhero</b>	Online	Legal consulting	Denmark	Denmark
<b>Uwork</b>	Local	Child welfare services	Norway	Norway
<b>Lionbridge</b>	Online	Translation	International company that have bought danish, swedish and finnish units that used to be independent translation firms	Denmark, Sweden and Finland
<b>Worksome</b>	Online and local	Highly qualified freelancers for companies, in marketing, it, engineering, economics and finance, hr, administration	Denmark	Denmark
<b>Voocali</b>	Local	Personal translator services to public authorities, and companies	Denmark	Denmark
<b>Bylineme</b>	Online	Media and communication	Norway	Norway
<b>Engineer.It</b>	Online and local	Engineering	Norway	Norway
<b>Fiverr</b>	Online	Online labour for freelance services such as graphics, design, digital marketing, writing, translation, video, animation, music, audio, programming, tech, business and lifestyle.	Israel	Worldwide, all the nordic countries

<b>Name</b>	<b>Online or local</b>	<b>Services</b>	<b>Country of origin</b>	<b>Operates in</b>
<b>Upwork</b>	Online	Online labour (short-term tasks, recurring projects, full-time contract work within e.G. It, data science, engineering and legal work)	Formerly Elance-oDesk, California, USA	Worldwide, all the nordic countries
<b>Freelancer</b>	Online	Online labour for freelance services ('whatever you may want')	Australia	Worldwide, all the nordic countries
<b>Guru</b>	Online	Online labour for freelance services (e.G.: Lawyers, finance gurus, engineers & architects, sales & marketing)	USA	Worldwide, all the nordic countries
<b>Peopleperhour</b>	Online	Online labour such as design, writing, translation, video, photo, audio, business support, social media, marketing, software and web development	UK	Worldwide, all the nordic countries
<b>Ework</b>	Online	Consultancy work	Sweden	Mainly in the nordic countries and Poland
<b>Graphiq</b>	Online	Media and communication (presentations, marketing material, branding, websites, illustration and animation)	Norway	Norway
<b>Konsus</b>	Online	Online labour including presentation design, graphic, visual and web design.	USA, previously Norway	Worldwide (+)
<b>Mbflex</b>	Online	Media and communication	Norway	Norway
<b>Pressworks</b>		Media and communication	Norway	Norway
<b>Solved</b>	Online	On-demand experts for cleantech & sustainability	Finland	Worldwide
<b>Folq</b>	Online	It	Norway	Norway

## 3.2 High-skilled platform work

Platform labour markets are segmented, with considerable variation across platforms and skill levels, as in the conventional labour market (Schor & Attwood-Charles, 2017). In this section, we explore existing literature on high-skilled platform work, or in other words, the knowledge-intensive platform economy.

### 3.2.1 Platforms mediate knowledge-intensive tasks

According to survey data from select EU member states (Pesole et al., 2018), the most common labour service provided via platforms is non-professional 'online clerical and data entry'. 'Professional and creative tasks', which generally require skills attained through higher education, nevertheless account for a substantial portion of tasks and are performed by 30% of providers surveyed – more than on-location services such as transport and cleaning. The study also finds some cross-country variation in the provision of online services. Eastern European countries have above average values for task types that require a low to medium level of education (transport, on-location and ancillary services, and sales). The two Nordic countries included in the study are Finland and Sweden: Finland reports significant below average values for on-location services and for the digital services that require medium to low skills (e.g. sales and micro tasks). Sweden shows values closer to the average but has significantly below average values for non-professional services.

### 3.2.2 The highly educated work on platforms, but not yet in the Nordic countries

Several studies have found platform workers in the USA and the EU member states to be more educated than the general population (Codagone, Abadie, & Biagi, 2016; Pesole, Brancati, Macias, Biagi, & Vázquez, 2018; Ipeirotis, 2010). Especially those with a tertiary high education (ISCED 5 and above) are overrepresented among platform workers in Europe. One explanation suggested in the literature is that frequent internet users, a population generally more educated than average, are more likely to use digital platforms. Pesole et al. (2018) nevertheless found that platform workers are significantly more educated than the comparable general population, when taking into account age and internet use. Other studies also support this finding (Ipeirotis, 2010; Eurofound, 2015; Huws et al., 2017).

In contrast, available evidence does not point to an overrepresentation of highly skilled workers in the platform economy in the Nordic countries. For instance, a study using the Danish Labour Force Survey (Ilsøe & Madsen 2017) shows that the educational attainment of Danish platform workers is quite similar to the general population – save for a higher share with an upper secondary/VET education, likely due to many platform workers being young and/or students. Forty-six per cent of platform workers in Denmark had an upper secondary or VET education, 19% were only educated to

lower secondary level or lower, 20% had a short higher education and only 12% had a long higher education (Ilsøe & Madsen, 2017). This raises the question of why highly skilled workers are not that well represented in the Nordic platform economy. Several mechanisms may explain this discrepancy. Not least the low unemployment rates among highly educated workers in the Nordic countries could be a determining factor. However, it might also be the case that highly educated workers in the Nordic countries have not yet discovered platforms as a medium for finding work.

The larger share of high-skilled platform work in Europe compared to the Nordic countries might also be due to a skill mismatch in the European platform economy. With reference to data covering select EU member states, Pesole et al. (2018) argue that the high educational level of platform workers could either imply that the work performed via online platforms requires high skills, or that young and educated workers resort to platform work in the absence of other opportunities (Eurofound, 2015; Huws et al., 2017). Crucially, the share of high-skilled workers does not equal the share of knowledge-intensive work tasks, as the degree to which workers are able to utilise their skills varies. Survey data indicates some degree of skill mismatching in the platform economy, where highly skilled workers conduct tasks that do not require specific skills. Pesole et al. (2018) found that such mismatches are relatively common in the EU area: Most highly educated platform workers perform professional tasks, but one third of platform workers have a mismatch between the lower-skilled tasks they perform and their high level of education/skills. Platform workers who provide more than one type of service often combine high-skilled activities with simple tasks. Schor (2017) similarly points out that many platform workers in the USA have full-time jobs and are often highly educated, but take on tasks that have traditionally been done by workers with a low educational attainment, such as cleaning, driving and other manual labour.

It is important to keep in mind that skill mismatching is not necessarily a trait of the platform economy as such. If there are skill mismatches in the conventional labour market, where some high-skilled workers do not get enough work according to their education or skill, this will also occur in the platform economy and should not be interpreted as a consequence of introducing digital platforms to mediate work. Current mismatching may also imply that there is an untapped potential for platforms to make use of the more advanced skills that the current platform workers already possess. Though permanent for some workers, mismatching will often affect workers in transition periods, e.g. those who are newly qualified or laid off. Platforms could offer easily accessible job opportunities to such groups. In such cases, platform work can function as an employment of last resort.

## 3.3 Scope of platform work as share of total labour force

In this part, we turn to the scope and composition of platform work in general – not only high-skilled platform work. There is no commonly agreed definition of platform work, which means there is no official data on its scope. Also, the phenomenon is new and marginal, which makes statistics quite uncertain. Nevertheless, several surveys have attempted to capture the scope in a Nordic context. Based on existing surveys, the estimates of platform work as a share of the total labour force range from 0.3% in Finland to 2.5% in Sweden, albeit based on different definitions and methodology. There are currently few figures on scope emerging from Iceland. This implies that platform work is a marginal part of the Nordic labour markets.

We first compare the estimates of platform work between the Nordic countries, before further exploring the available evidence from each of the Nordic countries.

### 3.3.1 Comparing the estimates of platform work between the Nordic countries

The estimates of platform workers in the Nordic countries of between 0.3% and 2.5% among the working-age population indicate that platform work is still a marginal phenomenon, see Table 3.2 below. The estimates also show some differences between the Nordic countries. It is difficult to say how much of this difference is due to different survey methods. Nevertheless, the main finding is that so far, platform work plays a very limited role in the Nordic labour markets.

The higher share of platform work in Sweden (2.5%) might reflect methodological differences between the studies or simply slight differences in the questions asked, but this is difficult to judge. The questions that were added to the labour force surveys (LFS) in Denmark and Finland covered a substantially higher number of respondents compared to the other surveys, which might make the results from these countries more reliable. A difference between the two is that the Finnish study includes capital platforms, while the Danish only includes labour platforms. The figure for platform workers from Finland, therefore, is probably lower than 0.3%, indicating that platform work in Finland is very rare.

The studies also indicate that the typical Nordic platform worker is young and male, and often has an ethnic minority background. The work performed is often low-skilled and the platform workers are low-paid.



However, these figures might reflect the fact that people perform work via platforms that mediate tasks without formal skill requirements, not necessarily that they are low-skilled themselves. For most participants, platform work serves as an occasional source of income. The differences between the profiles of platform workers working on platforms mediating low-skilled tasks compared to high-skilled tasks is not very well reflected in the surveys.

**Table 3.2 Summary, share of platform workers in selected studies from the Nordic countries**

Country	%	Definition	Methods	Source
Denmark	1%	Working-age population who had earned money at least once in the past 12 months	Question in LFS	Ilsøe & Madsen 2017
	0.3%	Working-age population who had earned more than 25% of their income from work-related and non-work-related platform activities in the preceding 12 months	Question in LFS	Statistics Finland, 2017
Finland	>2%	Those who earn 50% or more of their income via platforms and/or work via platforms more than 20 hours a week	Survey of 2300 respondents	Pesole et al. 2018
	0.5–1%	Working-age population who had performed platform work in the past year	Survey (1525 respondents), interviews with CEOs and online search	Alsos et al. 2017
Sweden	2.5%	Working-age population who had performed platform work in the past year	Survey of 7069 respondents	SOU 2017: 24
	>2%	Those who earn 50% or more of their income via platforms and/or work via platforms more than 20 hours a week	Survey of 2300 respondents	Pesole et al. 2018
	5%	Population who has performed crowdwork at least weekly	Survey of 2146 respondents	Huws et al. 2017

### 3.3.2 Denmark

In Denmark, Ilsøe and Madsen (2017) explored digitalisation and the use of digital platforms through the LFS in 2017. In the survey, platform work was defined as having earned money through a labour platform in the preceding 12 months. The study indicates that 1% of the labour force in Denmark (about 42 000 individuals) earned money through labour platforms such as GoMore<sup>14</sup>, HappyHelper<sup>15</sup> or Worksome<sup>16</sup> in 2017. Earnings through platforms were, for most Danes, a minor supplement to other sources of income (such as salary, pensions, student grants, unemployment benefits, social assistance, etc.).

Among those having performed platform work, there was an overrepresentation of young Danes with an ethnic minority background, low-paid and low-skilled persons with temporary jobs and unemployed people (Ibid.). This suggests that many of those working through platforms in Denmark do not yet have a firm foothold in the labour market (Dølvik & Jesnes 2017). The study does not distinguish between knowledge-intensive tasks and tasks without formal skill requirements.

Furthermore, the Danish Business Authorities in 2017 gathered firm-specific information about the Danish labour platforms. Based on information from 6 to 7 platform companies, the Danish Business Authorities found that a majority (75%) of those persons working via platforms worked less than 8 hours per week and only 6% worked more than 21 hours per week (Secretariat of the Disruption Council 2018:8). This is in line with the study by Ilsøe and Madsen (2017), where earnings through platforms seem to be a minor supplement to other sources of income.

In 2015, the Danish think tank CEVEA investigated the extent to which Danes worked through the platform Upwork, which mediates more knowledge-intensive tasks. CEVEA found that although 1600 Danish freelancers had a profile in Upwork, only 200 of them had actually performed work through Upwork (CEVEA, 2015, pp. 41-43). This indicates that counting the number of profiles on different platforms is not an accurate measure of the scope of platform work.

In 2016, Rasmussen and Madsen identified around 10 labour platforms in Denmark, that partly or fully targeted Danish workers (either Danish platforms or international platforms where Danes could potentially perform work). They concluded that the majority of platforms mediated low-skilled work that was carried out locally (Rasmussen & Madsen, 2017, pp. 53-56).

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<sup>14</sup> GoMore provides private car rental, co-driving and leasing.

<sup>15</sup> HappyHelper provides cleaning services to the private market.

<sup>16</sup> Worksome provides office-based tasks.

### 3.3.3 Finland

Statistics Finland (2017) included questions on work performed through platforms in their Labour Force Survey of 2017. Statistics Finland defines a digital platform as an 'online platform through which a person can sell his or her work input or otherwise earn income'. In addition, they add the premise that you have to earn at least a quarter of your income through a platform to be considered a platform worker. The question asked was as follows: 'Have you during the past 12 months worked or otherwise earned income through the following platforms: 1. Airbnb, 2. Uber, 3. Tori.fi/Huuto.net, 4. Solved, 5. Some other, 6. None of the above.' The definition includes capital platforms in addition to labour platforms, which is a broader approach compared to the Danish study.

According to the survey, about 0.3% of Finns (aged 15 to 74 years) earned at least a quarter of their income through the said digital platforms in 2017. This corresponds to 14 000 individuals. Most of these were men (60%), and 50% were under 45 years old. Those who reported most earnings from platforms were registered as 'self-employed without employees'. This might suggest that platforms are an alternative way of finding a job for established entrepreneurs in Finland. On the other hand, it might also indicate that platform workers establish their own companies in order to work through platforms, either of their own volition or because they are told to do so by the company.

Pajarinen et al. (2018) conducted a survey in 2007 of people residing in Finland who had earned more than \$1 via Upwork, the biggest online labour platform. Out of the 207 Upworkers, 59% responded to the survey. The respondents are young, urban, highly educated, and one third are immigrants. They most often work as translators, designers, coders or within communications. For 45% of the respondents, online work constitutes between 0 and 10% of total income, which can be considered a minor source of income. Comparing this with the profile of the Danish platform workers (Ilsøe and Madsen, 2017), these findings suggest that the workers on platforms mediating high-skilled labour have a different profile from the workers on platforms mediating tasks without specific skill requirements. Then again, not all work that is mediated through Upwork requires a high skill level.

One third of the respondents in the Finnish survey of Upworkers also performed work on platforms other than Upwork. For instance, 14% of the respondents had carried out work through Freelancer.com. This might indicate that Upwork is only one of several platforms used to find work, and it might be only one of several ways to find additional jobs. This indicates that for freelancers and the self-employed, platforms could be regarded as just another way of finding jobs, in addition to traditional networking. Overall, the respondents are motivated by the flexibility of the work provided by Upwork and by the extra earnings it brings.

### 3.3.4 Norway

In Norway, Alsos et al. (2017) estimated that between 0.5% and 1% of the working population in Norway, which is between 10 000 and 30 000 individuals, performed platform work in 2016. The estimate builds on both quantitative (several surveys) and qualitative methods (interviews with the CEOs of the platform companies, and online searches). After testing three rounds of surveys with different questions, the researchers decided to rely on a combination of qualitative and quantitative sources when estimating the scope. This was because the first two rounds of surveys gave unrealistically high estimates of platform work, while the platform companies themselves did not report such high numbers of workers on their platforms. The researchers concluded that the last survey gave the most accurate result (1%). When comparing the results of the survey with data from other sources, the estimates were closer to 0.5%. The researchers therefore concluded that platform workers constitute about 0.5% to 1% of the working age population. The researchers also concluded that questions asked over the phone rather than using internet panels gave more accurate figures.

The study also found that there are about 30 labour platforms in Norway, and this estimate was relatively stable from 2016 to 2017 (Alsos, Jesnes, Øistad, & Nesheim, 2017; Jesnes, Øistad, Alsos, & Nesheim, 2016). Most of the platforms used in Norway were platforms in which work is performed locally, but mediated digitally (e.g. FINN Småjobber, Uber), which implies more low-skilled jobs. Work through online platforms (such as Upwork, Freelancer), where the work is both mediated and performed digitally, appears to be less widespread in Norway, most likely because this type of work can be performed from anywhere in the world, and the high price of labour in Norway makes Norwegian residents less competitive in this market for online labour. The study found that 7% of companies have used a digital platform to carry out a job, which might imply that although Norwegian companies buy services through platforms, the workforce is not necessarily doing the work on these platforms (Alsos et al., 2017: 8).

### 3.3.5 Sweden

A study on ICT-based mobile work and platform work in Sweden covering 7069 respondents found that about 2.5% of the working age population – roughly 150,000 persons – had performed platform work in 2016 (SOU 2017:24, 2017, pp. 203-204). Platform work might thus be more prevalent in Sweden than in Norway and Denmark. Yet, it seems somewhat unlikely that platform work is more common than working in the staffing industry (Dølvik & Jesnes 2018), which is about 1.2% of the labour force (Håkansson & Isidorsson, 2014). Platform work, in the surveys, might also be confused with working in the staffing industry and other forms of atypical work, which might be why the estimates of platform work are so high in this survey. The survey also confirmed that for most participants, this type of work is sporadic and a minor supplement to other income, which might also be a reason for the high estimates.

When including those applying for a job through a platform, the numbers are higher. A total of 4.5% had applied for a job but not necessarily worked via a platform. Among those who applied for platform work, there was an overrepresentation of young men, and Swedes with an ethnic minority background, similar to the findings of the profile of the platform workers in Ilsøe and Madsen (2017), and platform work was more common in urban areas. In contrast to the findings from Denmark and Norway, the Swedish survey finds that online labour was more common than locally based labour. Online labour is not synonymous with high-skilled work. Offerta, Uber Pop, Taskrunner, and Amazon Mechanical Turk were among the most commonly used platforms (SOU 2017:24, 2017, pp. 204-205).

### 3.3.6 EU surveys including Finland and Sweden

A few international surveys have included Nordic countries. Pesole et al. (2018) conducted a pilot survey in 14 member states of the EU in 2017 and estimated the scope of platform work in Europe to be around 2% of the population aged 16–74 years. The estimate was based on an online survey of about 2300 respondents in each EU country, where they define 'platform workers' as 'those who earn 50% or more of their income via platforms and/or work via platforms more than 20 hours a week' (3). This is a rather strict definition, as some platform workers, at least in Norway, have marginal part-time contracts of less than 15 hours a week (Alsos et al., 2017).

There are significant differences across countries. While the UK has the most platform workers (4% generate 50% or more of their monthly income from platforms), fewer are platform workers in France (2%). The study included two Nordic countries, Sweden and Finland, which both show levels slightly below 2% (Pesole et al., 2018). In general, the Nordic countries seem to stand out with lower levels of platform work than the rest of Europe.

Furthermore, (Huws, Spencer, & Syrdal, 2018) conducted a survey to measure the size of the gig economy in Sweden, the UK, the Netherlands, Germany, Austria, Switzerland and Italy. The researchers divide platform work into three categories and defines it as: '1. Carrying out work from your own home for a website such as Upwork, Freelancer, Timeetc, Clickworker or PeoplePerHour. 2. Carrying out work for different customers somewhere outside your home on a website such as Handy, TaskRabbit or Mybuilder. 3. Carrying out work involving driving someone to a location for a fee using an app or website such as Uber or Blablacar' (16). Huws et al. (2018) estimated that there were 10% in Sweden who had ever performed crowdwork. The word 'ever' is probably the reason why the figure is so high, compared to other studies that measure platform work performed in the last year. The corresponding figures for the Netherlands were 9%, 10% for the UK, 12% for Germany, 18% for Switzerland, 19% in Austria and 22% for Italy. Only half of these provide services via platforms frequently (at least once a week), and income from platform work represents a small share of their income (less than 10 % of all personal income) (Huws et al., 2017). The figures from this survey are significantly higher than other estimates, but the latter finding – that this represents a small share of income – is in line with findings from the other surveys reviewed.

A European mapping conducted by Eurofound (2015:108) found that crowd employment is emerging in 11 Member States. Interestingly, few of the northern European countries often linked to a high level of adoption of new technologies show indications of this employment form. Only Denmark was classified as a country in which crowdwork is 'emerging', meaning it is of new or increasing importance.



## 3.4 Online labour: a subcategory of platform work

While platform work is difficult to measure through surveys and statistics, the Online Labour Index (OLI) represents an alternative way to measure the mediation of work through online platforms over time (Kässi & Lehdonvirta, 2016). Although online labour is not synonymous with high-skilled labour, a lot of high-skilled labour can be performed through online platforms, and the index is therefore relevant for our purposes.

The OLI tracks the number of projects and tasks published on the five largest English-language platforms through methods such as web scraping and machine learning. The platforms included in the index are Upwork, Freelancer, Guru, Peopleperhour and Mturk (Amazon Mechanical Turk). These platforms represent about 70% of the online labour market in terms of traffic, and they mediate both high-skilled and unskilled tasks. The global OLI indicated a growth of 25% in online labour in the period from May 2016 to August 2018 (Kässi & Lehdonvirta, 2018).

### 3.4.1 Stability in online labour in the Nordic countries

The main findings from the Nordic countries' online labour markets are as follows:

- There has been no systematic growth in demand for online labour in the Nordic countries since May 2017.
- The emerging Nordic online labour market corresponds to the overall EU development.
- The demand for online labour in the Nordic countries is higher than the supply (Jesnes & Braesemann, 2019).

#### Nordic Online Labour Index

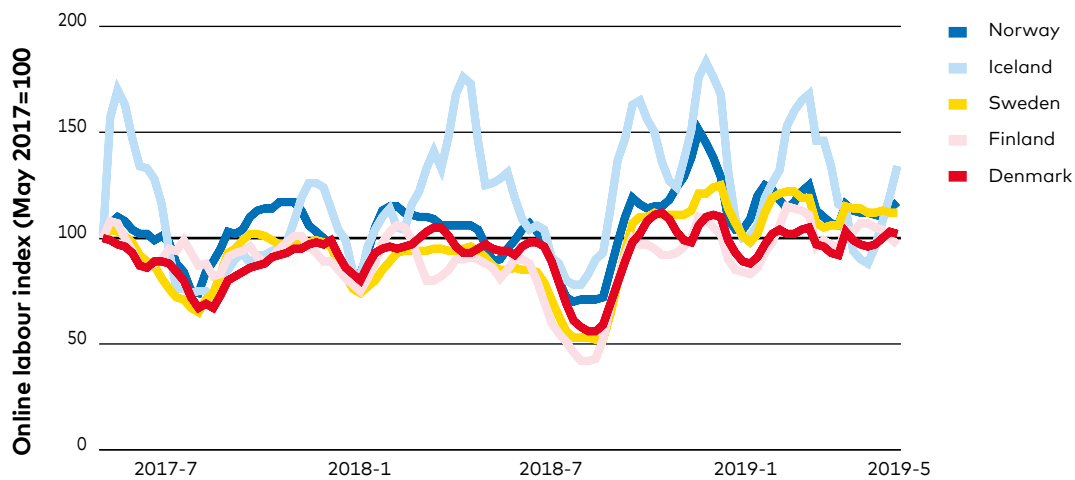
Compared to big economies such as the USA, India and China, the Nordic countries are relatively invisible in the online labour index. The Nordic project Future of Work: Opportunities and challenges for the Nordic models, coordinated by Fafo, has financed a Nordic version of the OLI, showing the development of such work in the Nordic countries from 2017 onwards (Jesnes and Braesemann, 2019). The Nordic OLI shows the number of projects posted and tasks published on the aforementioned platform companies in the Nordic countries. As the index only covers English-language online labour platforms, tasks posted on Nordic platforms such as Finn Småjobber and Worksome are therefore not included. Nevertheless, the Nordic OLI can be useful for exploring the development of this type of work in the Nordic countries, and it is questionable whether the inclusion of Nordic platforms would change the overall development.



Figure 3.1 shows the development in number of tasks posted, relative to May 2017. The main point to take from the graph is that we observe no systematic growth in demand for online labour in the Nordic countries since May 2017.

There is a slight decrease in demand during the summer holiday. This is a seasonal dip, which is also visible in the global index. Because there are few tasks posted in Iceland, small variations in the number of tasks posted result in large variations in the measurement. The Icelandic curve seems to indicate that there was an increase in jobs of 60 percentage points from May 2017 to June 2017, which reflects how a large variation can occur when there are few jobs. The variations in the demand curve for Iceland should therefore be interpreted with caution.

**Figure 3.1** Volume of online labour – tasks posted by firms from the Nordic countries on the 5 largest English-language labour platforms from 2017 to 2019



Source: Jesnes and Braesemann (2019).

According to Jesnes & Braesemann (2019), it is difficult to give absolute numbers for tasks posted on the platforms as some tasks are not publicly displayed on the platforms while others disappear rather quickly. Nevertheless, in order to give an estimate of actual numbers from Norway, Alsos et al. (2017) studied the publicly available database of the Online Labour Index in September 2017 and found that Norwegian companies posted about 1200 tasks in September 2017.

### 3.4.2 Tasks mediated through online platforms

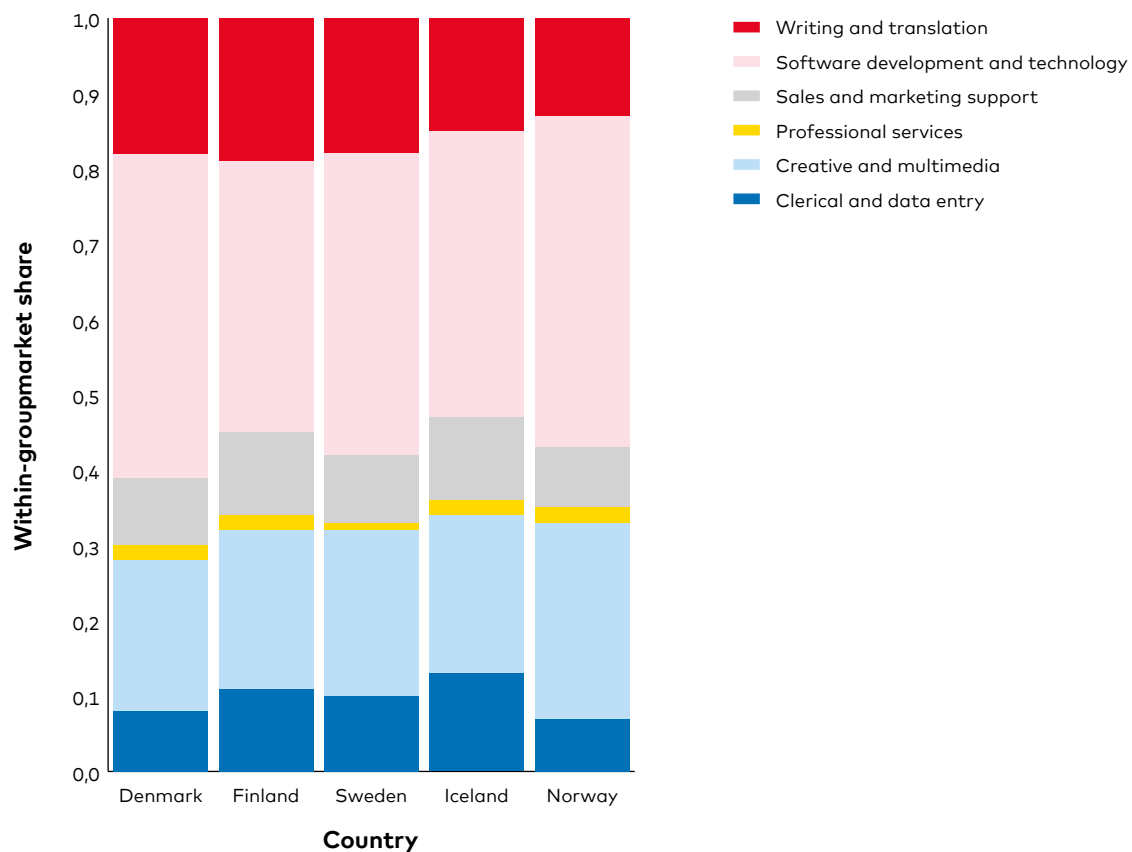
All of the platforms in the OLI mediate freelancers operating worldwide, also in the Nordic countries. The projects posted on the platforms vary from coaching to developing web applications. The OLI classifies projects and tasks posted by occupation and employer country. The occupational categories used by OLI are clerical and data entry, creative and multimedia, professional services, sales and marketing support, software development and technology, and writing and translation. All these categories include certain knowledge-intensive tasks (see table 3.3).

**Table 3.3 Classification of occupations and examples of platform work tasks in the Online Labour Index**

<b>Occupation</b>	<b>Examples</b>
<b>Professional services</b>	Accounting Consulting Financial planning Legal services Human resources Project management
<b>Clerical and data entry</b>	Customer services Data entry Transcription Image tagging Content moderation Web research
<b>Creative and multimedia</b>	Design, audio and photography Video and audio production Voice acting
<b>Sales and marketing support</b>	Advertising Search engine optimisation (SEO) Telemarketing Generating leads
<b>Software development and technology</b>	Software development Web development Web crawling and scraping Data science Game development Virtual reality
<b>Writing and translation</b>	Creative writing Technical writing Academic writing Article or blog writing Translation Copywriting and editing

Figure 3.2 indicates the types of tasks posted on the platforms in the Nordic countries. Most jobs are posted within the category 'software development and technology'. This includes tasks such as data science, software development, and web scraping (see table 3.3). The second largest category is 'creative and multimedia', which includes tasks within architecture, graphics and presentations. The next category, 'writing and translation', includes tasks within academic writing, article writing and translation. The categories 'clerical and data entry' and 'sales and marketing support' are equally small. Finally, 'professional services' is the smallest category. The variety of tasks posted in the Nordic countries seems to follow the same patterns as in the EU. Our interpretation of the distribution of posted jobs is that it is primarily work that can be relatively easily divided into different tasks that is most relevant to outsource via platforms.

**Figure 3.2 Posted jobs classified by occupational categories**



### 3.5 Concluding remarks

In this chapter, we have reviewed the scope and composition of platform work in the Nordic countries, with a particular focus on high-skilled platform work. Based on a literature review and media searches, we provided a snapshot of the knowledge-intensive platform companies operating in the Nordic countries today. There are about 30 platform companies mediating high-skilled platform work in the Nordic countries as of today. However, the platform economy remains a moving target, and this number seems likely to increase. While research on platform work from Europe shows that platform workers in general are highly educated, statistics reveal that this is not necessarily the case for the platform workers in the Nordic countries. A plausible explanation is that this is linked to the labour market position and employment rates of highly educated workers, which is high in the Nordic countries. However, it might also imply that high-skilled platform workers have not yet discovered that platform companies could be an additional way of acquiring jobs. Platform work in general is still a marginal concept in a Nordic context, and estimates range from 0.3% of the working-age population in Finland to 2.5% in Sweden. These estimates, however, are uncertain. The online labour index – an alternative measure of platform work – shows that the demand for online labour remains stable in the Nordic countries. The index measures jobs posted on the largest online labour platforms operating worldwide, but does not give a full picture of high-skilled platform work in the Nordic countries.



## 4 Current knowledge-intensive labour market in the Nordic countries

**Chapter summary:** It is difficult to measure the current and potential scope of the knowledge-intensive platform economy. To give the discussion appropriate dimensions we explore how indicators in aggregate labour market statistics can capture the relevance and scope of digital platforms in knowledge-intensive labour markets in the Nordic region.

In this chapter, we explore how indicators in aggregate statistics can capture the relevance and scope of digital platforms in the knowledge-intensive labour markets in the Nordic region. We present several indicators from aggregate statistics, aiming to capture current trends and future potential of the knowledge-intensive platform economy.

The analysis found that the knowledge-intensive labour markets in the Nordic countries are characterised by few inactive resources, as the labour markets have a combination of high employment rates and low unemployment rates. On the other hand, our hypothesis is that those working independently are likely to benefit from the knowledge-intensive platform economy in the short term. About 4% of professionals in the Nordic countries are self-employed without employees. Over time, aggregate statistics on self-employment, underemployment and professionals holding two jobs do not indicate significant changes in favour of independent work since the turn of the millennium. Nevertheless, the number of independent, as well as temporary and part-time employed professionals, indicates that the knowledge-intensive platform economy has the potential to organise a significant aggregate labour supply. It was also found that platforms do make independent work more attractive for professionals.

As discussed in chapter 3, it is difficult to measure the prevalence of platform work with current definitions and survey methods. There may be several reasons why independent work is not detectable in aggregate statistics. For example, workers may combine platform work with traditional employment, and are therefore categorised as employees. Another reason may be that the amount of work completed by each worker is so small that the workers themselves do not characterise it as work in their survey response. In order to apply the appropriate dimensions to the discussion of the platform economy, this chapter presents the current status of the knowledge-intensive labour markets in the Nordic countries.

In this chapter, we present aggregate statistics aimed at capturing observed trends and potential relevance of the KIPE in the Nordic countries. We explore indicators for how the platform economy may affect the labour market through four channels:

1. Activating inactive resources in the labour market.
2. Utilising residual capacity for work and preferences for more work among active workers.
3. Efficient tool for matching professionals and clients in the market for independent services.
4. A potential source of better labour market conditions for professionals.

#### **MAIN SOURCE MATERIAL: THE NATIONAL LABOUR FORCE SURVEYS**

The data presented in this chapter stems from the national labour force surveys (LFSs). The surveys are standardised and comparable across 35 participating countries in Europe. LFSs are the largest, representative household survey in the EU. The main statistical objective of LFSs is to categorise the working-age population (15–74 years old) into employed persons, unemployed persons (which together make up the labour force) and inactive persons (which are outside the labour force, e.g. students, pensioners etc.). In addition, LFSs serve as a statistical foundation for research and analysis. The surveys cover a wide range of variables, including educational attainment, occupation, industry, working time, employment relationships, second jobs, and underemployment.

Eurostat's database reports data provided by the individual countries' national labour force surveys. The surveys are conducted through phone interviews. In total, almost 200 000 persons are interviewed each quarter in the Nordic countries.

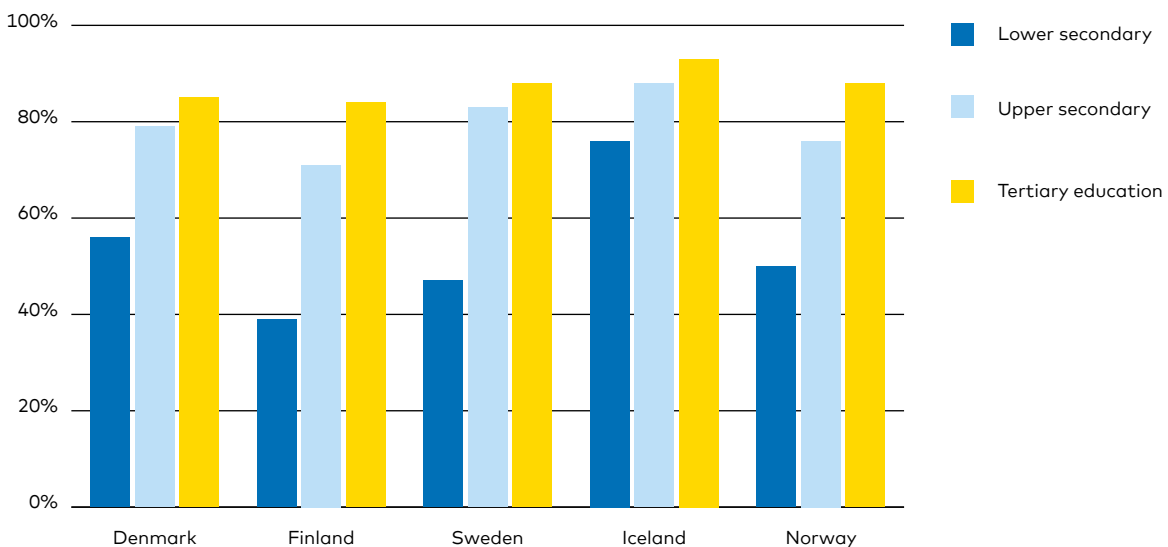
To ensure comparable and unified statistics, all figures are presented for the aggregated group of tertiary-educated workers.

## 4.1 Few inactive knowledge-intensive labour resources

The business idea behind the largest and most successful digital platforms generally builds on the ability to efficiently and securely mediate use of assets or time that is currently underutilised. For example, Airbnb allows homeowners to rent out a spare bedroom. Applying the same logic to the labour market would require available human resources which are currently underutilised in the labour market. This section evaluates the number of professionals that are currently seeking work or are inactive in the labour market.

The knowledge-intensive labour markets in the Nordic countries are characterised by high employment rates ranging from 70% in Finland to 84% in Iceland in the population aged 15–64 years, compared to 66% for the Euro area<sup>17</sup>. Figure 4.1 presents the employment rate among tertiary-educated workers in the Nordic countries. The employment rate increases with education in all the countries. Among tertiary-educated workers, it ranges from 84% in Finland to 93% in Iceland. The employment rates have been relatively stable over time.

**Figure 4.1 Employment rates by educational attainment in the Nordic countries. 2017**



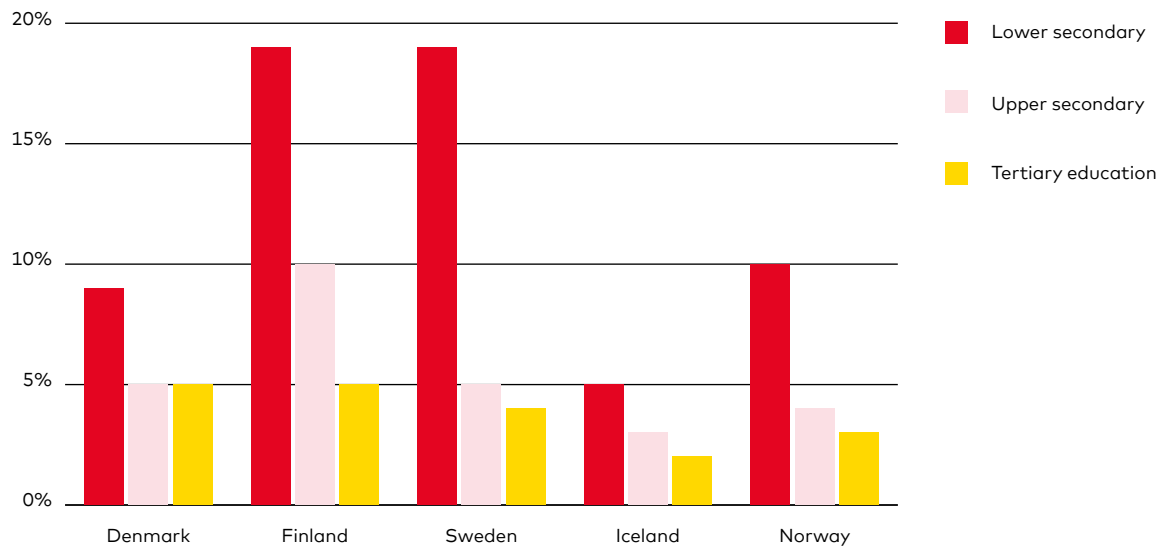
Source: LFS, Eurostat.

<sup>17</sup> The Euro Area are the 19 EU member countries that have replaced their national currencies with Euros.



Although almost nine in ten tertiary-educated persons are currently employed, there may still be a significant number of workers seeking work. However, the recorded unemployment rates in the Nordic countries are also relatively low compared to other regions. Like the employment rates, unemployment statistics indicate that tertiary-educated persons generally have better labour market outcomes than those with less formal education. In all Nordic countries, except Denmark, the unemployment rate among tertiary-educated persons is lower than for workers with a lower or secondary education, see figure 4.2. It is also likely that a part of the measured unemployment is frictional, meaning that workers are temporarily unemployed during the process of moving from one job to another.

**Figure 4.2 Unemployment rates by educational attainment in the Nordic countries. 2017.**



Source: LFS, Eurostat.

High employment rates combined with low unemployment rates among professionals in the Nordic countries indicate that there are few inactive knowledge-intensive labour resources in the region. This indicates that the platform economy's potential to be a catalyst to utilise and activate inactive labour resources is relatively limited compared to other labour market segments. As a result, knowledge-intensive digital platforms must compete with other employment alternatives for the same labour resources. This implies that digital platforms must compete on the conditions of employment, not only the opportunity for professionals to find employment. There may also be subgroups of employed professionals that can benefit from services provided by digital platforms in their current form of employment, mainly independent professionals.

## 4.2 Digital platforms may be more relevant for some groups of professionals in the short term

In the short term, digital platforms may be most attractive for professionals that are currently working independently, full time or in addition to regular employment. Below, we examine the share of independent professionals by using statistics on self-employed professionals without employees. Although the previous section found that most professionals are currently employed, it is not certain that the full labour supply of professional workers is utilised. There is limited data available concerning professionals that have underutilised labour supply or want to combine regular employment with self-employment. There are, however, two available indicators; the number of underemployed professionals and professionals that combine different forms of employment.

### 4.2.1 Relatively few are self-employed without employees

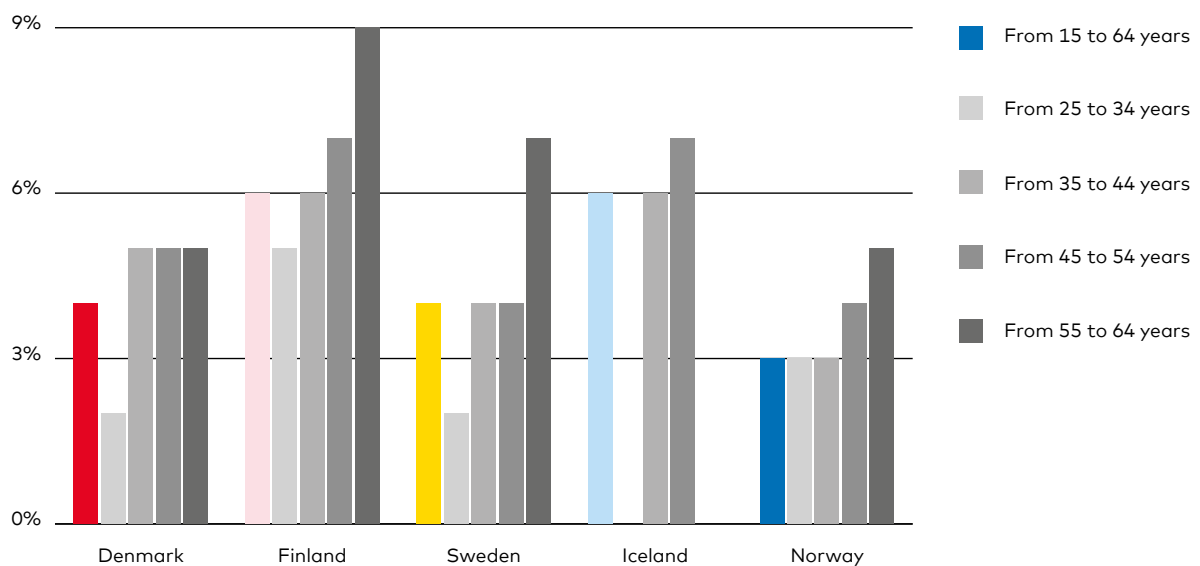
One hypothesis is that currently independent professionals have the lowest barriers to participating in the platform economy. Moving from one form of independent work into the KIPE will not affect their form of employment. Hence, their employment benefits and social rights are also unaffected. We use the share of 'self-employed professionals without employees' as a proxy to measure the number of professionals with low barriers to participating in the KIPE.

Given the increasing number of available platforms and how digital platforms are presented in the news and analyses of 'the future of work', one might expect to see an increase in the share of independent professionals, especially in the last few years. Aggregate statistics, however, suggest that the share of self-employed professionals without employees has been relatively stable in all the Nordic countries since the turn of the millennium. Finland is the exception, where the share has increased gradually from 5% to 6%.

Available data, although relatively limited, suggests that it is most common to be self-employed among professionals in creative sectors (arts, entertainment and recreation), professional, scientific and technical activities, ICT-related work and in construction. Comparing these indicators to the characteristics of platforms listed in table 3.1 suggests that there is some correlation between the share of self-employed and active platforms within industries.

The statistics on self-employment reveal an important aspect of independent work among professionals. In all the Nordic countries, it is more common to be self-employed among older professionals. One hypothesis is that older professionals have sufficient financial security, and are perhaps well-known in the industry. Hence, they can reap a larger benefit from their specific skill set by working independently.

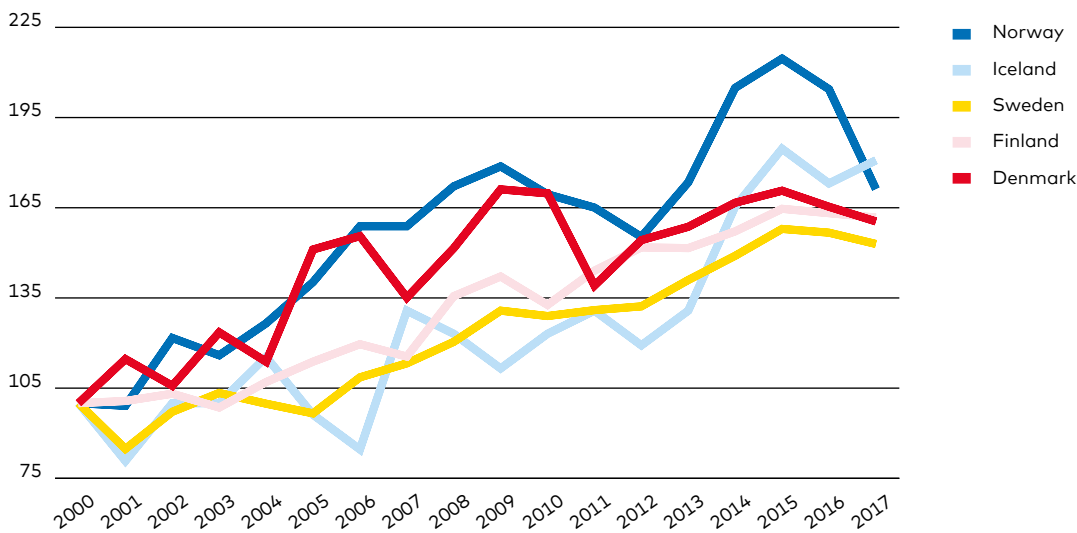
**Figure 4.3 Share of professionals that are self-employed without employees, by age group. 2017.**



Note: There is missing data for Iceland in the age groups 25–34 years and 55–64 years.  
Source: LFS, Eurostat.

Although the share of self-employed has not changed over time, the number of self-employed professionals has increased in tandem with the overall labour force. Figure 4.4 shows that the number of self-employed professionals without employees has increased by more than 50% in the Nordic countries since the turn of the millennium. If platforms are superior solutions for mediating work between independent workers and clients, compared to existing solutions, the number of self-employed could be an indication of the potential short-term labour supply in the KIPE. Regarding network effects discussed in chapter 2.2, steady growth in the number of self-employed professionals (assuming they use digital platforms) is likely to increase the attractiveness and value of the KIPE over time. In the long run, this may also affect the share of professionals that are self-employed without employees.

**Figure 4.4 Indexed growth in the number of professionals that are self-employed without employees. 2000-2017.**



Source: LFS, Eurostat.

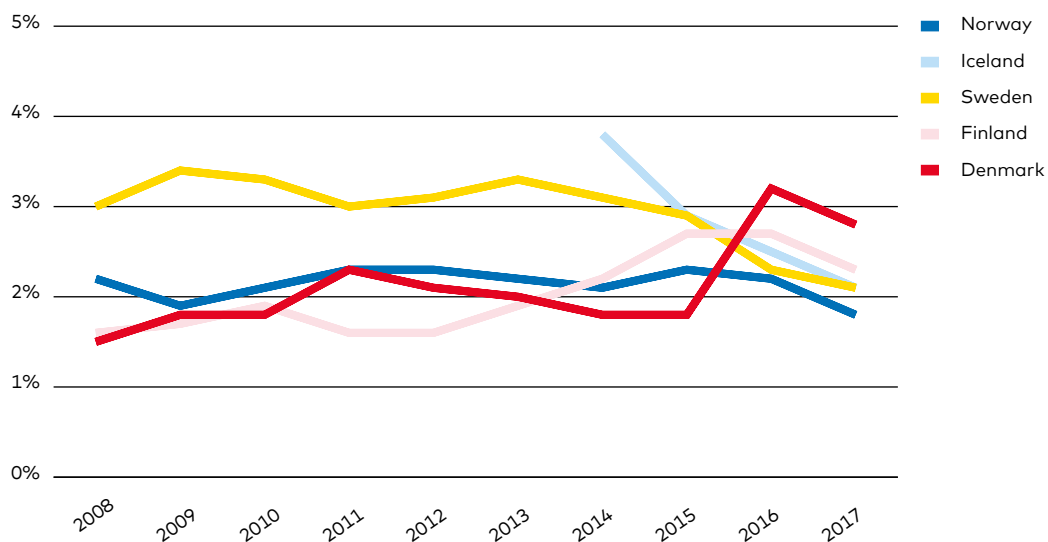
#### 4.2.2 Underemployed professionals have additional labour supply

Although most professionals are active in the labour market, in one way or another, there is additional unutilised labour supply in the employed workforce. From our perspective, the most relevant indicators for underutilised labour supply which may benefit from digital platforms are; the number of underemployed professionals in the economy and the share of professionals that combine two forms of employment.

About 20% of professionals in the Nordic countries are employed part time. The exception is Finland, where only 12% are part-time employees. There may be several reasons why professionals work part-time. Some are voluntarily working part-time, for example because of family or health circumstances. Underemployed professionals, however, are professionals that are involuntarily working part time under current working conditions. The KIPE may help underemployed professionals match with relevant clients to increase their income and working hours.

The share of underemployed professionals has been stable at around 2% to 3% in all the Nordic countries. In total, there were about 120 000 underemployed professionals in the Nordic countries in 2017.

**Figure 4.5 Share of professionals that are underemployed. 2008-2017.**

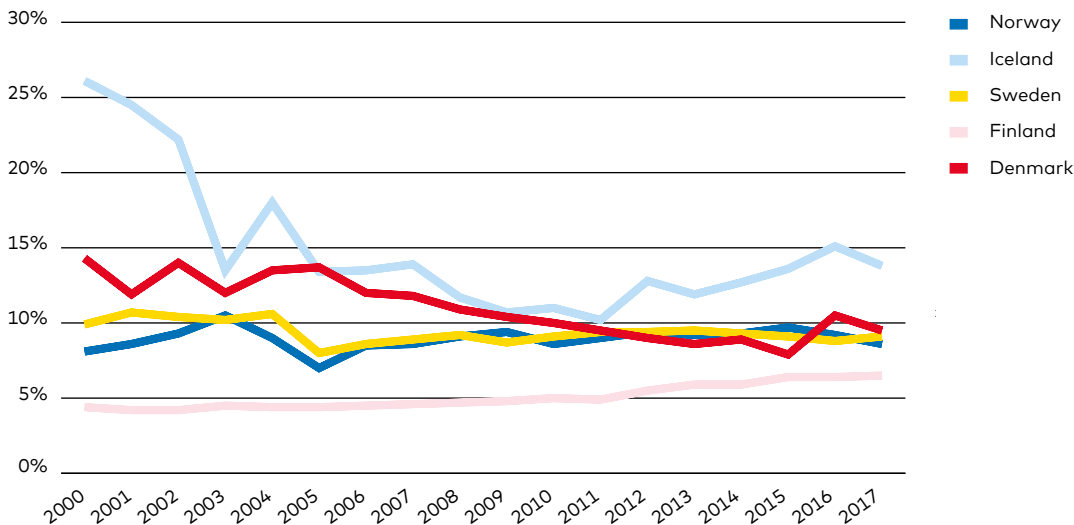


Note: The time series for Iceland is missing data until 2014.  
Source: LFS, Eurostat.

The other available indicator for the attractiveness of alternative employment is the number of professionals that combine different forms of employment. For the Nordic region as a whole, the share of professionals holding a second job has been relatively stable at around 9% since the turn of the millennium. The share has been stable in Norway and Sweden, decreasing in Denmark and increasing somewhat in Finland.

No data is available on which forms of employment professionals with two jobs combine. Statistics for all employed workers, however, show that about between 25% and 30% of workers with two jobs combine regular employment with self-employment. Most workers combine two wage-earning jobs, while the combination of employment forms may vary significantly across educational levels.

**Figure 4.6 Share of employed professionals that have a second job. 2000-2017.**



Source: LFS, Eurostat.

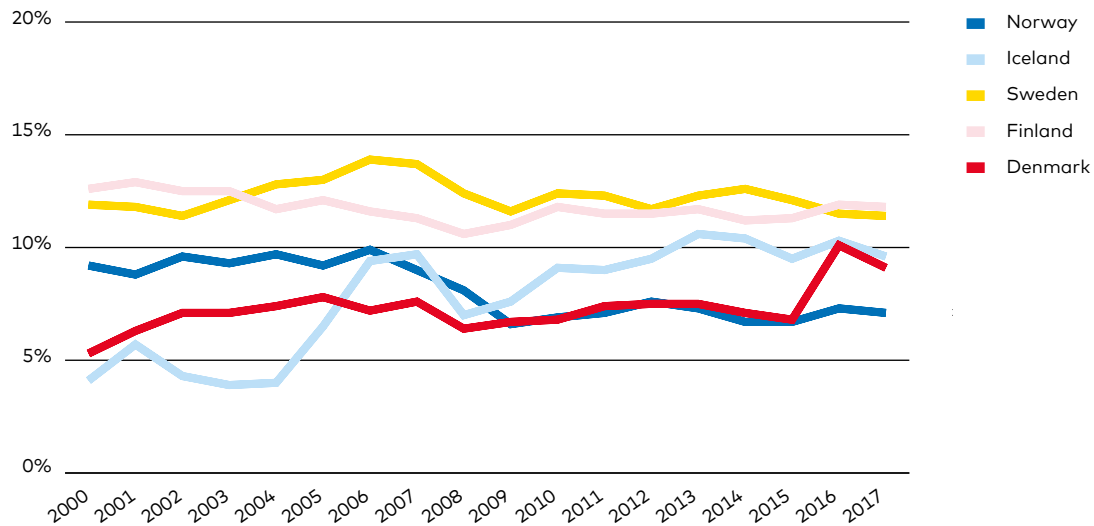
McKinsey (2016) finds that about 40% of all workers participating in the platform economy are casual earners, earning supplementary income. Most of these workers participate by choice, not necessity. It may be that these workers do not show up in the aggregate statistics of workers with two jobs because they do not report these sources of supplementary income as a second job.

### 4.3 Digital platforms are alternative solutions to organise temporary employment

The platform economy is, first and foremost, a way to find temporary demand for labour. However, platform workers are not hired by the client; the client buys services from the workers until objectively specified conditions are met. These conditions may be a specific date or the completion of a project or task. Therefore, the share of temporary employees is a relevant indicator for potential activity on digital platforms.

Except for a sharp increase in Iceland, leading up to the financial crisis, the share of temporary employees has been relatively stable over time. In 2017, the share of professionals that are temporary employees ranges from 7% in Norway to 12% in Finland.

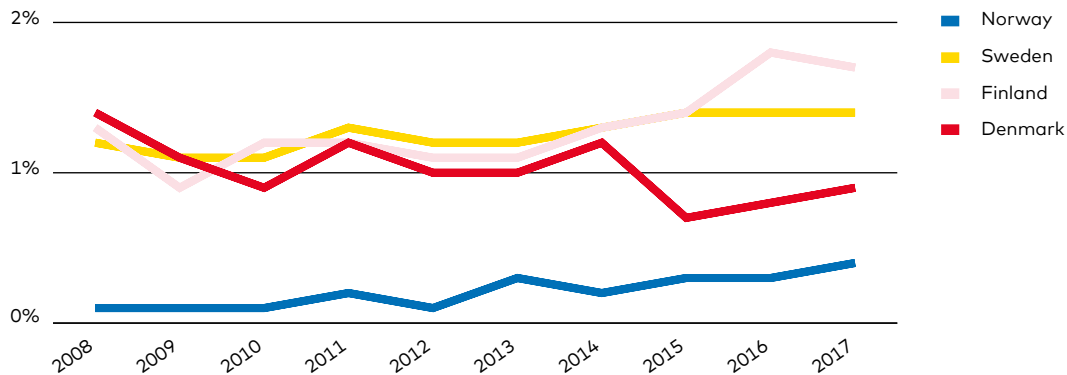
**Figure 4.7 Temporary employees as share of employed professionals. 2000-2017.**



Note: The value for Iceland in 2003 is missing. In the figure it is estimated as the average between 2002 and 2004. Source: LFS, Eurostat.

More specifically, digital platforms may provide services in direct competition with temporary employment agencies. No data is available on employment through temporary employment agencies broken down by educational attainment. Overall, however, less than 2% of workers are employed through such agencies.

**Figure 4.8 Share of all workers that are employed through temporary employment agencies.**



Note: Figure shows data for all workers, no breakdown by educational attainment is publicly available. Data for Iceland is missing. Source: LFS, Eurostat.

Although temporary employment agencies and platforms can serve a similar purpose for organisations with a temporary need for labour, it is important to keep in mind that digital platforms and temporary employment agencies usually operate with different employment conditions. While temporary employment agencies hire workers as employees – often permanently – and rent their services to clients on a temporary basis, there is usually no employment contract between digital platforms and independent workers.



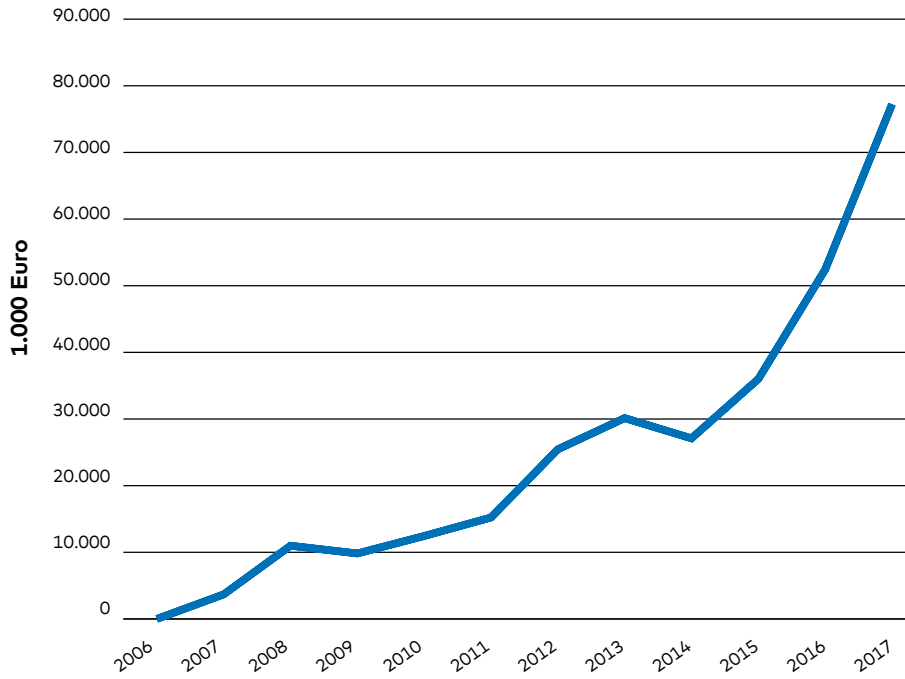
## 4.4 Exponential revenue growth for platform companies

So far, aggregate statistical indicators do not capture an underlying trend towards more independent work in the Nordic countries, as a share of total employment. If we look at the revenue of platform companies, however, the picture changes dramatically. Due to data limitations, figure 4.9 mostly includes revenue on Norwegian platforms, however, there is little reason to suspect the trend has been significantly different for the Nordic region as a whole. Over the last decade, revenue has grown systematically over time. The growth also seems to have increased significantly since 2015.

It is unclear how to interpret these discrepancies between revenue on digital platforms against a relatively stable share of self-employed professionals. There are at least two possible explanations for what we observe in data. One reason why revenue in platform companies can increase while the share of independent professionals remains relatively stable, is that platform workers may be already independent when joining the platform. In this scenario, independent professionals have adopted digital platforms to match with both existing and new clients in the market. This is also in line with research in chapters 7 and 8, which finds that many participants on platforms have several years of experience as independent professionals. In sum, this adoption of the platform economy will lead to increased revenues for platform companies but have little effect on the overall composition of the professional workforce.

An alternative explanation can be that each individual professional only does supplementary work in the platform economy. If the total amount of work is limited, it is plausible that workers will not self-report it as a job, hence, it is not observed in aggregate data. There is evidence to support the claim that most platform workers are working in the platform economy to earn supplementary income (Pajarinen, et al., 2018). On the other hand, in the Worksome Freelancer Survey 2019, 73% of respondents were solely self-employed and had no part-time job in combination with their independent work.

**Figure 4.9** Revenue in knowledge-intensive platform companies. 2008-2017.



Note: Because of limited data availability, mostly Norwegian platforms are represented in the figure.  
Source: Publicly available accounting data.



## 4.5 Concluding remarks

The main findings from the descriptive statistical analysis above is that the composition of the knowledge-intensive labour market has been relatively stable since the turn of the millennium. With high employment rates and low unemployment rates, there are also relatively few inactive labour resources seeking work among professionals, compared to workers with less formal education. This suggests that platform work must compete on working conditions, because professionals are likely to have alternatives in the labour market. This implies that platform work among professionals may to a larger degree be driven by preferences, rather than employment opportunities of 'last resort'.

Indicators such as the number of professionals that are self-employed without employees, underemployed or hold two jobs do not show a significant change in favour of more independent work over the last couple of decades. Nevertheless, digital platforms are likely to be relevant for those that are currently in these situations. For example, the KIPE may enable both self-employed and underemployed professionals to match with more clients (Statistics Finland, 2017). A discussion of drivers and barriers to participation in the KIPE is the topic of chapters 5, 6 and 7.

## 5 Will firms be clients in the knowledge-intensive platform economy?

**Chapter summary:** Firms will want external help to solve various tasks from independent professionals. Economic theory states that firms will choose to outsource tasks if the internal organisational costs associated with in-house production are higher than the transaction costs associated with sourcing labour in the market. Dynamic models of firm behaviour show that firms always need core employees to perform core tasks. Independent professionals are needed primarily to help firms grow, by reducing risk and enhancing flexibility.

Several tasks are considered to be core tasks and therefore limit the number of tasks that can be outsourced.

Knowledge-intensive digital platforms make the competence, costs and availability of independent professionals more transparent to clients. Use of digital platforms will therefore lower the barrier to replacing employees who are not considered to perform core tasks with external professionals. If the firms' core tasks change, work that is currently considered to be a core task may also be performed by external independent professionals.

Although buying services in the market is less costly and risky in some respects, the outsourcing of tasks introduces other costs and considerations for firms. These costs will limit the potential growth in firms' use of independent professionals.

Chapter 4 documents how the use of digital platforms by independent professionals and their clients has grown. Although growth has been rapid for some platforms over the past couple of years, the scope is still very limited and plays a modest role in the labour market for professionals. In order to let the scope expand, firms who need external help to solve tasks must have an interest in engaging professionals via digital platforms. In this chapter, we discuss what could indicate that a firm wants to do this, and the barriers to growth in firms' interest in digital platforms.

Firms that wish to be clients in the platform economy are profit-maximising actors in the labour market. This implies that the client will choose the most productive method for sourcing specialised labour, according to current needs. In practice, a firm can choose to organise work by hiring an employee or by sourcing the services in the external market.

In the following, we discuss factors of sourcing labour that can affect how clients choose to source labour to complete their tasks.

## 5.1 A dynamic model for organising firms

Burke and Cowling (2015) argue that traditional views of firm organisation do not realise the potential of more dynamic models of organising work and the structure of firms. In the context of the Coase theorem, the external labour force is only seen as a substitute to hired employees, which implies that the role of independent professionals would be as a replacement of the existing workforce. In a more dynamic setting, there exists three types of labour in a firm (van den Born & van Witteloostuijn, 2012):

- Core employees
- Independent professionals (freelancers)
- Routine workers



Following this categorisation, the tertiary-educated workforce would be most relevant as core employees and independent professional (freelancers). In a firm, core employees are typically management and employees that are essential for the everyday operation and function of the firm. The tasks for which the core employees are responsible will not be outsourced from the company.

The reason for not outsourcing core employees is that they represent the fundamental business of a firm, and this should be understood as a basic limitation on how far a firm will outsource their tasks. Every firm defines itself based on its core activities and competence. This is a competence that must be maintained and further developed as long as the firm exists. Unless a firm wants to 'self-destruct', there is no reason to assume that firms or organisations will outsource their own core business.

However, not all high-skilled work is core competence and therefore shielded from outsourcing. For example, many small and large firms outsource their accounting activities to specialised accounting service firms. Over time, what is defined as core competencies or activities may change. For example, outsourcing R&D activities, which has traditionally been a core task, is now associated with firm growth and development (Bøler, Moxnes, & Ulltveit-Moe, 2015). Although the tasks that are considered to be core tasks may change over time, there is a limit to the number of tasks that can be outsourced before the buyer can no longer operate as a firm.

Independent professionals are not permanently associated with the firm but can be hired temporarily if there is a need for more work to be done. Burke and Cowling (2015) found that independent professionals in the UK are high-skilled workers that supplement the client's own workforce and are frequently used to increase the client's innovation-driven economic performance.

One reason why the role of independent professionals was not covered specifically in the traditional literature may be that there was no effective market for sourcing these workers. This implies that the transaction costs associated with organising this temporary workforce were too high. With the platform economy, however, this market has become more transparent and available to clients.

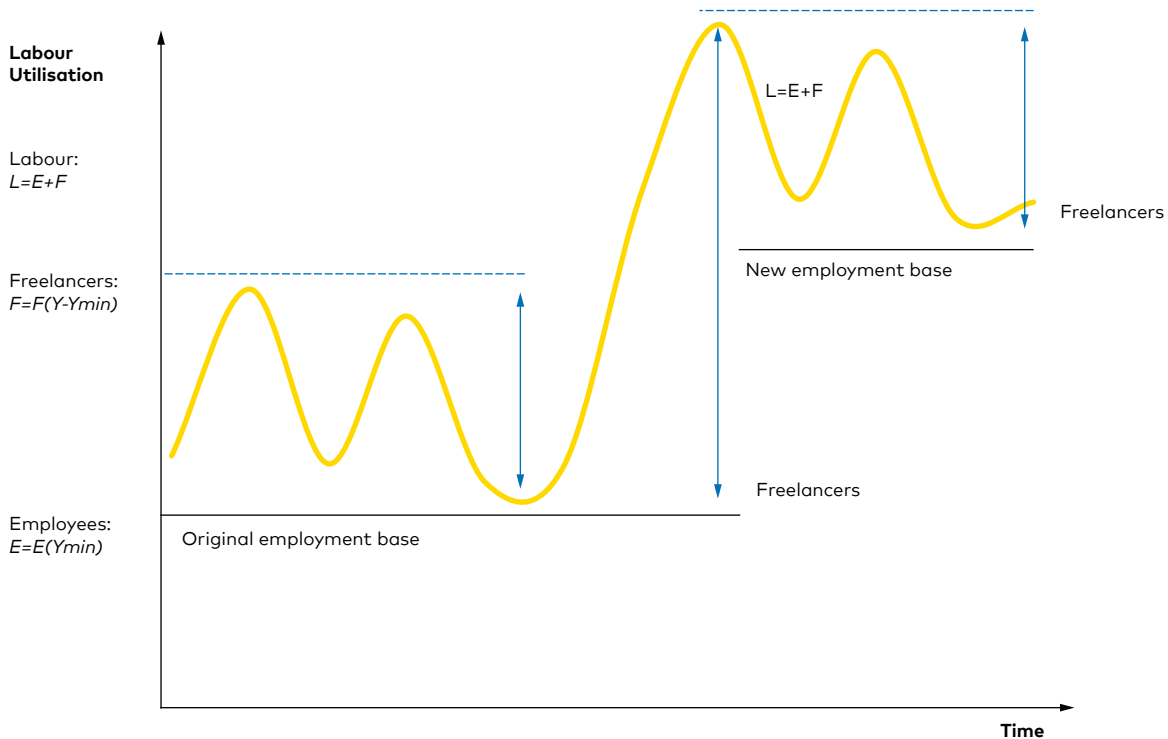
Although independent professionals may not replace or be a substitute for a firm's employment base, independent professionals may to a larger degree replace employees that are not considered to perform core tasks (or not performing core tasks anymore) or whose skills are only needed for time-limited projects.

## 5.2 Workforce flexibility and adaptability

The main reason for firms to be interested in utilising independent professionals is that doing so can effectively address fluctuations in the labour demand. The client can benefit from utilising specialised professionals without taking on costs associated with downtime in the excess employees in the firm.

Figure 5.1 illustrates how firms can utilise independent professionals to flexibly adapt the size of their workforce to their current labour demand. An alternative would be to hire an employment base between E and F in the firm, but then there would be periods with excess demand and periods with excess supply of labour in the firm. This could lead to the same total production, but with unwanted welfare costs due to periods when supply and demand do not match. It is beneficial for society when the labour force is utilised for tasks and in firms where it is most productive to do so.

**Figure 5.1 Independent professionals (freelancers) used to manage volatility and business growth**



Source: Burke and Cowling (2015).



In the context of knowledge-intensive economic activity, we can interpret the employment base as the number of knowledge workers employed in the firm. These are, for example, responsible for maintaining and developing the ICT system in the firm. The fluctuations in the L curve can then be interpreted as different projects related to the knowledge-intensive tasks in the firm, for example introducing new features to the ICT system. The underlying assumption in the left part of the figure would be that the projects do not require additional labour to be retained and utilised after the project is completed. These projects may affect the firm's labour demand in two distinct ways:

1. Increased total labour demand
2. Demand for different skill sets

First of all, the firm can utilise the independent professionals through digital platforms in order to ensure that they are able to produce the required number of hours to complete the project within the timeframe.

In theory, the firm could solve the need for additional work-hours by the employment base working overtime. However, if none of the employees in the firm meet the skill requirements for managing and completing the project, then working overtime would not solve the problem. Even if a current employee could solve the problem, they may be less productive and efficient than a hired specialised independent professional on a temporary contract. The advantage for the firm of this type of organisation is that the next project may be in a completely different field, for example translating a technical report. The skill requirements would then change again and even hiring the previous professional permanently would not cover the labour demand for the next project.

If Nordic firms adopt these organisational forms to a larger degree than before, it implies that there is a market for independent professional services. This could have positive effects on the innovative capabilities of firms and result in more efficient allocation of labour and skills in the economy, compared to a situation where firms and workers are more static. To reduce transaction costs associated with recurrent sourcing of independent professionals, one successful strategy is to establish relationships with a group of professionals who have experience working with the company (Corporaal & Lehdonvirta, 2017).

Even though the platform economy can create welfare benefits for society, there are limiting factors that are likely to affect the potential size of the freelance labour market. In the first round, this is limited by the share of activities that firms are comfortable with outsourcing. Firms can, for example, be reluctant to outsource their core activity (Corporaal & Lehdonvirta, 2017; Burke & Cowling, 2015).

## 5.3 Digital platforms reduce hiring costs

When firms identify a demand for labour or skills, they basically have the choice of hiring an employee versus sourcing labour from the external labour market to complete the tasks. The firm's optimal behaviour depends on several factors, e.g. whether the task is part of the firm's core activity, frequency of the task, skill requirements and so on. Coase states in his 'theory of the firm' that firms hire employees if organisational costs associated with in-house production are lower than the transaction costs associated with buying services in the market (Coase, 1937). The argument also goes the opposite way; work that can be more efficiently organised and completed outside the firm will be outsourced.

An important element when firms are considering independent professionals for performing specific tasks is the time-consuming hiring process. These costs of hiring are referred to as transaction costs. (Searching for tasks is also associated with significant transaction costs, and this will be discussed in the next chapter.) Firms face three groups of transaction costs when they interact with independent professionals:

- Search and information costs
- Bargaining and decision costs
- Monitoring and enforcing costs

The searching costs generally increase with the degree of specialisation of the skills required. This is because the pool of possible matches usually gets smaller when the required skill is more specialised.

When a possible independent professional is identified, the firm and the independent professional need to exchange relevant information. This additional information must be verified and quality assured to ensure a good match. In the traditional labour market, this stage usually consists of a professional supplying his/her CV and an application letter.

After the demand from the client has been matched with a potential independent professional, they must bargain their way to a contract. The contract must specify all aspects of the relationship between the client and the professional, for example the task/job to be completed, remuneration, responsibilities of the parties, working conditions. To get the best deal, the independent professionals and the clients can both bargain with several other clients and professionals.

Last are the costs associated with monitoring the professionals' services and enforcing the contractual agreement. Over time, the firm can reduce the transaction costs by hiring labour more efficiently, but there will still be significant transaction costs (Claussen, Khashabi, Kretschmer, & Seifried, 2018).

Clients that regularly source labour through the external labour market face these types of transaction costs every time they match with an independent professional. The alternative to sourcing labour in the external market is to hire employees permanently. When hiring an employee permanently, the client would face the search and information costs only once. The bargaining costs are also limited, as wages and working conditions are usually re-bargained at set intervals and at least some of them are collectively bargained. However, the employer still faces costs related to managing and organising work internally, as well as costs for monitoring and ensuring that the employee delivers effort and quality in line with the contract.

Digital platforms have the potential to significantly reduce the size of the transaction costs associated with sourcing professionals in the market. The biggest benefit that digital platforms give clients is that they provide a comprehensive marketplace for sourcing both skills and tasks. With a large userbase, platforms increase the likelihood of efficiently matching with relevant business partners. In addition, most labour platforms have filters and automated searching algorithms to help clients match with relevant professionals efficiently. Most platforms also use rating systems, which are a quick source of information on the performance and reliability of a professional or an employer. These features of digital platforms are likely to reduce searching and information costs for both independent professionals and employers significantly.

With regard to bargaining costs, most knowledge-intensive platforms allow independent professionals to set their own rates and conditions for working. This implies that there will still be some bargaining costs for independent professionals and clients to match. Professionals are generally given more autonomy and freedom on knowledge-intensive platforms than on platforms mediating simpler manual tasks.

It is not obvious how digital platforms affect costs associated with monitoring workers' effort and enforcing the contract. It is generally harder to monitor the effort of a remote professional than a hired employee in the office. Short contractual relationships may also weaken incentives to deliver projects within the allotted timeframe and to the agreed quality standard. Most platforms have an infrastructure designed to mitigate these challenges. The most important feature for ensuring quality and delivery in line with contractual agreements is the option for both parties to leave reviews. If an independent professional does not deliver in accordance with the contract, subsequent reviews will warn other potential clients of previous assignments. Some platforms have designed software solutions that allow clients to monitor the effort of the independent professional by recording his/her computer screen. In this case, the independent professional is only compensated for actual work (with the independent professional's consent). It is, however, uncertain how many skilled professionals would agree to these terms, which may limit the use of digital platforms.

## 5.4 Digital platforms do not remove all transaction costs

Although digital platforms can reduce the transaction costs associated with searching for and matching with independent professionals, there are still significant transactional and organisational costs associated with sourcing labour in the external market.

The first step for clients to match with professionals in the platform economy is to have a project description of what problems or tasks the firm wants to solve. For relatively simple and defined tasks, creating a project description is not hard. However, for bigger and more complex projects, where the firm may have a specific goal in mind but little knowledge of how to get there, writing a project description may be a challenge. With traditional consultancy firms, the client can go to the firm and ask for help in how to design the project, which skills are required and so on. In the platform economy, the client is more responsible for the design of the project, not just the end goal. In figure 5.1, this could be interpreted as the situation where the client shifts from the original employment base to the new employment base. These types of projects may be so large and complex that the client prefers to hire a larger consultancy firm, while the smaller fluctuations can be handled by more concrete projects in the platform economy. This could be a reason why web development, design and translation services have been the most demanded services on Upwork (Horton, Kerr, & Stanton, 2017). Another barrier to platform sourcing is that a project is so firm-specific that it requires upfront training of the workers, in which case it may be rational for the firm to hire the worker, train them and utilise their skills to complete the project.

There are also other types of uncertainties that arise with platform work, related to the behaviour of the independent professionals. First of all, it may still be hard to verify the qualifications and skills of professionals offering work through platform workers. Second, it may still be difficult to monitor the effort of the individual professionals during the project, especially if work is carried out remotely (Claussen, Khashabi, Kretschmer, & Seifried, 2018). Platforms use different strategies to mitigate these costs associated with sourcing labour through platforms. The most important tool for reducing information asymmetries is the use of reviews. If an independent professional does not perform the tasks in line with the contract and expectations of the client, a bad rating will serve as a warning to other potential clients.

Claussen et al. (2018) conducted a study of the characteristics that are typical for project success in the platform economy. Project success is measured by the client's rating of the project and performance of the independent professional.

The study found that:

- high prior ratings of the professional, the client's experience using platforms and fixed-payment contracts positively affect the rating of the project, and
- project complexity, measured by the number of independent professionals involved, number of skills required and the length of the project description, as well as the professional's experience measured by the number of projects completed had negative effects on the rating of the project.

The findings support the claim that certain characteristics of projects are related to high ratings by the client, which indicates that some tasks are more suited to being organised through platforms than others. At the same time, the findings indicate that clients learn how to use platforms, which over time can broaden the scope of relevant tasks.

## 5.5 Reduced risk with less regulated employment relationships

When a firm is dynamically growing and developing, hiring permanent full-time employees is a risk. By hiring temporary independent professionals in the growth phase, the firm reduces the risks associated with growth. Using independent professionals, the firm can 'test the waters' to see if the expected sales growth associated with expansion is sustainable. In figure 5.1, this phase is illustrated by the shift in the employment base, where independent professionals facilitate business growth, and when the realised growth is achieved and sustainable the firm can increase its employment base to a new level. With this dynamic, independent professionals can be used to create new jobs for employees (Burke & Cowling, 2015).

On the other hand, hiring a team of independent professionals may be associated with risks that are less relevant when hiring a team from a traditional supplier of professional services. When teams are comprised of independent professionals, each professional has an incentive to maximise their own share of the project. This increases the costs of managing the project and may compromise the quality or completion of the final product.

## 5.6 Digital platforms resemble and compete with traditional consulting firms

The characteristics of digital platforms in the KIPE most closely resemble traditional consulting firms in the current market for professional services in the Nordic countries. Traditional consulting firms offer similar services, based on renting out their employees to clients, either individually or in teams. Both independent professionals and consulting firms can provide strategic services, expertise and bring new knowledge to their clients. Digital platforms compete with consulting firms by lowering transaction costs and automating the matching process between projects and relevant professionals. As a result, consulting firms are likely to experience the most direct competition from digital platforms.

For small or well-defined tasks and projects, clients can probably substitute buying services from consulting firms with independent professionals. For more complex and lasting projects, however, consulting firms have key characteristics that make them relatively more attractive.

For complex projects it is likely that the client will demand several types of skill sets and operational resources to implement resulting solutions. Many consulting firms have employed a diversified set of skills to be able to handle all aspects of different projects, relating to strategic problems, as well as developing and implementing solutions. It is possible to hire teams of independent professionals in the KIPE, however, cooperation, knowledge sharing, and learning is likely to flow easier within a defined firm than between independent professionals. Hiring independent professionals for more complex projects can also be considered relatively risky, for example in case of unforeseen events incidents like sickness or injury. For the client, however, the benefits of having access to all the resources provided by consulting firms is likely to come at a premium cost. Nevertheless, these characteristics suggest that digital platforms are not suited to organise all types of professional services.

## 5.7 Knowledge-intensive consumer services

Although the KIPE is likely to have the biggest impact on society and the labour market through demand from firms, there is also a market for knowledge-intensive consumer services. In this market, the client is a consumer or a household. Examples of knowledge-intensive services demanded by consumers are medical services and psychologist services. Given equal quality of the service, the main role of digital platforms in the consumer market is to give consumers access to services at a lower price or less time-consuming manner. If a digital platform reduces the time spent on acquiring and receiving the service, for example by reducing the time spent waiting for a doctor at the clinic, consumers may even accept an increased price for the service itself. This is rational if the value of the time savings is higher than the price increase of the service.



## 5.8 Concluding remarks

When clients identify a demand for labour or skills, they basically have the choice between hiring an employee or outsourcing the work by buying services in the market. All clients will weigh up the benefits and costs associated with the alternative for each individual task. If the client has a temporary demand for a specific skill set, for example, it may be rational to buy the services in the market instead of hiring a permanent employee. On the other hand, if these are skills that are essential to the core competence or strategic operations, the client is more likely to hire an employee.

The main benefits for firms buying services in the market are related to flexibility. Digital platforms give easier access to (a growing) number of individual professionals. Easier access to different specialised skills through platforms may be even more important when firms need flexibility. In addition, buying services from independent professionals offering tasks through platforms reduces both costs and risks relative to hiring an employee on a permanent basis.

Although buying services in the market is less costly and risky in some respects, it does introduce other costs and considerations. For example, the client must manage external labour resources in tandem with internal resources. They risk buying services from an independent professional that cannot deliver the needed quality of labour, they may have to create detailed and specific descriptions of each individual task to post on the platform and they may be exposed to moral hazards from independent professionals.

Given the characteristics of services provided by digital platforms, they most closely resemble traditional consulting firms in the market for professional services. Therefore, it is likely that consulting firms will experience the largest degree of direct competition from digital platforms. Still, there are characteristics related to the types of projects and available resources for the client that suggest digital platforms are not suited to organise all types of professional services in the market.

## 6 Will professionals supply labour in the knowledge-intensive platform economy?

**Chapter summary:** Relatively tight labour markets for professionals in the Nordic countries suggest that digital platforms and conventional employers must compete for the same professional workers (see chapter 4). This implies that the working conditions take on a relatively greater importance than the mere opportunity for employment.

Available data suggests that most independent professionals in the Nordic countries are relatively experienced. As a result, hourly wages in the knowledge-intensive platform economy are relatively high. Independent professionals put a relatively high value on flexibility in working hours and location, but a relatively low value on the social aspects of the workplace. Many independent professionals also report higher job satisfaction and value autonomy in the choice of projects and clients they work for. On the other hand, independence is also associated with several costs for the individual professional. Income uncertainty and more administrative responsibilities are among the most important barriers to being self-employed.

For most of the factors discussed below, the effect of platform work versus conventional employment is ambiguous. Both choices are associated with advantages and disadvantages. Actual outcomes for individual professionals are also likely to vary significantly, depending on types of skills, experience and specific conditions, as well as the business models of platforms. Nevertheless, if work in the knowledge-intensive platform economy is driven by choice, this implies that individual professionals can evaluate benefits and costs associated with the alternatives and make the appropriate choice for themselves.

While firms act as profit-maximisers in the labour market, workers seek to maximise their welfare. How workers value different welfare components is subjective, and individuals put different emphasis on activities both in their professional and personal lives. Nevertheless, many of the drivers relevant to labour market participation affect the choices of individual workers in the same way.

In chapter 3, we saw that there is little evidence of increasing independent work in aggregate labour market statistics, and the KIPE is hard to measure at all. Nonetheless, recent research suggests that the platform economy is 'gaining a foothold in Europe's labour markets' (EU Science HUB, 2018). The future scope and relevance of the KIPE crucially depends on the participation of professionals. In section 4.1, we found that the labour markets for professionals are relatively tight in the Nordic countries, with high employment rates and low unemployment rates. This implies that the KIPE must compete on working conditions to be attractive to professionals, who often have alternative opportunities in the labour market. This also suggests that participation in the KIPE to a large degree can be driven by choice, rather than necessity. However, labour market dynamics also depend on how clients, i.e. firms, adapt to new ways of organising work (see chapter 5).

In this chapter, we explore and discuss relevant incentives and barriers for professionals joining the KIPE, as well as existing evidence on the characteristics of independent professional work. Specifically, we discuss the benefits and costs associated with being an independent professional compared to a conventional employment relationship. Relevant factors for choosing an employment form include income, uncertainty, preferences, and social protection.

## 6.1 High average income levels and potential for increased inequality

Although occupational choices are affected by a large set of both professional and personal factors, income is an important driver for participation and effort in the labour market. There are three main aspects of income that are relevant for participation in the KIPE: Income levels, distribution of income and income uncertainty. In this section, we explore the potential effects of working independently on these income-related aspects.

### 6.1.1 High average income levels on Nordic digital platforms

Political debates concerning platform work in general has largely centred around pay and working conditions. Critics emphasize that today's platform workers often experience detrimental working conditions in precarious work situations, with low pay. Especially for platforms mediating low-skilled tasks, adverse working conditions and low remuneration is observed and seem to be the norm (Bloodworth, 2018; Eldring & Ørjasæter, 2018; Codagone, Abadie, & Biagi, 2016). Crucially, however, these effects do not apply to all platform workers. Available evidence suggests that for independent professionals engaged on knowledge-intensive platforms in the Nordics, the situation is quite different.

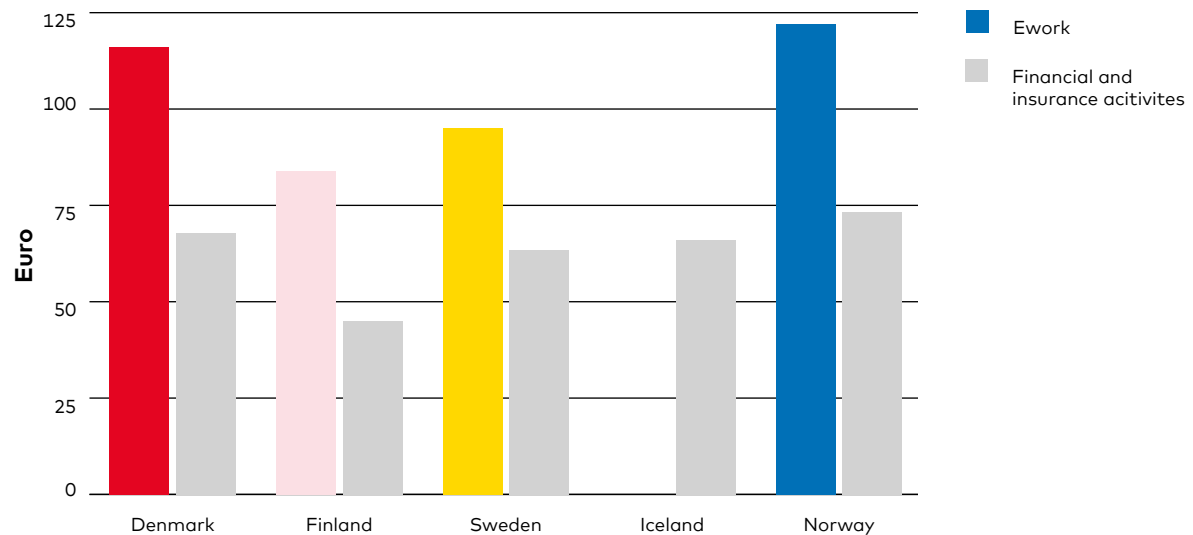
Existing research suggests that platform work primarily is a source of supplemental income for professionals. As a result of this, there are two measures of income level that are relevant for independent professionals; hourly wages and yearly income. The two measures must be analysed in relation to each other in order to evaluate the overall income associated with platform work. Hourly wages are an indicator of short-term demand for skills and may be especially important for professionals wishing to earn casual income from the KIPE. Yearly earnings, to a larger degree, depend on the overall demand for independent professional services in the economy, and may indicate the potential to have a career as an independent professional through digital platforms.

A case study of Finnish workers, mostly professionals (63% have education at college or higher level), working through Upwork, showed that they earned an average of EUR 19 per hour working online (Pajarinen, et al., 2018). This is comparable to the hourly wage of Finnish professionals, which was around EUR 18 in the same year (Statistics Finland, 2018). The hourly wage of Upworkers is estimated based on the question: 'What is your typical earning per one hour of online work in euro (after any fees paid to the platform but before taxes)?'. It is unclear whether the respondents include time spent searching for work in the reported estimate. If they do not, the real hourly wage is lower.

The Ework Barometer surveys the independent consultant market in the Nordic countries. In 2018, about 3 100 consultants participated in the survey. The majority were from Sweden (2 400), while the rest were fairly evenly distributed among Norwegian, Finnish and Danish consultants. The survey found that the hourly rate charged by the consultants was EUR 96. The rate varies across countries. Norwegian and Danish consultants on average charge higher fees than Finnish and Swedish consultants.

Figure 6.1 compares the hourly fees charged by consultants on Ework with average hourly labour costs in financial and insurance activities. The comparison shows that fees charged through Ework are significantly higher than average labour costs in a related industry in each Nordic country.<sup>18</sup> Worksome's Freelancer Survey 2019 surveys independent workers registered on their platform. More than 90% of the respondents have completed at least some education at university level. The survey does not report the exact hourly rates that consultants charge their clients, but the distribution shows that the majority charge in the interval between EUR 50 and EUR 130. Based on this distribution, we estimate average hourly rates of approximately EUR 87 (excl. VAT) (Worksome, 2019)<sup>19</sup>. Relatively high consultancy fees indicate that some professionals are able to extract additional income by supplying their skills as independent professionals through digital platforms.

**Figure 6.1 Reported average hourly fees in Ework Barometer and average hourly labour costs in financial and insurance activities. 2018.**



Note: The Ework Barometer is missing data from Iceland. Source: Ework (2018) and Eurostat.

<sup>18</sup> Eurostat's measure of labour costs includes wages, taxes, vocational training costs and other work-related expenditures. Financial and insurance activities are among the industries with the highest labour costs in the Nordic countries. This implies that the consultancy fees on Ework are high.

<sup>19</sup> The income distribution is given by intervals of approximately EUR 27. To calculate the average hourly rate, we have assigned each interval to the middle value. The values are then weighted by the distribution of wages.

The hourly wages reported by professionals currently working through digital platforms indicate that professionals have high earnings potential in the digital labour markets in the Nordic region. The hourly rate, however, must be seen in context with the potential total earnings, and these depend on the overall demand for independent professional services.

Data from Workesome's Freelancer survey is the best source material to explore the relationship between hourly rates, working time and annual earnings on digital platforms, and to compare these to regular employees in the Danish economy. The survey found that respondents work approximately 28 hours per week as an independent consultant. Assuming 5 weeks of holiday, this amounts to 1 336 hours of work in a year.

Based on the data from the survey, we can calculate an estimate of annual revenue, based on the hourly rate and the number of hours worked. A total of 1 336 hours of work at a rate of EUR 87 would imply an annual revenue of about EUR 116 000. In the survey, however, respondents reported average revenues of about EUR 53 000. Although it is unclear what respondents include in their estimation of 'time spent working as an independent professional', the difference between estimated and actual revenues can to some degree be interpreted as a measure of the transaction costs discussed in chapter 5 and 8. It also reflects the time used to manage and run the independent business, which is work that is not directly billed to clients. On the other hand, the estimated income should not be interpreted as an indication of what these professionals would have earned as conventional employees.

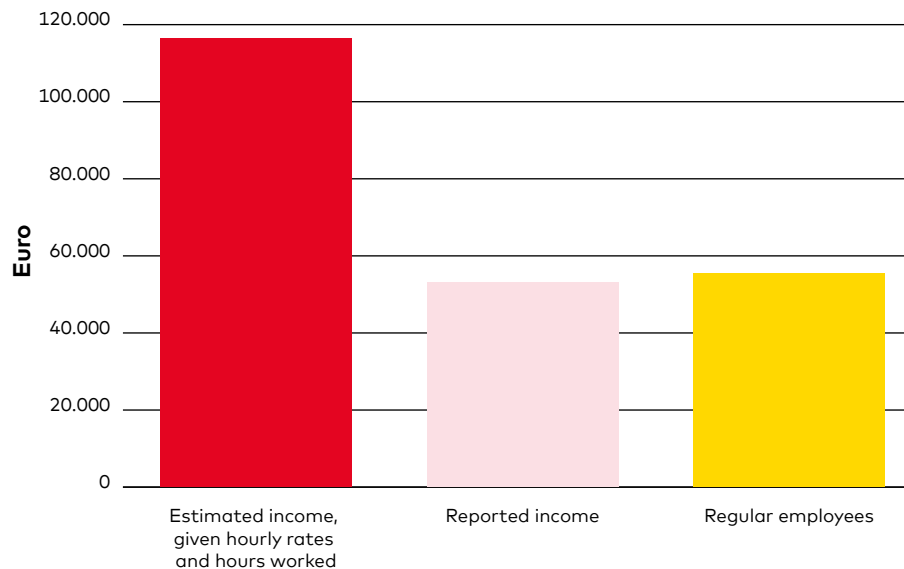
Figure 6.2 presents the estimated and reported incomes for independent professionals on Worksome, as well as a comparable measure of average wages for conventionally employed professionals in the Danish economy.<sup>20</sup> The figure shows that the difference between reported income among professionals in the survey is similar to the average wages of regular employees. It should be borne in mind, however, that this is an approximate comparison; the numbers are not exact.

Most existing research investigates the general differences between conventional employment and self-employment, without limiting the analysis to digital platforms for independent work. Because knowledge-intensive platform work has similar characteristics, however, it is likely that the results are generalisable to knowledge-intensive platform work. Christensen (2018) found that the median income of Danish freelance professionals was about half of the median income of regular employees. On the other hand, the study also found that self-employed professionals earn significantly more than wage earners. None of the calculations control for hours worked.

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<sup>20</sup> Average wages for regular employees is a weighted average of wages for employees with different levels of education. The average is weighted by the same distribution of educational levels as the respondents in Workesome's Freelancer survey.

**Figure 6.2 Comparing estimated and reported income for independent professionals on Worksome and wages for conventionally employed professionals in Denmark.2018.**



Note: The average wage for regular employees is calculated from the average of all workers that have attained a higher education in Denmark. The average is weighted by the same shares as educational levels for professionals on Worksome. It is then multiplied by the same number of hours. Danish wages have been converted to EUR using a conversion rate of 1 DKK = 0.13392074 EUR.

Source: Author's calculations based on data from Worksome (2019) and Statistics Denmark.

The evidence we have surveyed above suggests that average hourly income on knowledge-intensive digital platforms in the Nordic countries is on a par with or higher than average wages among regular employees. There are, however, some important characteristics that we need to be aware of in comparisons of the incomes between a small group of self-selected independent professionals and a larger population of conventional employees. Based on the statistics in chapter 4, Worksome (2019) and Christensen (2018), we know that self-employed professionals are older and more experienced than the average professional in the labour market. As a result, self-employed professionals would statistically also have a higher earnings potential in a regular employment relationship. Trying to eliminate these biases, van Praag and Raknerud (2014) find that individuals that move from regular employment to self-employment in Norway experience lower returns as self-employed, on average. The study does, however, include workers from all levels of education.

In addition to potential biases in the samples we are comparing, averages are prone to hiding the nuances and variances in the variables we are investigating. For example, it is technically possible for the average income of the self-employed to be equal to that of employees, albeit with higher income inequality. A detailed discussion of how digital platforms may affect the income distribution is the topic of the next section, 6.1.2.

Evidence that income from platform work is similar to or higher than wages from regular employment in the Nordic countries stands in contrast to existing research from the USA. Dunn (2017) finds that the median hourly wages of independent professionals living in the USA experience a significant downward pressure from international competition through a global digital platform, where many of the registered workers are from low-cost countries. There are many differences between the American and Nordic labour markets, but one crucial difference in this specific case is that the platforms surveyed above are only active in the Nordic region, while the platform in Dunn's study is a global platform. This raises the question of whether wages for independent professionals in the Nordic countries will be affected if the Nordic platforms extend their area of operation to international or global markets, or if global platforms scale up their presence in the Nordics.

### **6.1.2 Digital platforms may increase wage inequality**

Although we are not able to conclude, current observations indicate that income from independent employment, on average, is about equal to or higher than wages for professionals in regular employment in the Nordic countries. On the other hand, the previous section says little about what may be happening 'behind' the average wages across employment forms. Whether incomes are higher or lower, digital platforms or self-employment in general may affect the distribution of income in the labour market.

Survey data, for instance from Denmark (Ilsøe and Madsen, 2017) and the UK (BEIS, 2018a) suggest that the average income of today's platform workers – including those conducting low skilled tasks – is low, but also that pay varies widely and that a small share are high earners. Within the platform economy, the level of remuneration varies across different types of platform work, the skill level required for the task, as well as the mode of delivery. An illustration of the theoretical impact of market structure on remuneration levels in the platform economy, given unregulated markets, is shown in table 6.1.



**Table 6.1 Market structure and remuneration**

Local	Global
<b>High skill, local delivery</b> (e.g. medical services) → High fees/wages	<b>High skill, online delivery</b> (e.g. software development) → Global competition, polarized fees/wages
<b>Low skill, local delivery</b> (e.g. taxi services, cleaning) → Medium-low fees/wages	<b>Low skill, online delivery</b> (e.g. microtasks, clickwork) → Global competition, low fees/wages but with large variation

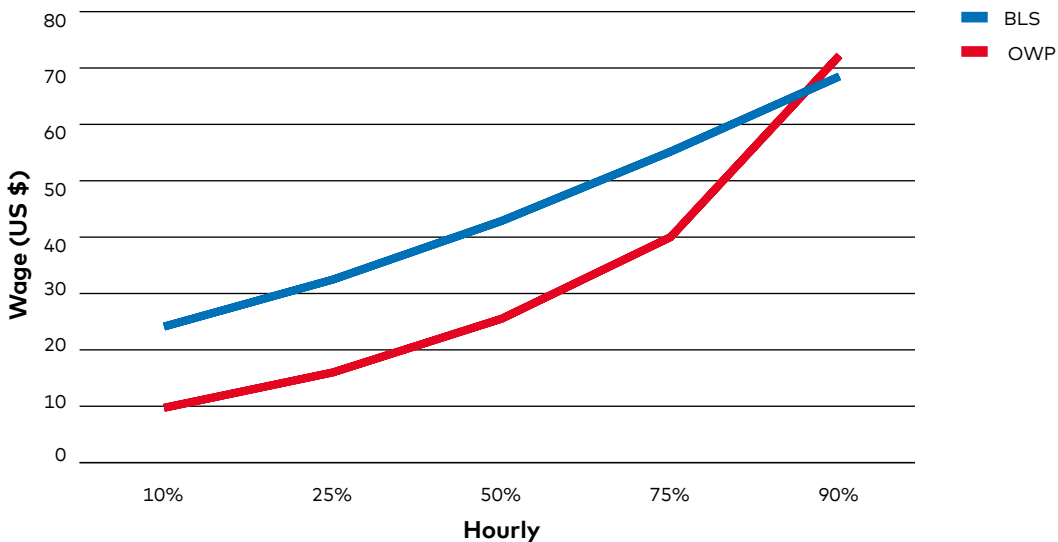
Independent professionals engaged in the platform economy perform tasks located in the upper half of table 6.1. In accordance with the studies reviewed in the previous section, there is evidence that locally delivered services and project-based tasks in the platform economy tends to be compensated at higher market prices (Eurofound, 2015; Schenk & Guittard, 2011). A relatively limited supply of professionals and highly specialised skill sets can command higher prices in the market, and pay could be expected to be around or even above comparable wages in the industry (Aloisi, 2015; Degryse, 2016; De Groen & Maselli, 2016). This is in contrast to tasks that do not require specific skill sets, where competition from a large number of workers create downward pressure on wages (De Stefano & Aloisi, Fundamental labour rights, platform work and human-rights protection of non-standard workers, 2018; Berg, 2016; Eurofound, 2015).

As a result, professionals in the KIPE generally appear less at risk of a 'race to the bottom', compared to other segments in the platform economy. Arguably, most active platforms in the Nordic countries belong to the upper left quarter of table 6.1, as they are geographically limited to a specific country or the Nordic region. Based on existing evidence this suggests that professionals working on Nordic platforms are able to charge high fees. Evidence suggest that this also hold true for online work when the platform, as long as the platform is geographically restricted to a country or region (Schmid-Drüner, 2016; Schmidt, 2017). This is the case for most of the platforms listed in table 3.1, as well as Worksome and Ework which are referenced in chapter 6.1.1.

On the other hand, table 6.1 suggest that global competition can have adverse effects on the distribution of income. This is mostly relevant for professional services which can be split into smaller, defined tasks and where international trade is not significantly limited by cultural-, legal- or language barriers. Software development and translation services are examples of professional occupations that can easily be traded across borders. For some Nordic professionals, access to a larger market of clients is an opportunity to increase their income. Others can face increasingly fierce competition from skilled workers in low-wage countries. As a result, there are potential adverse effects on the distribution of income from global competition both across and within professional occupations, because some occupations are more easily traded across borders than others.

As mentioned above, Dunn (2017) found that competition from workers on a global platform reduces the median wage of American independent professionals in the same market. Figure 6.3 presents the wage distribution among platform workers, compared to the distribution for employees in conventional employment.

**Figure 6.3 Wage distribution for American workers in software development.**



Source: Dunn (2017). Note: 'OWP' is the online freelancing platform. 'BLS' is based on data from the US Bureau of Labor Statistics. 'Hourly XX%' represents the corresponding percentiles in the wage distribution.

The figure shows that the wage inequality among platform workers (red line) is greater than for professionals in conventional employment (blue line). While platform workers in the lower part of the distribution have lower wages, platform workers in the top decile have higher wages than regular employees.

The shape of the income distribution indicates a type of 'superstar effect', where professionals at the top of the distribution are able to extract additional income from their skills. This is also likely related to a bias towards hiring experienced independent professionals, which increases demand for this group. At the other end of the distribution, independent professionals are adversely affected by increased competition for remaining jobs.

One reason for this result may be that clients in the KIPE do not fully know the quality (experience) of the person who will perform the work. The less knowledge, the greater the uncertainty and the lower the willingness to pay (and vice versa). In an ordinary working relationship, some of this uncertainty will be reduced by the workers normally being part of a working collective that can help and (indirectly) educate the inexperienced professionals. As a result, platform work may be lucrative for independent professionals possessing outstanding competences, experience or reputation. For inexperienced or less competent professionals, however, remuneration at free market prices may be far below average.

Schneck (2018) studied the effects of self-employment on the income distribution in Germany. He showed that an increased proportion of self-employed individuals in the labour market increases income inequality. Specifically, self-employment seems to remove income floors at the bottom of the income distribution and at the same time increase the earnings potential at the top of the distribution. One possible explanation is the absence of collective bargaining for self-employed. Increased wage inequality may also be a result of lower entry barriers for workers. If more professionals with lower productivity are activated in the market, it can have adverse effects on the distribution.

The Nordic countries are traditionally characterised by low income inequality. If increasing inequality among professionals is a concern for workers or society, there are opportunities to limit the effect in the KIPE. Specifically, platform owners or the authorities can impose restrictions on the market operations. For example, a platform may impose a minimum hourly wage for tasks mediated through the platform. Voocali is an example of a Nordic platform that has set a minimum rate for hiring translators. Assuming the minimum wage is set sufficiently high, it will limit potential low-wage competition in the market. At the same time, minimum wages increase the price of services, which reduces overall demand. Another aspect is that minimum hourly rates are only able to regulate the income from a specific hour of work. This may have a relatively limited effect on the annual earnings of workers, since these are affected by the overall demand for specific individuals.

Based on the evidence surveyed in this and the previous section, we are not able to conclude about the effects on income from the emerging platform economy. This is also in line with existing research, which has found no conclusive evidence on how different forms of employment affect total earnings for workers (Hyytinen, Ilmakunnas, & Toivanen, 2011). Current observations from the Nordic countries do, however, suggest that the average income levels among independent professionals are relatively high.

At the same time, characteristics of independent professional services and evidence from other countries indicate that a higher proportion of self-employed workers may increase income inequality in the labour market. Especially among those in the lower part of the income distribution concerns about the variability and unpredictability of earnings may be amplified. However, if participation in the KIPE is driven by choice rather than necessity, eventual income losses are likely to be compensated by other factors of employment, which we discuss in the remaining section of this chapter.

### **6.1.3 Independent professionals experience increased income uncertainty and risk**

The third aspect related to income that is important for workers is how stable and predictable income is. In the platform economy, income is directly related to the projects the worker is actively working on. This implies that income from platform work is prone to fluctuate over time. In order to secure stable and predictable income, demand for labour must be sufficiently high to support continuous activity from workers.

Platform work differs significantly from traditional employment when it comes to how income uncertainty and risk are shared in the labour market. In traditional employment, employees and firms share the costs associated with fluctuating income. During times of prosperity, the employer takes a relatively large share of the income in order to compensate for periods with low activity. As a result, employees have a predictable annual income. Employers and employees also share the costs during extraordinary periods, for example through bonuses or wage cuts. In the platform economy, the risks of fluctuating income are shifted to the workers, who are largely their own employers.

Income uncertainty is one of the main reasons why employees that would prefer self-employment are not currently self-employed in the Nordic countries (Eurostat, 2017). In Worksome (2019), almost two in five independent professionals report feeling less safe as independent consultants, compared to conventional employment. Risk and uncertainty can also affect the health of workers. Andersson (2008) found that mental health problems are more common among the self-employed, although few list stress as an important reason for not being self-employed (Eurostat, 2017).

As an example, we can imagine an engineering/technology consultant with two available labour market opportunities:

1. Working in a consultancy firm
2. Independent self-employed consultant on platform

In option 1, the worker and the firm share risks related to income fluctuations. In periods with less activity, the firm guarantees at least a base income for the worker. In return, the firm makes a profit from the work completed in periods with high activity. This standard employment relationship is also associated with other types of benefits and social protection for the worker, see section 6.3. In option 2, the worker bears all the risks associated with income fluctuations, as there is no employer in periods without an active project.

The risk associated with income uncertainty is a cost to workers in the labour market. In theory, risk averse workers would need to be compensated with higher wages to accept more risk. However, there may be other sources of non-monetary compensation related to platform work which outweigh the increased risk workers face in the labour market.



## 6.2 Preferences for independent work may trump income differences

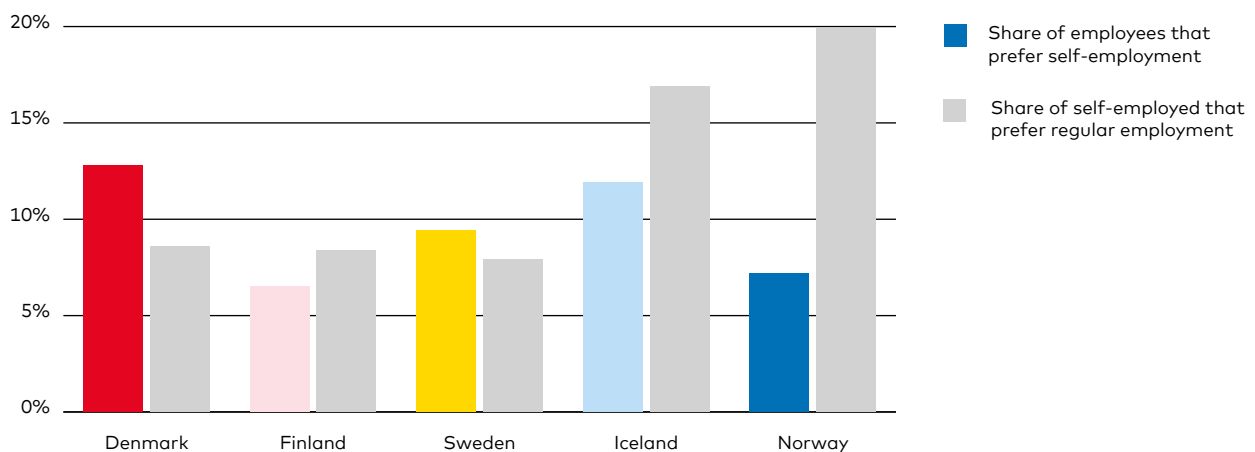
Although income is an important factor affecting behaviour in the labour market, it is far from the only one. Participation in the labour market and the choice of employment form are affected by a wide range of both professional and personal factors. Some factors can even compensate professionals enough to choose an occupation or employment form that is associated with lower pay, depending on their preferences. In Worksome's (2019) survey, only 21% of respondents reported to have chosen to be independent to 'achieve greater economic freedom', while 72% valued the independence and flexibility associated with self-employment.

In this section, we explore reported preferences for self-employment among professionals, as well as the factors that are important for choosing independent employment forms.

### 6.2.1 Many employees prefer self-employment

An overall indication of how professionals view the prospect of self-employment is reflected in the employment form they would prefer, given the choice. In the 2017 LFS, respondents were asked about their current and preferred forms of employment. Most professionals (80%-90%) would prefer no change in their employment form. However, figure 6.4 indicates that there is still a significant number of workers that would prefer to change their current form of employment. The differences are small, but the results indicate that Danish professionals have the strongest preferences for self-employment, while Norwegian professionals to a large degree prefer to work as an employee.

**Figure 6.4 Preferred employment form among professionals**



Source: Labour Force Survey, Eurostat.

As a computational exercise, we can calculate the effect of realising all the preferred changes indicated in figure 6.4. Because most professionals are currently employees, this group dominates the calculation. Given the results above, the number of self-employed professionals would increase by about 400 000, see table 6.2. This indicates that, given the right circumstances, a larger share of employed professionals would prefer self-employment.

The KIPE may be the technology that facilitates this change. A survey among European workers suggests that the preferences for independent work and self-employment are largely driven by older workers (Deloitte, 2018). On average, younger workers value job security and stability more than older workers, and young workers seem to adopt non-standard forms of work more out of necessity than choice.

**Table 6.2 Calculation of how realising preferred employment form would affect workforce composition**

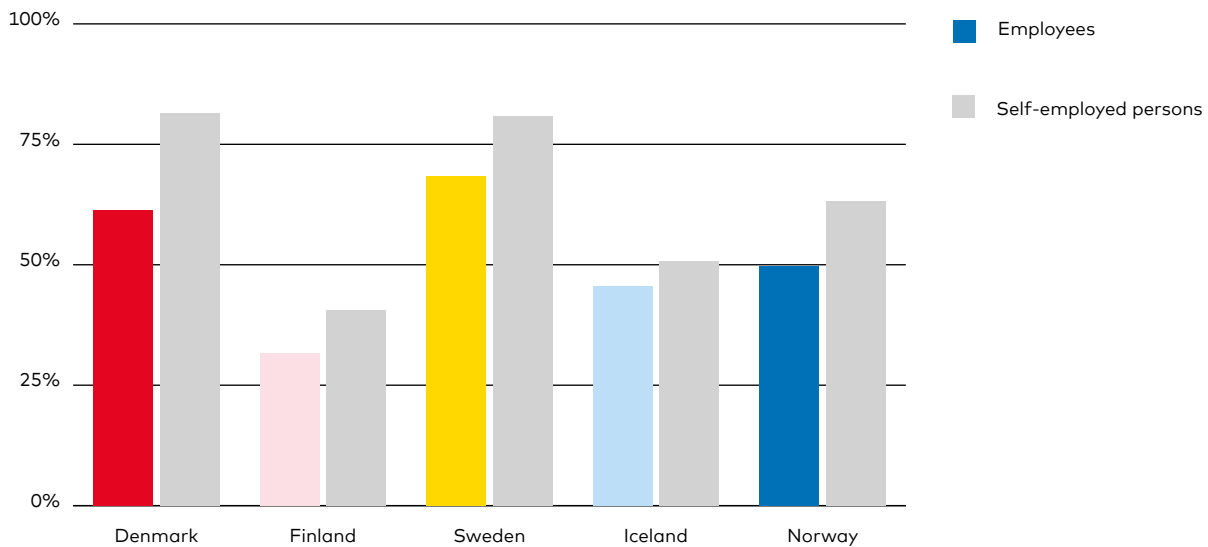
	2017		Realised changes		% increase in self-employment
	Employees	Self-employed	Employees	Self-employed	
<b>Denmark</b>	933	71	820	184	159%
<b>Finland</b>	956	114	904	166	46%
<b>Sweden</b>	1 982	146	1 808	320	119%
<b>Iceland</b>	64	7	57	13	100%
<b>Norway</b>	1 073	60	1 008	125	107%
<b>Nordics</b>	<b>5 008</b>	<b>398</b>	<b>4 597</b>	<b>808</b>	<b>103%</b>

Source: Author's calculation on LFS, Eurostat.

### 6.2.2 Independent work is a source of autonomy, flexibility and interesting tasks

Many factors affect preferences for self-employment. Preferences for flexibility, autonomy and interesting work are likely important factors for the appeal of self-employment. Given that there is sufficient demand for independent professional services, the KIPE may create the necessary marketplace for clients and professionals to meet. These factors are also likely to be closely related to job satisfaction. Existing research argues that self-employed workers experience higher job satisfaction than employees (Kawaguchi, 2008; Taylor, 2004). This is supported by self-reported data from the LFS, where a higher share of the self-employed report high job satisfaction in all the Nordic countries (figure 6.5).

**Figure 6.5 Share of professionals reporting high job satisfaction, by professional status. 2017.**



Source: LFS, Eurostat.

Norwegian professionals report flexibility as the most important reason for being self-employed, while Danish, Finnish, Swedish and Icelandic professionals were self-employed because a suitable opportunity presented itself.

Job satisfaction is driven by several factors. Autonomy, in terms of how to work and what to work on, is important for workers (Noblet, Teo, McWilliams, & Rodwell, 2005; Roelen, Koopmans, & Groothoff, 2008). Lopes et al. (2014) found that workers in the Nordic countries have high levels of work autonomy, compared to other European countries. Nordic workers have autonomy over both content and process of work. High levels of autonomy, however, also come with high work pressure and the effects are even stronger for highly skilled workers.



Self-employment through the KIPE can give professionals the opportunity to flexibly adjust the amount, location and contents of work. However, independent professionals still have to conform to the expectations of and contract with the client.

Research on job satisfaction in the workforce has found that interesting work, varied tasks and work autonomy are important drivers for job satisfaction. Many workers also value good social support in the workplace highly (Noblet, Teo, McWilliams, & Rodwell, 2005; Roelen, Koopmans, & Groothoff, 2008). In the Worksome Freelancer Survey, however, only 20% of respondents answer that they put a high value on 'integration in the client's workplace community and social activities'. Generally, the Freelancer Survey indicates that those who choose self-employment put relatively more value on factors that are not related to the social aspects of work.

For each independent professional, the KIPE gives access to a larger, and potentially more varied, labour market. Project-based working with different clients creates 'natural' variation in the context of the tasks. Especially those at the top of the income distribution are likely to have the opportunity to choose which projects to work on. For those at the lower levels, more intense competition may increase specialisation, and hence limit variation in tasks. Finnish Upworkers experience intense competition for tasks on the platform (Pajarinen, et al., 2018). If some professionals are 'locked into' specialised niches, with limited variation in tasks, it could have a negative impact on learning and career development. On the other hand, specialised tasks for a wide range of clients may increase learning because the techniques and methods are continually developed and adapted to new contexts. The total effects on learning of shifting from regular employment to independent work are unclear, and it may vary across individuals.

While independent work is associated with more varied work, it also comes with other work-related responsibilities. Specifically, independent workers must deal with administrative tasks that an employer would usually handle, e.g. accounting, taxes, insurance, retirement savings and so on. Platform workers generally do not have access to HR resources, mentoring or coaching and they must organize their professional development themselves (Eurofound, 2015, p. 115). They can choose to buy human resource services from external providers, however, these must be financed from their own income. There are significant economies of scale in administrative services, meaning that firms can handle administrative tasks more efficiently than individual workers. This is a drawback associated with leaving regular employment.

Working in the platform economy could have implications for workers' learning, access to training and ultimately their career path. The Nordic countries generally report high participation in adult education and training, especially among the already highly educated. Professionals who decide to forego traditional employment in exchange for platform work may thus pay a price in terms of reduced access to training, promotions or career opportunities which is the responsibility of the employer. On the other hand, the platform economy may also be an opportunity for career development for some, offering a chance to try new work tasks and learn different skills (see section 6.4) (Clinton, Totterdell, & Wood, 2006).

Platform work can affect the level of social support in the workplace in different ways. Online platform workers in particular can become isolated as work is delivered virtually and the worker is located remotely. Professional isolation can occur when platform workers are not integrated in the organisation and conduct tasks without taking part in the overall work process (Eurofound, 2018, p. 71). Lack of face-to-face interaction or participation on shared activities could hamper the development of a professional identity, which influences both the current and prospective careers of workers (Valenduc & Vendramin, 2016). Without access to informal information as part of a team, lack of social contact may lead to a lack of opportunity in developing social/soft skills (like team work or tolerance), and create a sense of de-personalisation (Blohm, et al., 2016, p. 125). Many platforms do, however, facilitate interactions between the registered professionals, e.g. through social media groups (see for example the case description of BrainBase in chapter 7.2). The platform itself may also be an opportunity for independent professionals to meet and interact with each other, outside of competing for projects. If platforms can successfully create communities for registered professionals, they can also reduce the risk of professional isolation potentially hampering learning and career development.

Risk aversion can in itself be a reason why fewer professionals are self-employed than reported preferences indicate. Van Huizen (2013) finds that there is a negative correlation between risk aversion and job mobility. The effect is stronger if the worker holds a permanent contract, has a 'good job' and when labour market conditions are unstable. Halek and Eisenhauer (2001) found that risk aversion increases with educational attainment, which may indicate that relatively few professionals want to 'take the chance'.

## 6.3 Loss of employment benefits associated with being an employee

Employees in the Nordic countries enjoy well-developed social security and welfare benefits that are partly unavailable to the self-employed. Public social security systems and welfare services in the Nordic countries are closely linked to the traditional employment relationship (Saloniemi, 2016). Being ineligible for these services and rights may be a major barrier to growth in the KIPE. For professionals with alternative employment opportunities in particular, access to these benefits could be a decisive factor for the choice of employment form. The funding of work-related welfare systems also relies on contributions from both employers and workers<sup>21</sup> (Dølvik & Jesnes, Nordic labour markets and the sharing economy, 2018).

In general, the Nordic welfare models distinguish between three categories of workers: employees, freelancers and self-employed. All workers have access to common goods such as hospitals, general education etc. according to the country's regulations. However, social benefits that are linked to the labour market vary somewhat across employment forms.

For platform workers their contractual arrangement determines access to social benefits, individual and collective labour rights (De Stefano & Aloisi, Fundamental labour rights, platform work and human-rights protection of non-standard workers, 2018). The statutory access to social protection benefits varies somewhat from country to country, illustrated in table 6.6. Compared to other European countries, however, the Nordics offer relatively good coverage for self-employed, although considerably less than for employees.

**Table 6.7 Statutory access to social protection benefits for the self-employed for the Nordic countries. Modified version of Fulton (2018: 72).**

	Denmark	Finland	Sweden	Norway
<b>Healthcare</b>	Full	Full	Full	Full
<b>Sickness benefits</b>	Full	Full	Full	<b>Part</b>
<b>Maternity/paternity</b>	Full	Full	Full	Full
<b>Unemployment benefits</b>	<b>Part</b>	<b>Part</b>	<b>Part</b>	<b>None</b>
<b>Accidents at work</b>	<b>Vol</b>	Full	Full	<b>None</b>

**Vol:** Voluntary access, where access is only possible if the self-employed opt in voluntarily

**None:** No access **Full:** Full access to the benefits

**Part:** Partial access, because of either differences in eligibility conditions or the fact that there are different types of benefit, with the self-employed only able to access one type.

<sup>21</sup> Denmark is an outlier here. Employers are not required to pay social security contributions for their employees to the state. This means that a larger share of the welfare arrangements is funded by employees and through other forms of personal and indirect taxation.

Freelancers effectively act as a middle category in terms of access to social benefits. Those that are not employees but receive wages in the form of a salary are designated as freelancers, although the term is often used more broadly to cover self-employed as well. Freelancers enjoy somewhat wider access to social security than self-employed (Nergaard & Øistad 2016).

The rights vary slightly from country to country. We do not go into detail regarding the national legal differences between self-employed and freelancers in this report. Table 9.2 below illustrates how rights and benefits are distributed between the different formal categories, exemplified by the Norwegian legislation. Similar principles apply in all the Nordic countries, despite some country variation. The main takeaway is that contractual arrangement matters for rights and benefits.

**Table 6.2 Rights and benefits for employees, freelancers and self-employed in Norway**

<b>Rights and benefits</b>	<b>Employee</b>	<b>Freelancer</b>	<b>Self-employed (with or without own employees)</b>
<b>Sick pay</b>	100 % coverage from 1st day, employer covers the first 16 days	100% coverage after 16 days, may have insurance for the first days	75% after 16 days, may have insurance for the first days/ remaining percentage
<b>Occupational Pension</b>	Yes	No, own responsibility	No, own responsibility
<b>Unemployment benefits</b>	Yes	Yes, as employees	No, may sign up for insurance
<b>Injury benefits</b>	Yes	No, may sign up for insurance	No, may sign up for insurance
<b>Covered by the Working Environment Act, Labour Dispute Act, Wage Guarantee Act ++</b>	Yes	Varies, subject to individual assessment	No (with the exception of provisions on health and safety and discrimination)
<b>Collective rights (strike, collective bargaining)</b>	Yes	Varies, subject to individual assessment	No, due to competition law

In addition to the differences in rights and benefits between the different contractual arrangements illustrated in table 6.2, many employees have access to further education either via the employer or through a collective agreement. The same goes for the principle of seniority in employment, which provides accrued seniority benefits when working in the same company over a long period, such as higher salaries, extra vacation and protections against dismissal. See chapter 9.1.2 for further discussion on access to rights and social benefits across employment forms in context of the Nordic labour market models.

A survey of the self-employed in the USA indicates the following as the most desired benefits, in order of importance: health insurance, retirement benefits, paid sick leave, holiday and vacation days (Requests for Startups, 2015). Although the self-employed and employees share many of the same rights, there is an additional level of uncertainty for independent professionals. If a professional is solo self-employed, there is no one around to run the business while the owner is away, e.g. on sick or maternity leave. This may hurt the individual's future income prospects in the independent market.

Currently, the main alternative to platforms for professionals unable to attain or uninterested in permanent employment has been temporary employment agencies. The main difference between platforms and employment agencies is that when workers are hired through an agency they are employed by the agency on a temporary contract. This means that the worker gets access to the benefits that are associated with a temporary employment contract. In platform work, however, contracts are mainly directly between the worker and the client. Usually the worker is then characterised as an independent or self-employed worker.

One option that would enable independent professionals to gain access to the same employment benefits as conventional employees is to become an employee in their own limited liability company. This, however, is likely to be associated with increased overhead costs for running the company. These costs will then necessarily translate into increased prices for independent professional services, which in turn may reduce demand. Nevertheless, many independent professionals working through BrainBase are organised as one-man limited liability companies (see chapter 7.2).

Employment contracts, in and of themselves, may also be a barrier to combining regular employment and activities on digital platforms. Many employers include a clause in the employment contract that restricts the employees' opportunity to take on additional work outside of their regular 'day job'. If these clauses are common among professional workers, they can limit the supply of labour on digital platforms. This could limit labour supply, even if workers have preferences for supplying additional working hours in the platform economy.

## 6.4 Opportunities and challenges in a dynamic labour market

In the previous sections, we have discussed factors relevant for professionals' long-term choice of employment form. In the short-term, however, the labour market is a dynamic environment. Like other groups of workers, professionals are constantly moving in and out of employment, changing jobs and developing their careers. In this section, we discuss how characteristics of the KIPE can affect these dynamics in the knowledge-intensive labour market.

### 6.4.1 Low entry barriers but high client expectations

Platforms generally have very low barriers to entry. While some platforms restrict the registration of professionals through interviews and other quality-controlling measures, most of them are open for anyone to register and supply their labour and skills. These characteristics suggest that the KIPE can play an important role in flexibly including persons in the labour market, for example during periods of unemployment. (Barnes, Green, & de Hoyos, 2015; Eurofound, 2015; Graham, Hjorth, & Lehdonvirta, 2017; Kuek, Paradi-Guilford, Fayomi, & Imaizumi, 2015; Schmidt, 2017).

For professionals that prefer conventional employment, but are currently unemployed, temporarily working in the KIPE can be a way of increasing their employability. It can also function as a gateway for professionals that are not established in the labour market, for example recent graduates. In this role, the KIPE may serve as an alternative to traditional courses and other publicly initiated programmes for unemployed persons. Unemployed persons can potentially use the KIPE to maintain and even extend their CVs by gaining new work experience. Farrell and Greig (2016) found that many Americans used platform work to increase income during periods with reduced income from their main job. However, these were mostly low-skilled tasks.

As described above, the KIPE would essentially function as a temporary employment agency. This role does, however, rely on support and use from both sides of the labour market. Horton et al. (2017) found that there is a bias towards hiring experienced platform workers for projects. Tervio (2009) argues that this is caused by the failure of firms to internalise knowledge about workers, because projects are short-term and the employment relationship is not permanent. As a result, the inclusive role of the KIPE may be more limited than for platforms mediating low-skilled work. This may also be because clients in the KIPE often are businesses, which require specialised skills and more experience than households buying unskilled manual services.

In any case, the KIPE does create the opportunity for clients and professionals to match, so it is more inclusive than not having the options available. In order to gain platform experience, professionals can initially supply their skills at lower prices, which is a strategy that is applied relatively often in creative occupations to create a portfolio.

Another possible limitation to using the KIPE during periods of unemployment is that it can interfere with regulation related to unemployment benefits. Income from the KIPE means that, at least to some extent, the worker is not actually unemployed. This would therefore affect the rights associated with unemployment benefits. It must also be evaluated whether professionals that prefer conventional employment should allocate all their time to applying for these jobs or combine this with working in the KIPE.

Since the platform economy is relatively new, there is limited evidence on the actual long-term labour market outcomes for platform workers. Existing evidence suggests that platform work only occasionally functions as a springboard into secure, permanent employment (Graham, Hjorth, & Lehdonvirta, 2017). This is also in line with general findings on the effect of temporary and non-standard work, which suggest that platform work may reduce social mobility in the labour market (see Eurofound (2018) for a literature review).

#### **6.4.2 Platforms create opportunities for career development**

The previous section discussed how the KIPE can be a source of employment in a period of need for the workers. Professionals can also, however, voluntarily supply labour in the KIPE to develop or change their career. The characteristics of digital platforms suggest they can provide opportunities for skill development and enhance labour market mobility. Platform work can be used to 'broaden skills and expertise, or for changing career' (Barnes, Green, & de Hoyos, 2015, p. 23). Although most professionals are currently employed, some may be interested in changing jobs and chasing new opportunities in the labour market. The self-reported job satisfaction in figure 6.5 indicates that some employed professionals are not fully satisfied with their current job.





A study of platform workers in two UK-based online freelancing platforms showed that workers not only used existing skills and experience to find work through the platform, but also developed new skills, in some cases unrelated to their previous jobs (Barnes et al 2015). Similarly, part-time platform work can provide work experience and learning without having to commit to a full-time and/or permanent job. This can enable workers to try out different tasks and occupations, potentially eases the transition from one career to another, or simply be conducive to broadening one's existing skillset. With prospects of rapid structural changes in the Nordic economies stemming from technological change (Dølvik & Steen, 2018), platform work could play a significant part in future restructuring processes. On the other hand, there are (and should) be barriers to enter certain markets. Incorrect matching of professionals and tasks can create problems regarding the quality of services and professional responsibility, e.g. in medical services or electrical installation, where health and safety of workers, clients and the public can be at risk (OSHA, 2015). The European Trade Union Institute (ETUI) highlights that many platforms do not require submission of proof of qualifications, completed training, or experience.

What seems to count is instead the rating from the most recent buyer, which leads some service providers 'to develop an obsession with evaluation rather than with training' (Degryse, 2016, s. 48). If clients put more weight on evaluation over qualifications, digital platforms may reduce the value of attaining higher education, if the same set of skills can be learned through other means. This effect is likely to vary across educational backgrounds but can probably be expected to have the largest impact on the lower part of the income distributions.

Possibilities for flexible career development may reduce barriers for current employees who are too risk averse to 'take the chance' to change their current employment situation. At the same time, these professionals also must overcome eventual biases for hiring experienced independent professionals in the market. However, since these professionals are driven by choice rather than necessity, it is likely that they are more adaptable to evolving market situations, both in and out of the platform economy.

## 6.5 Concluding remarks

In chapter 4, we found that tight labour markets in the Nordic region implies that digital platforms must compete on the conditions of work, rather than the mere opportunity for employment. In this chapter, we have explored different indicators for opportunities and barriers for professional workers to participate in the KIPE.

There is no conclusive evidence on the effect of independent employment on income. Existing evidence suggests that Nordic platform workers are relatively experienced and charge fees comparable to or higher than average incomes. As a result, there is earnings potential in the KIPE. The Nordic results, however, contrast with US studies which find that the average income of independent professionals is significantly lower than regular employees.

Although the effect on hourly wages seem to be negligible, platform work is associated with significantly more uncertainty and risk for individual workers. Specifically, independent professionals must bear all of the risks that are usually shared between employers and employees. When it comes to income, there are particularly high costs associated with income uncertainty, which may fluctuate significantly over time. There are also administrative burdens, like accounting, taxes, insurance coverage and so on, that independent professionals must handle themselves.

Theoretically, workers would require a premium to compensate for the costs of uncertainty. Given indications that income is relatively unaffected, other aspects of the working conditions may compensate professionals. In this chapter, we have seen that the main reason for being self-employed is related to flexibility, in terms of amount of work, content and location. Given that independent professionals are their own manager, self-employment is also associated with more interesting work and autonomy in which types of jobs to accept. Finally, the KIPE may also create dynamic opportunities for employment in the labour market. These dynamics can be driven by need, i.e. during periods of reduced income or unemployment, or choice, by creating opportunities for career development and changing jobs.

The total effect of the KIPE on the knowledge-intensive labour markets and outcomes for specific professionals or occupations is ambiguous. There are both costs and benefits associated with new ways of organising work using digital platforms. Advantages and disadvantages are also likely to vary across and within professional occupations. On one hand, current labour market conditions for professionals in the Nordic region are likely to mitigate potential problems arising from the KIPE in the nearest future. On the other hand, ambiguous effects on income and working conditions from platform work suggest that authorities, trade unions and other stakeholders in the labour market should monitor the development and react to potential unwanted outcomes through regulation and other tripartite agreements which the Nordic countries are known for. Chapter 9 discusses how authorities and trade unions can address potential issues in the labour market caused by new ways of organising work through digital platforms.

## 7 Experiences of platform companies

**Chapter summary:** Four case studies of active Nordic platforms for independent professionals show how the platform business models are all based on reducing costs for both professionals and their clients. Every platform makes information about the professionals' expertise easily accessible. Similarly, all of the studies show that the platforms increase professionals' access to tasks.

Different kinds of technology services are the most common tasks offered and demanded through our platform cases. Professional translation services are also an important part of the platform economy and Lionbridge is an example of a platform company that organises a large group of professionals in this field.

The case studies show that individual professionals use platforms for developing professional as well as social meeting places with like-minded people. This is seen most clearly in the BrainBase case, which utilises social media to create a community among registered professionals. A survey among participating professionals in the Worksome platform showed that flexibility, variation in tasks and interesting assignments are the most important motivations for working through the platform. Interviews suggest that these motivations are important for all independent professionals.

Some platforms have different ideas for improving the conditions for the professionals, such as insurance packages. However, few such ideas have currently been implemented.

The case platforms primarily organise formerly independent professionals. At the same time, further growth in the platforms will challenge the business models of traditional consultancy companies that rent out their employed professionals to clients.

Our cases use different models for generating income to the platforms and for further developing the platforms. Most common are fees on the invoiced amount for the assignment, but other forms include small cuts from the professionals' income.

Although the role of platform companies as an intermediary in the labour market is not new, the specific business models and technology for mediating work are new. Given the incentives for participation in the flexible digital labour market, there seems to be a market and a need for labour market intermediaries. In order to explore any unnecessary barriers to growth in a segment of the labour market that can contribute to growth and innovation, we have conducted four case studies of platforms operating in the Nordic countries; Worksome, BrainBase, Lionbridge and Solved. The case studies investigate the segments in which the platforms operate, the participants and the main barriers to growth.

## 7.1 Case 1: Worksome

Worksome (launched in 2017) mediates the supply of highly skilled independent consultants and freelancers to companies. Worksome does not necessarily regard itself as a platform that mediates tasks, but rather as a marketplace that simplifies the recruitment process by matching supply and demand through algorithms.

'Worksome is trying to make sure that you get a multitude of benefits from working through a platform; compared to if you are not. If more people were to organise themselves through a platform, the platforms would be able to provide solutions that are better career choices, as well as providing a contract, better insurance etc.'

The company is currently operating in Denmark and the UK but is planning to expand to other Nordic countries shortly. The company focuses on mediating work locally, which entails matching highly skilled consultants living in Denmark with Danish companies. Limiting the marketplace to national markets differentiates the company from Fiver, Upwork and other platform companies mediating labour in a global market. One of the main reasons for this strategy of limiting matching to within national borders is to avoid a 'race to the bottom' in terms of wages.

### Characteristics of the consultants: a skilled workforce

About 7700 consultants and freelancers in Denmark and 1000 in the UK have created profiles on the platform. This does not mean that all of them have performed a job through the platform. The tasks most commonly mediated through the platform are within IT. Examples of tasks mediated through the platform include web and app development, graphic design, communication, online marketing, software development and more. The jobs range from shorter to long-term jobs, and from simple to more complex tasks.

Worksome has conducted a survey of about 1 200 of their consultants. More than 60% of the respondents are 40 years or older and about half hold a master's degree. Many of the consultants have extensive experience from traditional jobs or as self-employed. About half of the respondents have more than 20 years of work experience. It is common among the consultants to have few clients (between 1 and 5). In contrast to the average platform worker in Denmark, who uses platforms to earn supplementary income (see Ilsøe & Madsen 2017), three out of four respondents report that income from Worksome clients is their main source of income. One in four combine this with other income sources.

The survey also found that 52% to a small or very small degree 'feel safer as a freelancer than as a permanent employee'. The sources of uncertainty may be related to income but can also be related to other factors like compliance with the law, health and safety issues or social and welfare rights related to the employment situation.

According to the survey, the desire for flexibility, variation in tasks and interesting assignments are the most important motivations for working in this way. Only 21% responded that they chose to become independent to 'achieve greater financial freedom'. About half of the respondents are members of a trade union, and most are members of an a-kasse (voluntary unemployment insurance fund). 65% save for their own pension.

#### **Characteristics of the client companies**

About 7000 companies in Denmark have a profile on Worksome, but not all of these have posted a job. In terms of revenue, the big companies at Worksome (for instance within banking) dominate, but in terms of number of projects, it is the small companies that dominate. All 7 000 companies registered on the platform are legal entities. Many are small and medium sized enterprises. In some cases, these companies represent a self-employed person looking for a freelancer to conduct a task through Worksome.

#### **Marketplace for matching supply and demand**

Worksome facilitates the entire recruitment process. This involves matching through algorithms, setting up contracts, and handling invoicing and payment. Worksome takes a fee of 4% of the invoiced amount for the assignment, and 4% from the freelancer.

The company also provides a rating system whereby both the clients and the consultants evaluate each other when the job is completed. Worksome is planning to launch insurance packages and other services to improve the conditions for the consultants. Saving for retirement, holiday pay, insurance etc. are currently optional and up to each individual freelancer.

Companies that use Worksome create a profile on the website and can then post jobs or specific tasks, with either an hourly rate or a fixed price. The companies usually set a price range, and the consultants then submit bids for the tasks. A total of 5–7 consultants usually bid for a job. Companies can also search for consultants on Worksome and invite selected consultants to apply for their jobs. These processes of matching are facilitated by algorithms, and in that sense, Worksome is fully automated. This distinguishes Worksome from other companies that rely on more traditional methods of active human involvement in the mediation of work.

Consultants that use Worksome also set up a profile on the website with a description of competencies, experiences, and the types of tasks and jobs they would like to work with. An initial scanning of the consultant's profile is conducted by Worksome to make sure that it is a real person behind the profile and that certain quality criteria are fulfilled. Based on the profile information, consultants will receive a notification when jobs that match their profile are posted. Consultants can then freely bid for jobs and tasks that are suggested, or which they search for through the platform. When bidding for a job, a dialogue will be opened with the company and an agreement can be negotiated.

The main challenge for Worksome is to increase demand, as the company states: 'It's a big shift for companies to buy freelancers when the need arises, instead of recruiting people permanently.' In Worksome's view, politicians, unions and others should recognise that this way of working is an alternative to the employment relationship.



## 7.2 Case 2: BrainBase

BrainBase is a Norwegian platform launched in 2017 as a service 'for the self-employed, by the self-employed'. BrainBase's vision is to 'create the best platform for independent consultants and simplify the market for consultancy services, on the premises of the consultants'. To do this, the platform offers two separate, but related services to registered users:

- Mediating consultancy services between independent consultants and clients
- Creating a social and professional network for participating consultants

The platform mainly mediates ICT-related projects at an advanced level, but the participating consultants also have experience with design, strategy and management.

In order to create the best platform for independent consultants, BrainBase challenges the use of expensive intermediaries in the market for consultancy services. BrainBase reduces the 'cut' taken by the intermediary. By reducing costs associated with the matching process between clients and consultants, the platform generates benefits for both parties. By providing an open and transparent platform, it can also reduce the need for personal independent consultants to have a personal network.

One of the potential downsides of being an independent consultant is that it can be lonely, both socially and professionally. To address this issue, BrainBase has created a collaboration hub on Slack.com, where the consultants can interact with each other. This creates a community among the consultants, which can be comparable to working in a larger consultancy firm. Most of the work done by consultants is carried out on-site at the client's location, although some work remotely. The location is largely based on the client's preferences.

### **Characteristics of the consultants: advanced ICT skills**

About 200 consultants are registered on BrainBase, most of which have significant experience from the industry. It is a prerequisite that consultants work 100% independently. All registered workers are vetted up front to assure the quality of the services mediated through the platform. The easiest way of getting access to the platform is through a recommendation from registered workers. Alternatively, the candidate's competency and experience are verified and quality-assured through a short interview before getting access to the services. In these cases, the contact is initiated by consultants that want to join the platform.

The focus on advanced-level projects and community implies that BrainBase is not aimed at recent graduates or those with limited work experience, which means that the workforce registered on the platform is made up of professionals with significant labour market experience. Most registered consultants are between 30 and 45 years old. On average, participants have more than 10 years of professional experience from the field.

Many of the consultants registered on BrainBase are organised as private limited companies (AS), which means that they are employees in their own company. This gives them access to the same social security rights as conventional employees in Norway (see chapter 6.3).

### Characteristics of client companies

Both large and small companies are registered as clients on BrainBase. There are some start-ups that have sourced skills and labour through the platform, but most of the demand for workers registered on the platform stems from larger firms.

Two models for mediating work through the platform:

BrainBase has two models for mediating work through the platform:

1. **Direct contracts between consultants and clients (recommended)**  
 With direct contracts, all payments are made directly between the client and the consultant, without BrainBase mediating the payment. In return, the consultant must pay 2% of the contract value. This cut is limited to the first year of the contract.
2. **1-1-1 model**  
 For clients that do not want contracts directly with the individual consultant, BrainBase can function as an intermediate organisational firm, organising almost 200 consultants. In this model, BrainBase charges 3% of the hourly rate.
  - 1% goes to BrainBase for covering running expenses.
  - 1% goes to consultants in the network – profit-sharing in the network.
  - 1% goes to a charity.
  - The remaining 97% is for the consultant that does the work.

Both models leave BrainBase primarily with a cut that covers running expenses, while most of the money and resources involved in the contract support the actual productive work in the project.

## Main challenges for growth

- **Public sector procurements**

The public sector is an important source of projects in the Norwegian market for ICT consultancy services. Participating in even small projects in the public sector is often associated with relatively costly administrative work, thereby representing a barrier for independent consultants in general. There have been some recent developments, however, with the testing of a 'dynamic procurement system' (Dynamisk innkjøpsordning), where it is easier for independent consultants to access projects in this market.

- **Low transaction fees, few resources for developing the platform and services**

As for any other business, BrianBase depends on funding to create growth on the platform. The policy of keeping the platform's cut of transactions to a minimum leaves BrianBase with few resources to spend on developing the platform and their services, including marketing and developing the technical aspects of matching workers and clients on the platform.

- **Competition from other companies and brokers**

Other companies and platforms are also attempting to take advantage of the platform economy and the potential for mediating work to independent workers. The platform is experiencing increased competition from other actors aimed at the same segment of independent consultants.

- **Balanced growth in the best interest of registered consultants**

There are challenges related to how the platform can continue to grow in the best interest of existing and new consultants. Key questions concern what the value of the platform should be and who it should be valuable for. Problems that arise are, for example, related to who should be allowed to participate on the platform and how to maintain the quality of the services mediated through the platform.

An important strategy for mitigating this challenge is to involve the connected consultants themselves when important decisions are to be made.

## 7.3 Case 3: Lionbridge

Lionbridge is a multinational company established in Sweden, which mediates services like language translation, localisation, software testing, e-learning translation and interpretation. They use platform technology for the mediation of work. This platform also functions as a marketplace sometimes, matching supply and demand on primarily languages services involving translations of LSP (language for special purposes). In some cases, they also engage in software development and testing, or content development.

The company was founded 1996 and its international headquarters are in the USA. They have 50 different offices and 3000 employees in 26 countries. In many cases, the company has expanded to a country by acquiring existing translation firms already operating in the country. This is the case in the Nordic countries, where Lionbridge operates in Sweden, Finland and Denmark. The units found in these countries started as independent translation firms in the 1990s, acquired by the company in the early 2000s.

New platform technology introduced in recent decades has enabled them to reorganise both the way the company distributes work to translators, and administration previously conducted by offices in each country. Many of these tasks are now centralised to specific offices, with staff providing administrative support as well as distributing part of the work across country borders.

### **Characteristics of the consultants: a skilled workforce**

About 10 000 freelancers work for Lionbridge worldwide. Informants from the Swedish divisions describe how they regularly engage a couple of hundred freelancers of which 50 are translating into Swedish. Most of them have a university degree in languages and translation, and extensive work experience as a translator. In contrast to the research describing how much of the workforce that use platforms see it as a way of earning supplementary income (cf. Ilsøe & Madsen 2017), these freelancers see themselves as translators that depend on companies like Lionbridge as their main source of income.

The tasks most commonly mediated through the platform are within IT, comprising for instance of the translation of technical instructions or software. These tasks can be performed online, and often comprise texts that translators have to update. In such texts, extensive parts of a document may be locked, and digital tools guide the translator to the new sections that have to be translated. Translators sometimes also have to review texts translated by an automated computer-aided translation (CAT) tool. In many cases, client companies provide strict instructions to the translators on how to translate different texts, as well as translation memories, or other types of software that the translator is required to use to do the translation.

In interviews, translators give different reasons for why they work for companies like Lionbridge. For instance, they may appreciate being able to work from home, and the way it provides flexibility in relation to family life. Those who engage in this type of technical translation may also be linguistically interested, and see freelancing as a possible way to earn an income. When asked about unions, interviewed translators emphasised that they identify themselves as self-employed and do not see the immediate gains of being a union member. It is difficult to say how many of the translators have access to an unemployment insurance fund.

#### **Characteristics of the client companies**

Leading software firms and services utilise Lionbridge's services. In contrast to platform companies that are open to extensive numbers of individual clients posting a variation of smaller sized tasks, Lionbridge engages in business relations within their specific domain; mostly with well-known multinational companies like Nikon, Expedia, Golden Ventures, Google, HP, IBM, Merck, Microsoft, Motorola, Nokia, Oracle, Pearson, Porsche, Sony Ericsson, Thomson and Volvo.

#### **Mediating tasks and matching supply and demand**

Lionbridge manages the recruitment of translators via their platform. They engage in matching tasks and freelancers through algorithms and setting up contracts, as well as paying the freelance translators. In addition, Lionbridge provides a rating system whereby the company evaluates the translators when their jobs are completed. Together with other companies, they also draw advantage from a platform providing evaluations of translations across company boundaries, conducted by translators that peer review each other. Lionbridge do not offer insurance packages or other services to improve the conditions for the consultants. It is up to each individual freelancer to engage in competence development or save for retirement, holiday pay, insurance etc.

As mentioned, the platform enables the company to access a mass of geographically dispersed translators, or a 'crowd' of freelancers. When the different clients' jobs or specific tasks are posted on Lionbridge's platform, different translators are notified and can accept their job offer or leave it for someone else in the crowd. In many cases, the first translator to accept the offer automatically distributed via the platform gets the job. The client posting the job often suggests a price based on number of words. The payment is reduced if the client company provides translation memories or tasks based on automated translations.

In many cases, the matching between task and translator is automatically managed by the platform. Based on rating and profile information, freelancers receive a notification when jobs that match their profile are posted. Lionbridge thereby distinguishes themselves from companies that rely on traditional managers to distribute work. Nevertheless, informants also describe how their crowd contains a core of translators that they consider to be skilled and who project managers can stay in direct contact with via email or phone.

## 7.4 Case 4: Solved

Solved was established in Oulu, in northern Finland, in 2013. Solved defines itself as a 'cleantech advisory service and collaboration platform'. The business idea is to combine digital technology, platform logic and highly skilled cleantech experts in a new way.

From the company perspective, a platform is a tool for matching the client's problem with the team of experts in order to find the best possible solution. In this structure, the role of the company is to select the team of experts relevant for the job. According to the company: 'our network of experts consists of independent consultants, innovative entrepreneurs, industry experts and relevant stakeholders'. That is to say, the idea is not to sell or transmit in advance defined products or solutions. Unlike many other business platforms, Solved offers many different channels – chat, phone, email – for the contacts. On the other hand, following the general logic of platform economy, the ecosystem of the business consists solely of clients and business partners, without employer/employee relations.

In terms of the nature of the business, a global perspective is prominent. At present, the company is active in all continents, in 70 countries. Today, the network – or 'the community' – consists of 2500 experts and 250 organisations throughout the world. Currently, the company has three offices, in Helsinki, Oulu and Bratislava. The customers, who represent both public and private actors, vary in both size and type. One of the first major international projects was to plan the district heating infrastructure for Slovakia, to bring it in line with the emissions directives of the European Union. Urbanisation as a global mega trend and the increasing importance of finding solutions to environmental problems will guarantee the firm demand for the expertise Solved is working with.

The managing director of the company summarises the principles: 'In our company, gig work, the platform economy and on-demand expert services are combined with each other. Furthermore, we hold a unique position as pioneers in sustainable development and in the future-orientated work.'

## 7.5 Concluding remarks

Although platform companies utilise new business models and technology, the main challenge for growth seems to be participation from both clients and workers. Worksome emphasises, however, that the main challenge is to source demand from clients. This indicates that it is easier to attract workers as long as there is sufficient demand from clients on the platform. For BrainBase, an important challenge for further growth on their platform is competition from other intermediary companies. What these challenges have in common is that these barriers only indirectly hinder the platform, as participation depends on the incentives and disincentives for clients and workers. In the competition with global actors in the platform market, it is also difficult for Nordic platforms to compete to be relevant marketplaces for both clients and workers.

Although many of the barriers mentioned in the interviews are related to the actual participation of workers and clients, there is potential for improvement in some areas directly related to authorities and public policy. Many of the largest platforms in the Nordic countries mediate ICT-related tasks to clients. The authorities are important clients in the ICT sector, especially in Norway. Relatively strict regulations of public procurements are barriers for independent consultants matching with potential clients and participating in relevant markets. New public procurement systems can enable independent workers to participate in relevant projects, also those put out to tender by public authorities.

Another aspect mentioned by platform companies is the ease of reporting economic activities mediated by the platform, and the need for new solutions that can facilitate automated or more effective reporting of income. This would help to mitigate the challenges related to the black economy and tax evasion. In addition, it may lower the barriers for workers to participate on platforms, because it will make administrative work easier to manage, as well as more transparent and effective. In general, the self-employed have more administrative responsibilities than employees, and there is a need to make sure that the reporting is easy to understand and operate within the legal framework. This also includes defining the legal framework that is applicable to platform owners and platform workers.





## 8 How a knowledge-intensive platform economy can contribute to innovation and economic growth

**Chapter summary:** The market for independent professionals is characterised by substantial costs of hiring and sourcing tasks. These transaction costs make less use of independent professionals' expertise than would otherwise have been the case. Knowledge-intensive digital platforms reduce transaction costs, thereby making it profitable for both clients and professionals for more tasks to be done. Reduced transaction costs can make professional services that are currently not on offer profitable and result in professionals migrating from other kinds of employment to knowledge-intensive digital platforms. Overall, economic growth is stimulated by more knowledge-intensive services being carried out.

The economic impact of a more effective market for knowledge-intensive tasks may also be significant, and even exceed the impact of an increase in services performed. Learning and innovation are driving forces for economic growth. If knowledge-intensive digital platforms contribute to more knowledge dissemination, learning and innovation in the economy, they will have a major positive economic impact, and this may be the case. However, traditional consultancy firms face the same economic problems as platforms – organising for reducing the transaction costs associated with the temporary hiring (in and out) of professionals for temporary tasks. Digital platforms also compete in organising competence-sharing by developing communities for social and professional interaction between independent consultants. At present, it is unclear if knowledge-intensive digital platforms invest in knowledge-sharing and knowledge accumulation for connected professionals to the same degree as traditional consultancy firms do for their employees. The economic impact of platforms will be dependent on their ability to do so.

In the traditional market, information on the demand and supply of independent professional services is readily available. The cost of gathering and sharing is a cost of transactions (buying and selling) in the market for knowledge-intensive services. As discussed in previous chapters, digital platforms create marketplaces where clients and independent professionals can meet and interact. If information can flow more efficiently between clients and independent professionals through digital platforms, both parties can waste less resources on organising work.

When transaction costs are reduced, value added increases in related industries. If digital platforms reduce transaction costs between buyers and sellers of knowledge-intensive tasks, value added will increase especially among knowledge-intensive industries.

The economic importance of lowering transaction costs of knowledge-intensive tasks is closely linked to how learning and using new knowledge (i.e. innovation) is a driving force for economic growth. Economic growth is measured by how much is produced, while learning and innovation represent new and improved products or organisation in the labour market. The US economist and Nobel laureate Paul Romer has shown how the stock of human capital determines the rate of economic growth, see Romer (1990). This means that a country must seek to maximise the utilisation of its human capital stock to stimulate economic growth, a result that is widely accepted in modern economics (Stiglitz & Greenwald, 2014).

The platform economy may stimulate innovative activities and economic growth in the Nordic region in several different ways. The platform economy has the potential to increase the utilisation of human capital among highly educated persons in the Nordic countries to stimulate innovative activities and economic growth in the region. Chapters 5 and 6 discussed different ways in which digital platforms may affect the knowledge-intensive labour market in the Nordic region. In this chapter, we discuss how the platform economy can contribute to economic growth through knowledge transfer and learning across firms and workers.

We start, however, with a discussion of how reduced transaction costs affect supply and demand for professionals. The discussion is supplemented by a formal theoretical analysis in Appendix A.

## 8.1 Reduced transaction costs stimulate economic growth

By reducing the overall costs associated with organising work and production, digital platforms create new innovative ways of efficiently matching independent professionals and clients, and thereby stimulate economic growth. As discussed in chapters 5 and 6, this is because both clients and professionals waste less resources on searching for and matching with each other.

Assuming there is enough demand for professional services, lower transaction costs enable economic partners to produce a larger quantity of services with the same amount of resources. In Appendix A, we show, with reasonable assumptions, that lower transaction costs increase the production of professional services. At the same time, independent professionals experience an increase in real wages. This is because less resources are allocated to searching and matching, while more are allocated to producing output that has value for clients in the market. The clients benefit too, for the same reason. How independent professionals and clients share the benefit of reduced transaction costs determines who benefits most.

In some cases, high transaction costs can even create situations where clients and independent professionals do not match at all. This happens if transaction costs are so high that no client is willing to buy the service at the lowest possible price a supplier can provide.

If a digital platform can decrease the transaction costs sufficiently, at least some clients and independent professionals can match. In such a scenario, the introduction of a digital matching platform creates a market that did not exist before. If the new services are produced by independent professionals that would otherwise be unemployed, lower transaction costs have the additional benefit of reducing (hidden or open) unemployment in the economy. It could also be that lower transaction costs allow professionals that are currently employed in other industries to pursue career options that are more in line with their skill sets and interests, which was not available before. This is illustrated in figure 12.3 in Appendix A.

Although the context described above is based on a theoretical foundation, there are examples of platforms solving these types of issues in the real labour market. The most compelling example may be medical services that are supplied through apps, like Kry.se or Legevisitt.no. These provide consumers access to medical services outside of the public health care system. The services are available on-demand, and in some cases the doctor can even travel to the patient's home. Specifically, the platforms have reduced costs for patients to match with an available doctor outside the public health care system.

These efficiency gains are partially used to cover the costs of traveling to patients, which is not a service usually provided by the public health care system. It is also possible that increased availability of health care services can increase the demand for medical services, resulting in more production and more economic growth.

The fact that reduced transaction costs can, in themselves, create new market opportunities for knowledge-intensive services is a result of both a technological innovation (the platform) and an organisational innovation (a new way of organising task execution). These efficiency gains are also likely to be applicable to other types of knowledge-intensive services. For example, they may create a market for personal legal services, like evaluations of the conditions of an employment contract. At the same time, it may be likely that traditional law firms will handle larger and more complex legal cases. Point of Law and Avtal24 are examples of Swedish platforms that supply legal services.

Although it is realistic to assume that professionals already working independently are likely to have the smallest costs associated with adapting to organising work through platforms, not all independent professionals are necessarily interested in participating. If an independent professional has enough demand for their services, they may not be interested in allowing the platform to take a 'cut' for facilitating a transaction that would be completed anyway, without a transaction fee. However, even if not all independent professionals want to take part in the possibilities that new digital platforms enable, this will not reduce the benefits for the many others who do participate.

### **8.1.1 Efficiency gains can also increase welfare in other ways than increased production**

Economic growth due to lower transaction costs assumes that clients and individual professionals are both interested in allocating the free resources realised by lower transaction costs to the production of more services. For individuals, however, the measure of welfare is more complex than just increasing production. Instead of allocating additional hours to increasing the supply of labour hours, individual professionals may be interested in increasing the number of hours set aside for leisure or other non-paid activities.

If individual professionals use realised productivity gains to reduce the number of hours worked, lower transaction costs will not result in economic growth. On the other hand, it is a sign that the professionals value other measures of welfare (such as leisure or family activities) more than additional income.

### **8.1.2 Factors limiting outsourcing of knowledge-intensive services**

Even in an economy that utilises digital platforms, there will still be substantial costs associated with organising and monitoring work outside of the firm boundaries (see chapter 5).

A limiting factor for outsourcing tasks through platforms may be that not all tasks are easily defined. Although the client may have a specific goal in mind, it may be difficult to make a project description to define which qualifications and how much time is required for the project. Digital platforms, therefore, require clients to invest resources in precisely defining the project and producing the project description. This process is likely to be less costly when organising work internally, assuming that the required skills are available to the client. It is also generally harder for a client to monitor the effort of a remote professional, compared to hired employees.

There may also be other limiting factors, which are not necessarily directly founded on economic considerations. In projects dealing with sensitive information and/or expensive equipment, the client's decision to source labour may not be affected by the size of the transaction costs. In these cases, the risk of sensitive information being leaked or expensive equipment being damaged may trump the potential cost savings associated with sourcing skills through digital platforms.

Although sourcing labour and skills externally will still be associated with significant costs (compared to organising tasks internally), digital platforms are nevertheless likely to reduce the total costs associated with external sourcing. Reduction in transaction costs and sustained factors that limit the benefits of outsourcing primarily create new trade-offs, where clients combine their own internal labour force with increased use of independent professionals.

### **8.1.3 Data indicates increased supply of services primarily from currently employed persons**

There are two main channels through which digital platforms can increase the aggregate labour supply in the knowledge-intensive labour market. One is to activate professionals that are not currently active in the labour market. The other is to increase the labour supply from professionals that are already employed in some form.

Chapter 4 found that the knowledge-intensive labour markets in the Nordic countries are characterised by high employment rates and low unemployment rates. This implies that there is not a large group of inactive professionals that the platform economy can tap into.

On the other hand, there may be significant potential for increasing the labour supply from already employed professionals. Section 4.2 found that almost 20% of tertiary-educated persons in the Nordic countries are part-time employees. There may be several reasons why professionals are employed part time. However, about 12% of part-time employees report in the LFS that they are underemployed, meaning that they would like to work additional hours and are available to do so. This is equivalent to about 2% of the employed tertiary-educated workforce. Underemployed professionals are likely to be the group of professionals that can immediately benefit from increased activity on digital platforms.

Although the share of part-time employees that currently reports being underemployed is relatively small, digital platforms could make it more attractive for other professionals to increase their labour supply. Because professionals that report being underemployed today base this on the current labour market conditions, if platforms were to provide a more flexible and efficient matching of individual professionals, clients and tasks than the current alternative, this could make it attractive for more part-time employees to increase their labour supply. It may even be that professionals employed in full-time positions are interested in working through platforms in addition to their regular job in order to find meaningful tasks and/or supplement their income.

Each of the Nordic countries in isolation represent a relatively limited supply of additional work from tertiary-educated professionals. In total, however, there is a significant number of professionals that are available to work additional hours. Traditionally, clients may have been limited to their local environment for sourcing additional expertise. By providing an effective and secure platform for performing and completing services virtually, digital platforms pave the way for increased international trade in knowledge-intensive tasks.

When it comes to international trade in knowledge-intensive services, it is important to keep in mind that the opportunity to source labour from other countries varies across tasks. While tasks such as web development and translation services can be delivered virtually, services such as management consulting may still require the physical presence of a professional. At the same time, many of the tasks that are mediated between the Nordic countries may potentially be outsourced to professionals from low-wage countries. For example, statistics from Upwork show that a large share of transactions are completed between clients in developed countries and specialised professionals in developing countries (Horton, Kerr, & Stanton, 2017). This can also be the case for Nordic clients, and may move some of the economic activity from the Nordic region to other parts of the world.

It is, however, uncertain whether the international activity on Upwork is in addition to work that would be completed locally or if it replaces some of the work that was previously done locally. If new international platform services replace work that would otherwise have been completed locally, this will reduce local demand for professionals in knowledge-intensive services and hence displace some professionals in the Nordic region. On the other hand, matching with independent professionals outside of the Nordic region is likely to be associated with other forms of costs, for example language barriers and time zone differences, which may impact on the effectiveness of these matches.





## 8.2 Knowledge-intensive platforms may stimulate learning and innovation

The economic impact of a more effective market for knowledge-intensive tasks may be much larger than the impact of more worked hours.

Stiglitz and Greenwald (2014) argue that successful and sustained growth is founded on a society's ability to learn. History shows that the pace of learning and innovation is affected by the economic and social environment and the structure of the economy, as well as public and private investments in research and development. This type of innovation is essentially about utilising existing or new forms of knowledge in new contexts and areas.

**An innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations.**

OECD (2005, p. 46).

Learning happens in a myriad of ways. For example, learning by doing – which leads to innovation in firms and individuals – and learning from others and by interacting with firms and persons in other countries. Learning itself can also serve as a catalyst for additional learning. Learning among individuals and firms is the most important source of implementing new ideas and solutions in production.

The knowledge-intensive platform economy likely has the greatest potential to facilitate learning from others, since most knowledge-intensive digital platforms mediate temporary services between professionals and clients. In practice, firms and individuals both learn from interacting with others, for example when professionals move between firms and bring some of the learning that occurs in one firm to other firms. By buying knowledge-intensive business services in the market, firms can facilitate 'learning from others' through transactions in the market in a similar way to outsourcing research and development tasks. Benefits from sourcing knowledge-intensive services through the market depends on the absorptive capability of the firm, which refers to how well the firm is able to internalise the benefits from external knowledge sources.

The OECD's definition of innovation is based on a long list of prior research of different types of innovative activities that can lead to economic development and growth. Both Stiglitz and Greenwald's (2014) theory of learning and the OECD's definition draw on Schumpeter (1942), which focuses on quality-improving innovations that render old products or business models obsolete. Schumpeter labelled this process 'creative destruction' and classifies five types of innovation that can lead to economic and social development:

1. New products
2. New methods of production
3. New sources of supply
4. Access to new markets
5. New ways to organise business

The emerging platform economy has the potential to promote economic growth through several of Schumpeter's types of innovation. However, it is still an open question whether platform-based innovations come in addition to existing products and business models or if they will render existing solutions obsolete through 'creative destruction'. Romer (1990) argues that innovation can also lead to economic growth by creating new, but not necessarily better, varieties of products. This implies that innovation can lead to economic growth without creative destruction, but rather by creating alternative solutions that can coexist with other varieties.

### **8.2.1 Access to new skill sets can promote innovation and growth**

In an increasingly complex and connected environment, innovative activity normally requires the innovator to combine several different types of knowledge, capabilities, skills and resources. For example, research and development (R&D) knowledge, production knowledge, facilities, market knowledge, sufficient financial resources and an effective distribution system (Fagerberg, 2013). The OECD (2006) finds that knowledge-intensive service activities (KISA) play several important roles in the innovation process, for example by transferring knowledge across industries, such that it can be applied in new contexts.

Firms must mobilise a wide range of skills and knowledge to continuously improve existing production solutions and products. The range of skills often extends beyond the internal capabilities of individual firms, especially small and medium-sized enterprises (SMEs). The demand for a specific set of skills may also be temporary, hence, hiring a permanent employee is not a feasible solution. Fagerberg and Fosaas (2014) found that high innovation costs and lack of qualified personnel are the main factors that hamper innovation in the Nordic region.

Digital platforms can provide firms with the required flexibility and labour supply to promote innovative activities. Lukas Biewald, CEO of FigureEight (formerly CrowdFlower), expressed this as follows :

**Before the Internet, it would be really difficult to find someone, sit them down for ten minutes and get them to work for you, and then fire them after those ten minutes. But with technology, you can actually find them, pay them a tiny amount of money, and then get rid of them when you don't need them anymore.**

Lukas Biewald (Prassl, 2018).

Although the quote is somewhat negatively phrased, it does also have a positive interpretation. It can be interpreted as an indication of the potential for firms to flexibly and temporarily access specialised knowledge. The option to efficiently match with specialised professionals on short-term contracts reduces both costs and risks associated with permanently hiring qualified personnel and the overall cost of innovative activities. In the KISA case studies, firms emphasised how the flexibility of external knowledge services and the ability to specifically match tasks and workers was crucial to innovation (OECD, 2006). Given that digital platforms may also promote the sourcing of labour across borders, firms may gain access to skill sets that are in limited supply in their domestic labour markets.

### **8.2.2 Digital platforms facilitate the realisation of new products and production processes by transferring existing knowledge**

In this section, we discuss how digital platforms make different types of skills more accessible. These aspects of digital platforms are innovations in the labour market in and of themselves. Sourcing professionals and skills through platforms is generally associated with lower costs and risks, as well as increased flexibility for the clients. Although these aspects are likely to be very important for firms, buying knowledge-intensive services is often motivated by the client's need to improve products or production processes, or both. In other words, knowledge-intensive platforms facilitate the realisation of new and/or improved products or production processes. This differs from more basic services, where digital platforms mainly reduce the costs associated with the transactions but do not affect the productivity associated with producing the good or service.

The specific role of digital platforms in these types of innovative activities is that they facilitate increased mobility of skilled professionals, which leads to the transfer and implementation of knowledge and methods across firms within and across industries. Increased mobility of professionals with specific skill sets also facilitates innovative activities in small and medium-sized firms, which may be limited by a lack of access to skills and knowledge in the current labour market. The real benefit of this knowledge, however, is crucially dependent on the absorptive capacity of the client, which has to be able to internalise and utilise the knowledge it has gained after the freelancer leaves. Cohen and Levinthal (1990) describe a firm's absorptive capacity as the ability to recognise the value of new (often external) information, assimilate it, and apply it to commercial use.

Working closely in a team of colleagues over time and gaining an overview of the production process is conducive to worker's contribution to innovations in the firm. As organizing labour through digital platforms often implies the opposite, the potential for employee-driven incremental innovation processes could be reduced if this form of organizing work becomes more widespread.

Digital platforms may conversely provide new opportunities to systematize, analyse and act upon suggestions for improvements of products or processes and the ideas of workers, e.g. through feedback forms, surveys, direct messaging, video feeds etc. If implemented correctly, digital platforms could thus be systematically used to foster bottom-up innovation processes.

Cohen and Levinthal also argue that, in times of rapid and uncertain technological change, it is important that the firm allows all parts of the organisation to be exposed and have access to sources of relevant external knowledge. This creates a flexibility for all parts of the organisation to adapt to and exploit the advantages of new solutions. The alternative is having a central 'gatekeeper', who, for example, controls the use of independent professionals in the organisation. Digital platforms can make specialised knowledge more accessible to all parts of an organisation, because they create a community and source of knowledge and skills that anyone in the organisation can access. This ensures that platform sourcing can be used to the benefit of individual parts of the organisation.

'Without' digital platforms, independent professionals are a dispersed group. As such, it is assumed that most independent professionals rely substantially on their personal and professional networks to match with clients. This assumption is in line with findings in figure 4.3, which found that self-employment is more prevalent among older professionals. In this environment, it is relatively hard, both for professionals and clients, to identify and match with relevant partners. This setting also requires the client to gather information about each independent professional separately. Because large firms naturally attract attention and have larger professional networks, they are likely to have significant comparative advantages in the market for professional services when independent professionals are dispersed across the economy. This also implies that they have greater access to specialised knowledge in times of need.

'Since' digital platforms have been established, information about the available pool of independent professionals has (to a large degree) been gathered in large databanks and infrastructures that potential clients can access. The infrastructure provides a platform where both professionals and clients can gather information about qualifications and relevant assignments. The platforms make independent professionals more accessible to smaller firms, but also smaller firms more accessible to independent professionals that want to supply their labour and skills. This makes existing knowledge and specialised skills in the labour force more mobile across different firms and applications, stimulating and supporting innovative initiatives and activity.

## 8.3 Platforms support knowledge transfer – what about generating knowledge?

So far, the discussion in this chapter has focused on digital platforms' ability to enhance the mobility, access and transfer of existing knowledge as it flows between clients as the independent professional moves from job to job. Stiglitz and Greenwald (2014), however, argue that it is society's ability to accumulate knowledge that is the foundation for sustainable economic growth. How digital platforms and increased use of independent professionals will affect society's ability to accumulate and build new types of knowledge is still an open question. For example, when professionals are increasingly hired on a temporary basis, they are also likely to have to carry a larger part of the burden associated with investing in training and education, because each individual client has little incentive to invest in their abilities but rather reap the benefits of earlier investments in knowledge.

Although interactions with clients and intermediate suppliers are important sources of innovation and learning, a lot of new knowledge is generated when colleagues interact with each other. Stiglitz and Greenwald (2014) also argue that barriers to sharing knowledge are smaller within the boundaries of a firm. Digital platforms inherently reduce the interaction between employees because independent professionals are independent and dispersed geographically. There may be, however, several nuances to this relationship, both on the platforms themselves and when independent professionals are hired by a client.

Knowledge-intensive platforms may be in direct competition with the services provided by traditional consultancy firms, see for example the cases about Worksome and BrainBase in chapter 7 and the discussion in chapter 5.6. In many ways, a traditional consultancy firm will face the same economic problems as a platform – organising for reducing the transaction costs associated with the temporary hiring (in and out) of professionals for temporary tasks.

In terms of competence and employment relationships, the biggest difference between digital platforms and traditional consultancy firms is that professionals are hired by consultancy firms, while digital platforms only provide the digital infrastructure for matching independent professionals and clients. As a result, there is no employment relationship between the client, the professional or the platform.

This means that, while independent professionals may still be dispersed, traditional consultancy firms have an overarching internal organisation encompassing all the consultants employed by the firm. This internal structure also incentivises the firm to invest in knowledge-sharing and knowledge accumulation for the employees that represent the firm on assignments. This knowledge is then applied when the employees carry out assignments for the individual clients.

Traditional consultancy firms may today have a better internal infrastructure for sharing knowledge than platforms. However, this may change. There are solutions that can facilitate learning and knowledge accumulation also in the framework of a digital platform. Realising the need for both social and professional interactions between independent consultants, BrainBase has established a community on Slack,<sup>22</sup> where all consultants that are registered on the platform can share knowledge, ask questions and collaborate. These types of communities can be initiated by both platform companies and groups of professionals and may blur the lines between traditional consultancy firms and digital platforms. Then there is a question of whether the quality of the community created by independent professionals through a platform is equivalent to the internal organisation of work, training and education in traditional consultancy firms. In any case, it is likely that independent professionals must carry a larger share of the burden related to education and training on platforms.

How digital platforms are able to address these types of challenges may dictate what role knowledge-intensive digital platforms will have in the economy. If platform-initiated communities are equivalent to the networks of knowledge in consultancy firms, platforms may play a significant role in the market for knowledge-intensive services. If platform-based communities are deemed inferior to traditional consultancy firms, the main role of platform workers may be limited to supplementing the knowledge of core employees in traditional firms. This could also limit the tasks demanded via platforms to more specific tasks, as opposed to larger and more general forms of knowledge-intensive work.

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<sup>22</sup> Slack is a community for professional collaboration.



## 8.4 Increased use of independent professionals has an ambiguous effect on demand for traditional employees

In section 5.1.1, we pointed out that knowledge-intensive digital platforms that reduce transaction costs in the economy increase real wages for independent professionals. However, the effects for (non-independent) employees may be reduced real wages. Assuming that outsourcing professional services to the market of independent professionals is a substitute for hiring employees, lower transaction costs in the independent professional market create a downward pressure on the wages of regular employees (see Appendix A). This results from the fact that it is relatively cheaper for an employer to hire an independent professional (as a result of lower transaction costs). Only employees who have tasks that can be outsourced will be affected, but on average this effect will create a downward pressure on the wages of permanent employees.

In Appendix A, we show how, theoretically, more efficient markets for independent professionals lower the price of independent professionals relative to traditional employment, and thereby increase the use of freelance services in the economy. The effect on traditional employees, however, is ambiguous, and crucially depends on how services from independent professionals fit into the production line. If services from independent professionals are a substitute for traditional employees, the use of employees will go down. If independent professionals, first and foremost, are complementary to the activities of traditional employees, then employment in firms will not necessarily go down as a result of the platform economy.

## 8.5 Concluding remarks

The discussion in this chapter finds that the platform economy will contribute to more efficient matching of independent professionals and clients, where both parties will likely benefit from the efficiency gains created by the market. The efficiency gains are created because platforms gather information and create digital marketplaces to reduce costs associated with searching, bargaining and monitoring when clients realise a demand for labour and skills. These efficiency gains are forms of innovation in and of themselves and stimulate economic growth by enabling economic partners to produce more with the same amount of inputs.

Another source of economic growth that has been associated with the benefits of digital platforms, in general, is the opportunity to activate persons or assets that are not active in the economy today. This may be an important aspect of platforms that mediate labour resources or assets which are underutilised. The findings in chapter 4, however, indicate that there is relatively little slack in the knowledge-intensive labour markets in the Nordic region. Nevertheless, about 20% of professionals in the Nordic countries are employed part time. At least some of these workers may be interested in using platforms to flexibly supplement their income or find engaging tasks.

Although independent professionals are assumed to benefit from digital platforms, the effect of more efficient transactions of independent professional services on total employment and demand for tertiary-educated employees is ambiguous. Given an assumed level of production, increased efficiency in the market for independent professionals is likely to put downward pressure on the demand for employees and on employees' wages. In this case, some employees will lose their jobs and become unemployed. On the other hand, if efficiency gains are used to increase production and demand for professional services, it is unclear what the effect on unemployment and total employment will be (see Appendix A for a detailed, theoretical discussion).

In the last part of the chapter, we discussed how digital platforms may affect innovation and learning. This is a different aspect of economic growth from transactional efficiency, which largely allows economic actors to complete the same tasks more efficiently. Stiglitz and Greenwald (2014) argue that society's and businesses' ability to learn and apply knowledge in new areas is the foundation for sustainable economic growth.

In the short term, increased transactional efficiency will increase the availability of knowledge-intensive services and the mobility of professional workers across firms. This is likely to contribute to an increase in the transfer of existing knowledge, which can be applied in different contexts and utilised in new, innovative ways. This can, for example, be an important factor in the digitalisation of industries that may rely on professional services to adapt their organisations to new solutions in the digital age. On the other hand, how clients on digital platforms will benefit from increased mobility of professional workers depends on their absorptive capabilities, meaning their ability to internalise knowledge that is temporarily provided by platform workers.

In the long term, the effects of digital platforms and independent work on learning and innovation are ambiguous. Stiglitz and Greenwald (2014) argue that knowledge transfers more efficiently within organisations than across them. In addition, interactions between employees are an important source of innovation in businesses. If a larger share of professionals is organised as independent entities, it is uncertain how this will affect the accumulation of human capital and knowledge in the long term. This is also because clients have weaker incentives to invest in the knowledge and skills of hired independent professionals versus their own employees.

## 9 Nordic labour market models and the knowledge-intensive platform economy

**Chapter summary:** This chapter investigates how the platform economy may impact and be shaped by the Nordic labour market models. The Nordic labour market models are characterised by high levels of organisation, collective regulation, trust, egalitarian distribution of wages and a well-developed welfare state. If platform work becomes more widespread, it might challenge some of these basic facets of the Nordic labour market models. However, the Nordic working life models may also show their capacity to adapt to new ways of organising work, as they have done in the past. In order to foster sustainable innovation, the knowledge-intensive platform economy should be integrated into the Nordic models in a way that ensures a level playing field and a certain level of rights and social benefits for platform workers, while allowing new technology to enable innovation and a more efficient working life.

In the first part of the chapter, we identify specific challenges that platform work in general poses for the Nordic labour market models, which authorities and social partners should be aware of and address. These challenges include legal uncertainties, access to social benefits and rights, risk of polarisation in pay and working conditions, and potentially adverse effects on career development and training. The second part of the chapter investigates efforts to include platform work in the organised working life of the Nordic countries, in terms of trade union strategies aimed at unionising and bargaining for independent professionals both on and outside digital platforms.

The Nordic labour markets are renowned for their high levels of employment, unionisation, collective regulation, trust, and egalitarian distribution of wages and job opportunities. The Nordic working life models are also characterised by a well-developed and generous welfare state enabled by high labour market participation, with a large majority of the workforce in stable, full-time positions (Andersen, Dølvik, & Ibsen, 2014).

If platform work becomes more widespread, it may represent a challenge to parts of the Nordic working life models in several ways, such as by creating ambiguities about the legal status of those working through platforms and the applicability of labour law, as well as challenging the current way of regulating pay and working conditions.

These challenges notwithstanding, the Nordic working life models might also show great capacity to adapt to new ways of organising work, as they have done in the past. Powerful and well-organised social partners have supported the introduction of new technologies in order to stimulate growth, and the Nordic labour regimes have been praised for their capacity to cope with change in ways that have benefitted business as well as workers and the wider society (Dølvik, Fløtten, Hippe, & Jordfald, 2014). The Nordic welfare states should also be well-equipped to ensure a certain level of rights and social benefits for independent professionals working through platforms, as well as other platform workers. In this way, it should be possible to allow new technology to enable innovation and more efficient labour markets. The chapter discusses platform work in general, but emphasises the consequences of platform work by independent professionals where this is relevant.

## 9.1 Challenges to the Nordic labour market models

If platform work becomes more widespread, it might represent a challenge to the Nordic working life models in several ways. Below we list some of the challenges discussed in this chapter:

- Platform work creates ambiguities about the legal status of workers and the applicability of employment law.
- If employers increasingly use independent professionals to conduct tasks traditionally performed by employees, this could impact on the quality of services, job security, competence development and training, possibilities for employee-driven innovation, local level social dialogue, non-hierarchical work environments and other qualities associated with the Nordic model at the workplace level.
- Solo self-employment coupled with new ways of measuring individual performance (rating systems, task monitoring etc.) is likely to drive inequality in pay and working conditions, potentially leading to wage polarisation in parts of the labour market. Independent professionals that can use their high skill levels are most likely to be the winners, while less skilled workers might suffer low wages, poor working conditions and few opportunities for career development and training.
- If the share of regular employees declines and solo self-employment increases significantly, societal coverage of social benefits and rights will decline, given current regulations.
- Collective wage formation and the role of the social partners may be put under pressure, partly as a result of non-existent or low levels of union membership among platform workers and lack of rights to collective action for the self-employed.

### 9.1.1 Legal uncertainties: self-employed or employees?

Platform companies tend to designate independent professionals as self-employed or freelancers and not as employees. As detailed in chapter 6.3, the contractual arrangement of platform workers determine access to social benefits and individual and collective labour rights. Workers, unions, authorities and academics in many countries have disputed that platform workers are self-employed, and rather claim that the platforms have substantial control over the workers through algorithms and rating systems, and that calling the workers self-employed is a form of 'outsourcing of risks and costs' (Moore & Newsome, 2018). Relying on the self-employed as a workforce is also perceived as a company strategy that contributes to social dumping as the self-employed are often paid less than employees (Eldring & Ørjasæter, 2018).

Whether platform workers (regardless of skill) are employees or not is a question that, if the parties disagree, ultimately requires legal assessment. This is a complicated legal exercise. The courts in the Nordic countries use the contract-of-employment test on each case to evaluate whether there is an employment relationship or not (Hotvedt, 2018). This is an individual assessment of the contract as well as the actual work situation, whereby criteria such as continuous personal work, supervision and control are important factors (Ibid.).

While there have been previous cases of grey-area contracts being assessed in the Supreme Court, at least in Norway, there have been no legal proceedings concerning employment matters in platform work in the Nordic countries. Hence, we do not yet know what the outcome of such a case would be and how the use of digital technology as a means of control would be considered by the court. Hotvedt (2018) has suggested that the courts should take into account the business model of the platform companies (e.g. rating systems, algorithmic control) in their assessment of whether an individual is under the supervision and control of the company or not.

The legal status of platform workers is further complicated by the fact that the definition of an employee varies between countries as well as within various national legal sources. In Denmark, for instance, a person may be viewed as an employee with regard to the Working Environment Act, which covers 'work for an employer', but not by the Holiday Act, which covers 'persons receiving remuneration for personal work in a service relationship'. The assessment of whether platform workers are employees or not is therefore not straightforward (Munkholm & Schjøler, 2018). The Swedish legal system tends to use a comparatively wide definition of an employee. The Swedish concept is likely wider than the concept of employee used in, for example, France, the USA and the UK – to the extent that it covers more than some 'middle' categories such as worker in UK labour law (Engbom & Lundberg, 2019) – thus potentially covering many platform workers.

The few existing court cases concerning the status of platform workers, notably in the USA, the UK and France, indicate that platform workers can be considered employees, freelancers or self-employed, depending on the type of platform, legal regime and case by case evaluation under the current legislation. This is illustrated with the example of a court case against Uber and a court case against Deliveroo, both in the UK. In the case *Aslam and Farrar v Uber*, the UK Employment Tribunal ruled that the two Uber drivers were workers (London Employment Tribunal, 2016).

This is a third category in British labour law, which is in between self-employed and employee and grants access to some employee rights, such as minimum pay, holiday pay, paid rest breaks, but not all the rights of an employee (Taylor Review, 2017). However, in another court case from the UK, couriers working for the food delivery company Deliveroo were considered self-employed. This means that the couriers do not have the right to take collective action or to negotiate collectively (Moore & Newsome, 2018).

In the USA, this emerging grey zone has led both academics and politicians to call for a third employment category like the one in the UK, that gives access to some employee rights, but not all (Harris & Krueger, 2015; Warren, 2016). An additional category of employment has not yet been placed on the agenda in the Nordic countries, perhaps because the legal term of employment has proven to be quite flexible in giving protection to those who need it (Hotvedt, 2018).

### 9.1.2 Access to rights and social benefits

Overall, the 'binary divide' between employees and the self-employed is decisive for social benefits, as well as individual and collective rights (Munkholm & Schjøler, 2018). As discussed in chapter 6, those that are genuinely self-employed enjoy flexibility and independence that may outweigh the loss of these rights and benefits. However, in cases where control, power relations and tasks are closer to that of a regular employment relationship despite a contractual arrangement of self-employment, the loss of these rights and benefits is more problematic.

To correctly classify platform workers, remove doubts about their legal status to provide a certain level of rights and social protection to the (genuinely) self-employed should be a key priority for policymakers. This is of course important to the independent professionals working in the platform economy, as well as other platform workers, but may also be crucial in creating a level playing field for fair competition between companies. This is needed to foster sustainable growth and innovation, and to ensure that digital labour platforms that succeed do so due to actual and sustainable innovations, rather than novel ways of circumventing labour law, social benefit contributions or occupational safety and health regulations etc.

The challenges emerging from the platform economy in relation to 'the binary divide' between the self-employed and employees has become an issue for the ILO Global Commission on the future of work. In their report (ILO, 2019), the Commission proposed a 'Universal Labour Guarantee', whereby 'All workers, regardless of their contractual arrangement or employment status, should enjoy fundamental workers' rights, an "adequate living wage", maximum limits on working hours and protection of safety and health at work' (ILO, 2019).





According to De Stefano (2019), this is a breakthrough as 'the Global Commission calls now to regard a new set of protections as universal, and applicable to all workers without distinctions, namely those related to occupational safety and health as well as to working time and living wages.' (Regulating for globalization, 2019). The effects of this call from the ILO regarding the rights of the self-employed in different legal regimes remain to be seen. However, efforts are already underway in the Nordic countries that could help bridge the gap between the self-employed and employees when it comes to, for example, unemployment insurance schemes. In Denmark, for instance, a new unemployment insurance scheme has been adopted, aiming to better cover those in non-standard and combined forms of employment (Kvist, 2017). The new system means that participants accrue rights depending on how much they work, not based on their contractual arrangement (Dølvik & Jesnes, 2018). Different approaches to solving these issues also include efforts by trade unions to unionise, support and even employ freelancers or platform workers. Such arrangements may be required if the platform economy is to become a desirable alternative for high-skilled employees already enjoying such benefits, and/or if predictions of continued growth in atypical employment come to fruition.

At the EU level, there are also efforts to improve the rights of platform workers and other atypical workers. In April 2019, the European Parliament approved the Transparent and Predictable Working Conditions Directive, with the aim of strengthening the rights of platform workers and other atypical workers (see below). The Directive is an update of the 'Written Statement Directive' from 1991 and is part of the European Pillar of Social Rights. The European Council is expected to formally adopt the Directive in June, before it is implemented in national jurisdictions. The Directive may have significant implications for the rights of platform workers when implemented in national jurisdictions.

#### **EU Directive: Transparent and predictable working conditions**

The Commission is proposing that all workers in the EU should have the right to:

- more complete information on the essential aspects of the work, to be received by the worker, in writing, at the latest on the first day on the job (rather than up to two months afterwards),
- a limit to the length of probationary periods at the beginning of the job,
- seek additional employment, with a ban on exclusivity clauses and limits on incompatibility clauses,
- know a reasonable period in advance when work will take place, for workers with very variable working schedules determined by the employer, as in the case of on-demand work,
- receive a written reply to a request to transfer to another more secure job,
- receive cost-free the mandatory training that the employer has a duty to provide.

The proposal has a broad personal scope of application. It aims to ensure that these rights cover all workers in all forms of work, including those in the most flexible non-standard and new forms of work such as zero-hour contracts, casual work, domestic work, voucher-based work or platform work. It also comes with targeted provisions on enforcement, to make sure that workers in the workplace effectively benefit from these rights.

### 9.1.3 Risk of polarisation in pay and working conditions

As discussed in detail in chapter 6, the level of remuneration varies across different types of platform work, the skill level required for the task, as well as the mode of delivery. While many platform workers are low paid and experience unfavourable working conditions, few professionals in the Nordic KIPE seem to be in such a situation.

The organisation of work through digital platforms does not necessarily drive workers' remuneration down. Rather, it may drive polarisation of pay, notably between low-skilled work on the one hand, and high-skilled professional services on the other. Polarisation may also evolve within professions or platforms as a result of competition at the individual level. In theory, this may be most pertinent for tasks requiring very specialised skills, where the demand and willingness to pay for expertise or excellence is high. If these types of tasks are mediated by platforms with individual rating systems and price setting, they could be lucrative for individuals possessing outstanding competences, experience or reputation – as is the case for much traditional freelance work. For inexperienced or less competent workers, however, remuneration at free market prices may be far below the collectively agreed wages of an employee in the same profession, and concerns about the variability and unpredictability of earnings may be amplified. Thus, a possible outcome is that platform work becomes a lucrative source of income for some professionals, while being an additional source of income or employment of last resort for others. If a growing platform economy is left largely unregulated and platform workers remain largely non-unionised, this may also create pressure on the established system of wage formation and collectively agreed wages and working conditions.

## 9.2 Trade union strategies

Trade unions are increasingly working to unionise, bargain for and further the rights of the self-employed and freelancers. In part, this effort is aimed at counteracting the negative effects of growth in atypical work in general and platform work in particular. The European Trade Union Confederation (ETUC) has made this a priority at EU level, and union membership for the self-employed is widely accepted among its affiliated trade unions (Fulton 2018:8). In the Nordic countries, many organisations have a long history of unionising the self-employed, while others have recently taken new initiatives in that direction, often in response to the emergence of the platform economy.

### 9.2.1 Organising and representing the self-employed and platform workers

In the Nordic region, as in most European countries, there are no legal barriers to unions recruiting the self-employed and/or platform workers. In practice, the extent to which unions have chosen to do so varies and in certain cases union rules or attitudes have effectively prevented the self-employed from joining unions. Other unions have a long history of unionising the self-employed. This has traditionally been prevalent in specialist unions or specialist sections within larger unions operating in industries where self-employment has long been a common way of working, for example, among journalists, actors, musicians and other performers, translators and interpreters, as well as architects and some medical professions (Fulton, 2018: 35). Some mainstream unions have accepted the self-employed as members for a long time. With the advent of the platform economy, several unions that do not have a tradition of recruiting the self-employed have made renewed efforts to do so.

Unions provide a range of services for self-employed members. Nordic unions that have a history of unionising the self-employed usually aid the self-employed with legal issues (contracts, IP rights etc.), offer a network, courses and conferences, insurance and other benefits. Many unions also work politically to improve social security rights for independent workers. In the Nordic countries, the emergence of the platform economy and the rise in atypical employment have spawned some new and creative initiatives towards the self-employed from unions for specialists and the professionals, but increasingly also from mainstream blue- and white-collar unions.

In Finland, the three trade union confederations, the Confederation of Unions for Professional and Managerial Staff in Finland (Akava), the Confederation of Salaried Employees (STTK) and the Central Organisation of Finnish Trade Unions (SAK) collaborate through an initiative called Itset aimed at securing better rights for the self-employed.

The main aim of Itset is to allow trade unions to represent the self-employed in negotiations concerning pay and working conditions. For this to happen, they argue, Finnish competition law must be changed to allow collective bargaining for the self-employed. Itset is also concerned about false self-employment and the rights and benefits of the self-employed in general.<sup>23</sup>

In Norway, several trade unions – notably for professionals, cultural workers, journalists etc. – have traditionally unionised independent professionals (the self-employed and freelancers), and continually work to improve their rights. The emergence of the platform economy has also spawned additional initiatives from unions that have not previously targeted this group. Such offers have existed for some time for professionals represented by the Federation of Norwegian Professional Associations (Akademikerne), which has also worked politically to improve access to social benefits, especially pension rights. Another example is the initiative LO self-employed, launched by the Norwegian Confederation of Trade Unions (LO) in the autumn of 2018, which aims to recruit more self-employed through specific membership offers.

#### **LO and its new initiative targeting the self-employed**

In late 2018, the Norwegian Confederation of Trade Unions (LO) launched the initiative 'LO self-employed', which marks a new direction for the Confederation. The initiative was a response to the growth in self-employment in key occupational groups represented by its unions, but also to the debate surrounding the platform economy. Some of the trade unions affiliated with LO have previously unionised the self-employed, but the Confederation has not previously had any common strategy to unionise this group. The initiative is still in its forming process, but it will include insurance developed especially for the self-employed as well as access to specialised legal advice on self-employment contracts and issues.

In Sweden, several member unions of the Swedish Confederation of Professional Employees (TCO) and the Swedish Confederation of Professional Associations (Saco) have represented self-employed workers for some time. The unions provide support to the self-employed by offering services such as legal advice, income insurance, professional development etc. Some have also established guidelines for fees, wages and conditions when accepting a temporary job as a self-employed contractor or have established billing or invoice services to ensure that their members are treated fairly (Engblom & Lundberg, 2018).

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<sup>23</sup> <https://journalistiliitto.fi/en/itset-group-self-employed-must-have-bargaining-powers/>  
<http://heikkijokinen.info/trade-union-news-from-finland/1423-self-employed-workers-need-more-bargaining-power>

The white-collar trade union, Unionen, in Sweden, has been recruiting the self-employed for a long time and has a section on its website called 'Unionen Egenforetagare' (Unionen Self-employed), where it offers a range of services. Unionen is also part of the FairCrowdWork initiative, which collects information about platform work and offers ratings of platform companies with the aim of ensuring fair working conditions for platform workers and their participation in governance. Unionen has on several occasions proposed to create a platform for digital standards and guidelines for companies wishing to follow established norms in a Nordic setting (Wallin, 2017).

### **FairCrowdWork Initiative**

FairCrowdWork is an initiative by trade unions around Europe that entails information about platform work and ratings of platform companies being disseminated through a website. The initiative was started by European trade unions such as IG Metall (the German Metalworkers' Union), the Austrian Chamber of Labour, the Austrian Trade Union Confederation, and the Swedish white-collar union Unionen. The initiative started with the Frankfurt Declaration on Platform-based Work, whereby the coalition issued a call for cooperation between workers, unions, customers, platform companies, and regulators to 'ensure fair working conditions and worker participation in governance'. The initiative posts ratings of platform companies that are based on background information gathered from the web, reviews based on worker surveys and an assessment by the FairCrowdWork of the platform's terms of service. Currently, the website offers ratings on the following platform companies: Amazon Mechanical Turk, Jovoto, MyLittleJob, AppJobber, Clickworker, Pofilic, content.de, Streetspotr, Testbirds, CrowdGuru, CrowdFlower and Upwork. The ratings include workers' reviews on pay, communication, evaluation, tasks and technology. FairCrowdWork offers a free union 'hotline', which platform workers in Sweden and Germany can call to ask about work and pay.

In Denmark, a number of unions represent the self-employed. The Danish Confederation of Professional Associations (Akademikerne) has several unions that do so, and has taken a special interest in platform work and self-employment that has included assembling a panel of experts on the platform economy in cooperation with the Union of Commercial and Clerical Employees in Denmark (HK). The panel has produced a number of policy recommendations and developed concrete measures, including an insurance package for freelancers and other members who do many small jobs. HK has also created an agency, 'freelancer.dk', that takes care of freelancers' taxes, VAT etc. and provides insurance including paid sick leave, as well as providing freelancers with the legal status and rights that follow from being employees. A similar concept exists in the Danish Association of Professional Technicians, which represents technicians and designers.

CoolCompany, Frilans Finans, Eezy.fi and Employ are private actors that provide similar services to HK's freelancer bureau, by taking the role of an employer for freelancers. These are often called umbrella companies and their purpose is to improve the framework for freelancers and the self-employed and to relieve them of their administrative work (SOU 2017: 24).

#### **Freelancer bureaus run by trade unions**

Danish HK, a union with members working within retail and public and private administration, has recently established the agency 'freelancer.dk' as a part of their union innovation project 'HK lab'. The agency mainly targets new freelancers, unemployed persons who want to do freelance assignments but need employment status, and employees who want to take on freelance assignments part time. The workers themselves make contact with the client (or platform) that they want to perform a task for and agree upon payment etc., but are then formally employed temporarily by the agency while performing the task and receiving payment through the agency. The agency takes care of taxes, VAT etc. and provides insurance including paid sick leave, as well as providing the workers with the legal status and rights that follow from being employees. Freelancers can set their own prices, but the agency ensures fair remuneration by checking hourly compensation against wage statistics and refusing to administer contracts underbidding wage levels set in collective agreements. The agency takes an 8% administration fee. HK also offers insurance to freelancers, including unemployment benefits, through their regular membership and unemployment insurance fund (a-kasse).

### 9.2.2 Collective agreements in the Nordic platform economies

Collective bargaining plays a significant role in regulating the Nordic labour markets, in addition to labour law. More than 70% of the workers in the Nordic countries are covered by collective agreements. On the one hand, this institution of the Nordic model might be challenged if more people become self-employed and take casual jobs through platforms (Dølvik & Jesnes, 2018). On the other hand, the Nordic countries may be in a unique position to include this new form of work organisation into the organised working life and improve the working conditions of platform workers.

Generally, unions have found it much more difficult to undertake collective bargaining and attain collective agreements for their self-employed members than to recruit and organise them (Fulton, 2018: 11). However, collective agreements among freelancers do exist and are most common among freelance journalists, performers and other creative and cultural occupations. Most commonly, however, self-employed persons and freelancers currently do not have the same access to collective bargaining as employees due to both national and European competition law (Munkholm & Schjøler, 2018). However, this might be changing in European jurisdiction (Jesnes et al., 2019).

The right to collective action for independent professionals (freelancers and the self-employed) with no substantial influence on their working conditions and terms is currently a topic of discussion in academic, legal and political milieus around Europe.<sup>24</sup> Two court cases – the FNV Kunsten Informatie en Media<sup>25</sup> and the ICTU vs Ireland, No 123/2016 – seem to suggest that freelancers and the self-employed have more leverage for negotiating collectively than previously assumed (Ibid.). This possible new room of collective action for freelancers and the self-employed is also discussed in a Nordic setting. In 2017, the Norwegian sharing economy committee proposed that those working via platforms – regardless of their contractual status – should be entitled to negotiate collective agreements with their platform operators, and that this possibility should be further investigated (NOU 2017:4, 2017).

In the Nordic countries, there are also signs that the dichotomy between the self-employed and employees is being addressed in new ways by the social partners. There are emerging examples of platform companies, with self-employed and freelance workers in their portfolios, that negotiate collective agreements of a varying nature with trade unions in the Nordic countries (Jesnes et al., 2019). This can be exemplified by the agreement between the Danish platform for cleaning in private households, Hilfr, and 3F. This is a trial agreement in which the providers of work can decide themselves, after they have worked more than 100 hours, if they want to be an employee or self-employed.

<sup>24</sup> See for instance Hotvedt (2018). Lecture, Tilknytnings- og organisasjonsformer i arbeidslivet, Institutt for privatrett, UiO

<sup>25</sup> The case (C-413/13 FNV Kunsten Informatie en Media from 2014) concerns orchestra musicians that tried to negotiate a collective agreement, whereby the EU court determined that the agreement fell outside the competition law as the musicians could be considered falsely self-employed.



Traditionally, as seen in the previous chapter, workers themselves cannot decide between being an employee and self-employed, and this trial agreement is therefore a novel concept in the Nordic working life (Munkholm & Schjøler, 2018). The effects of this agreement remain to be seen, but it is an example that signals that collective agreements are possible in the Nordic platform economies and that the Nordic models are adaptable to new ways of working.

Also in Denmark, the video translation platform Voocali has signed the Agreement for Salaried Employees in HK for potential employees on the platform, and a special agreement (Voocali & HK Privat, 2018) that covers work carried out via the platform that is not covered by the Agreement for Salaried Employees. Voocali's translators are ensured minimum wages applicable in the industry and protection against arbitrary removal of their profile.

A different solution is to organise digital platforms more like traditional companies and hence allow them to be covered by existing regulations on temporary work. Chabber, a platform providing work for waiters, bartenders and kitchen assistants, operates as a temporary employment agency covered by the Act on Temporary Agency Work (A4 Medier, 2017), which guarantees equal treatment for temporary workers when working at a user entity. In Sweden, also, the white-collar trade union Unionen has made collective agreements with Instajobs (providing services within different categories of highly skilled) and Gigstr (provides gigs of different types) for the workers to be covered by the collective regulations for temporary agency workers.

Other examples of collective agreements covering platform workers are also emerging in Sweden. Bzzt, a company providing personal transport by moped, is one of the most exposed examples in media. Unlike many platform companies, the drivers in Bzzt are offered a marginal part-time employment contract. These workers are paid on an hourly basis, and the company guarantees a minimum amount of hourly pay. Nevertheless, the work hours in the contracts are often fewer than in a standard full-time employment relationship, which might have consequences for pensions and other social benefits. The agreement between Bzzt and the Swedish Transport Workers' Union allows Bzzt drivers to be covered by the Taxi Agreement, which gives the workers access to the same standards as traditional taxi drivers. The company regards the agreement as a measure intended to facilitate a sustainable work life and loyalty among their drivers.

The emerging collective agreements in the Nordic platform economy are included in table 9.1 below. Most of these agreements are not within the knowledge-intensive platform economy. One explanation of this might be that the need for collective agreements is lower among high-skilled platform workers that enjoy better working conditions and pay than from the perspective of platform workers that work through platforms with low skill requirements and poorer working conditions and pay.

**Table 9.1 Collective agreements in the Nordic platform economy**

<b>Platform</b>	<b>Status &amp; nature of the agreement</b>
<b>Hilfr (cleaning), Denmark</b>	Cleaning platform Hilfr and 3F Private Service, Hotel and Restaurant signed an agreement in April 2018 <sup>26</sup> . This is a trial agreement whereby the providers of work can decide themselves, after they have worked more than 100 hours, if they want to be an employee or self-employed.
<b>Chabber (waiters, bartenders and kitchen assistants), Denmark</b>	Chabber operates as a temporary employment agency covered by the Act on Temporary Agency Work.
<b>Voocali (translation services), Denmark</b>	Voocali has signed the HK Agreement for Salaried Employees and a special agreement that covers work performed via the platform by those that are not employees (HK Privat, 2018).
<b>Bzzt (personal transport by moped), Sweden</b>	The agreement between Bzzt and the Swedish Transport Workers' Union allows Bzzt drivers to be covered by the Taxi Agreement, which gives the workers access to the same standards as traditional taxi drivers. Unlike many platform companies, the drivers in Bzzt are offered marginal part-time contracts.
<b>Instajobs (platform for students, different categories of highly skilled), Sweden</b>	Agreement with the white-collar trade union Unionen for the workers to be covered by the collective agreement for temporary agency workers.
<b>Gigstr (low-skilled gigs), Sweden</b>	Agreement with the white-collar trade union Unionen for the workers to be covered by the collective agreement for temporary agency workers.
<b>Foodora (food delivery company), currently operates in Austria, Canada, Finland, Germany, Norway and Sweden.</b>	The Norwegian Transport Workers' Union and Foodora are currently in negotiations on entering a collective agreement.

Source: Jesnes et al. (2019).

Considering these agreements emerging in the Nordic platform economy, one might ask if they are deviant cases or if they mark the beginning of a trend whereby platform workers, like most other workers in the Nordic countries, are covered by collective agreements (Jesnes et al., 2019). If it is a trend, the Nordic model of collective agreements may once again turn out to be unique in a global perspective, ensuring working conditions and pay above a certain threshold. If the agreements turn out to be deviant cases, the platform economy may be more of a challenge to the current Nordic model of collective bargaining, built upon the employer-employee relationship.

<sup>26</sup> An English translation of the agreement text is available: [https://www.3f.dk/fagforening/fag/rengoeringsassistent-\(privatansat\)/overenskomsten-hilfr](https://www.3f.dk/fagforening/fag/rengoeringsassistent-(privatansat)/overenskomsten-hilfr)

## 9.3 Concluding remarks

The prospect that the platform economy may serve as a lever for innovative job creation and more effective matching of labour supply and demand has been positively received in the Nordic countries. However, the promise that platform work implies a 'liberation' from the employment relationship on which much of the Nordic labour market models are built has sparked criticism, not least from unions and companies being directly challenged by the new labour platforms (Dølvik et al., 2017).

The platform economy presents several challenges to the Nordic labour market models, including the risk of polarisation in pay and working conditions, the legal uncertainties surrounding the status of workers and their access to social benefits, as well as how to maintain career development and training.

The self-employed and freelancers are generally not covered by labour law and do not have full access to social security benefits or collective action, such as the right to strike and collective bargaining. Correct classification of platform workers and provision of sufficient rights and social protection for the self-employed and freelancers will be crucial to incorporating labour platforms into the Nordic models, both in terms of platform workers' rights and working conditions and in order to ensure fair competition between companies.

Clarifying legal uncertainties appears to be important to ensure that growth in work through digital platforms support the Nordic labour market models. Both professionals and other working through digital platforms should be correctly classified and know their legal status and accompanying rights, benefits and duties – either as employees, freelancers or self-employed. Introduction of intermediate legal classifications is possible, but not necessarily beneficial, as the current category of employee exists to cover the needs of the weaker party in the relation. A third category might challenge basic principles of labour law. The issue of false self-employment in the platform economy is an important issue for some affected platform workers, although hardly very relevant for professionals. Courts, labour lawyers, trade unions and possibly legislators should nevertheless address this issue and ensure that labour law covers those who need protection.

There is a need for statistics that capture new forms of work. The platform economy is a complex phenomenon that might benefit high skilled workers more than low skilled, if skill mismatching is avoided. In order to make adequate and good responses and strategies to the KIPE, it is important with statistics and knowledge about both low and high skilled platform work.

In the absence of collective bargaining and with increasing global competition, increasing wage polarisation should be expected, both within and between professions. Platform work could thus turn out to be a lucrative source of income for a select group of professionals, an addition to their main income for some and an employment of last resort for others.

Trade unions have a key role in organizing self-employed and platform workers as well as offer varied and targeted services. Trade unions that wish to recruit and represent platform workers should be attentive to their needs and will likely need to offer several targeted services in addition to standard membership to be attractive. Specific legal expertise and advice, targeted insurance schemes, administrative support, courses and advice regarding contracts, taxation or profession-specific issues are some of the services trade unions can offer, in addition to political lobbying for the rights and benefits of these groups.

Trade unions might offer a more comprehensive framework for self-employed. Freelancer bureaus and umbrella companies might provide a useful framework for platform workers, self-employed and freelancers in order to provide workers with employee status as well as to ease their administrative tasks. Though relatively radical and dependent on nation-specific legislation and insurance schemes, such arrangements could be an interesting measure for trade unions to explore.

In order to ensure a certain level of pay and working conditions, trade unions might strive for collective agreements in the platform economy. Several unions have done this, in different ways. While some trade unions represent platform workers that are hired on marginal part time contracts that makes collective agreements within range, others represent platform workers that are self-employed or in between. Though both legal and practical hurdles remain, innovative types of agreements are emerging, such as the 3F-Hilfr agreement in Denmark, or the Swedish way whereby some platform workers are covered by regulations on Temporary Agency work. Competition law might limit platform workers' opportunities to negotiate collective agreements, and trade unions have therefore taken initiatives to change regulations in order for platform workers to obtain collective rights.

Social partners and authorities should work to improve conditions for platform workers at the EU/international level. The ILO calls for fundamental workers' rights, adequate living wage, limits on working hours and protection of safety and health at work for all workers, regardless of contractual arrangement. The EU directive on Transparent and predictable working conditions is a step in this direction, with new requirements e.g. for more information on the essential aspects of the work to be written in contracts. The Nordic countries are in a position to implement and promote such changes at national level.

Platform work challenges the defining features of the Nordic working life models built around the wage-earner relationship and a highly unionised labour market with strong social partners. Some therefore argue that the model is under pressure and could be vulnerable to the disruptive effects of the platform economy. Others argue that Nordic labour market models with partly liberal market regulations, high levels of education and strong social partners, are well-equipped to reap the innovative potential of the platform economy while also integrating this type of work into the institutional framework of the model (Dølvik & Jesnes, 2017). Recent developments lend some support to the latter argument. Trade unions are increasingly representing and promoting the rights and interests of platform workers and other self-employed workers, both low and high skilled. Despite regulatory hurdles, several collective agreements have been negotiated between platform companies and trade unions in the Nordic countries. Whether this reflects a trend towards a Nordic model of platform work or deviant cases remains to be seen.

## 10 Conclusions and recommendations

**Chapter summary:** Based on our analysis of how digital platforms reduce transaction costs for both independent professionals and their clients, our conclusion is that knowledge-intensive platform economy will grow. However, since the scope today is very modest it will grow from a low level.

Most clients in the knowledge-intensive platform economy are firms, and they can choose whether to outsource some of their work. Clients' need to protect their core tasks, however, effectively limits overall demand for independent professional services in the market. Clients will primarily buy professional services that are supplements to or outside of their own core activities. As a result, traditional consulting firms will probably be especially exposed to competition from digital platforms offering services from independent professionals.

Knowledge-intensive platforms are innovations in themselves. How attractive they will turn out to be for both professionals and clients will be decided in the market. Innovation policies should therefore be limited to making sure that digital platforms evolve through their own competitiveness. Technology-neutral innovation policies ensures that digital platforms can compete on equal terms with other service providers in the .

Clients need to internalise certain types of knowledge and skills implies that digital platforms will affect groups of professionals differently. Professionals working as self-employed or in traditional consulting firms may see a wage rise. Professionals that have jobs that are outsourceable in client organisations will experience a downward pressure on their wages.

Trade unions have a key role to ensure that professionals working through platform reap most of the benefits resulting from the efficiency gains, especially to secure access to social benefits. To exercise this role the strategic response of trade unions should be to organise platform workers in one way or another. Securing social benefits for professionals working through platforms will support the Nordic labour market models in general and will also reduce tendencies to lower wages for employed professionals.

It is uncertain how the platform economy will develop in the future. If we limit the analysis to the Nordic labour markets, however, there are currently workers that are not self-employed, but would prefer to be so under the right conditions. If digital platforms can provide the right conditions for independent professionals, then a simple calculation of survey results on professionals' preferences for self-employment show that the share of independent professionals in the Nordic region may double, from about 5% to 10%.

Throughout this report we have analysed several aspects and possible implications related to growth in the knowledge-intensive platform economy. The conclusion of the analysis is that digital platforms can have positive effects on productivity and economic growth, but platforms are also associated with potential challenges related to sustainable growth and adverse effects on some groups of professionals.

In this chapter we will present the main conclusions from the analysis, as well as important challenges authorities and trade unions should have in mind when designing strategic responses to possible implications of new ways of organising work. The discussion is summarized in seven main conclusions, for detailed analyses of drivers, barriers and implications we refer the reader to the preceding chapters.

## 10.1 The knowledge-intensive platform economy will grow, but from a low level

Recent estimates of the share of employed workers that earn income via digital platforms on a regular basis ranges from 0.3% in Finland to 2.5% in Sweden. As a result, platform work is not visible in aggregate statistics on the labour market (see chapter 4). Currently, the only indicator that statistically capture the growth in the platform economy is revenue growth in the platform companies.

The limited scope of the platform economy today, however, does not imply that it will not grow over time. The scope can even grow fast if platform solutions are superior tools for clients to organise and complete outsourceable tasks. The characteristics of digital platforms imply that they will improve the matching efficiency for both professionals and clients in the market for independent professional services. Logically, both independent professionals and clients will, therefore, want to utilise these tools to reap the benefits of more efficient markets. There may be some transactions that are withheld from digital platforms, but it is reasonable to assume that new actors in the market for independent professional services will look to digital platforms to match with economic partners. Currently, about 4 percent of professional workers in the Nordics are self-employed.



## 10.2 Clients' demand for outsourcing is limited

More efficient market transactions for professional services increases clients' demand for outsourcing tasks, because the price of independent services is more competitive in the labour market. Platforms create a marketplace where clients' demand for labour and skill can match with labour and skills supplied by independent professionals. The clients in the market for professional skills are mainly firms that need access to specialised skills and knowledge to complete a project or a task. Embedded in this demand for knowledge, is the need for the firm to internalise new sources of knowledge. Therefore, clients also need a core team of employees who can internalise and apply the knowledge that independent contractors bring to the organisation.

This core team, as well as their tasks and responsibilities, may change over time but the client will always have a demand for employees that can utilise external sources of knowledge in the firm. Other drivers and barriers for clients' demand for independent professional services are discussed in chapter 5.

Logically, it follows that there is an upper bound to the demand for freelance services, relative to clients' demand for employees.

## 10.3 Digital platforms will probably compete for tasks with traditional consulting firms

The characteristics of transactions in the knowledge-intensive platform economy suggest that traditional consulting firms will be especially exposed for competition from digital platforms offering services from independent professionals. This is because traditional consulting firms offer similar services to independent professionals. Knowledge-intensive digital platforms will be attractive for clients because prices are likely to be lower, as a result of lower transaction costs and automated matching processes.

On the other hand, systematic knowledge sharing, learning and cooperation are probably easier within a defined firm. Traditional consulting firms also have extensive internal systems for maintaining and developing the knowledge of their employees. These firms may therefore have competitive advantages in offering better trained and more effective teams, when teams are useful for solving tasks. The consulting firm will, for example, handle all HR-related tasks when hiring their team of professionals.

As a result of their extensive internal educational and mentoring programmes, traditional consulting firms may also be more attractive for young talents seeking to develop their career. Knowledge-intensive digital platforms must have a significantly larger footprint in the economy before it is possible to identify a new competitive equilibrium between digital platforms and consulting firms in the market for professional services.

## 10.4 Innovation policy should let knowledge-intensive platform grow in a technology-neutral framework

Knowledge-intensive platforms that are attractive to independent professionals are innovations in themselves. How attractive they will turn out to be for both professionals and clients can only be decided in the market. Innovation policies should therefore be limited to making such digital platforms evolve through their own competitiveness, without special innovation policy measures. Policymakers should be aware that technology- and organizational-neutral legislation is important to enable competition on equal terms and let new business models and forms of organizing work grow to a new equilibrium. We therefore recommend legislators to be attentive to developments in technology and business models, but refrain from being overly conservative or constrictive.

Because knowledge-intensive platforms are in a very early phase, there may be a need for encouraging platform start-ups. In situations where new platform business models are challenging existing regulations, legislative 'sandboxes' may be used to test how regulation works. Legislative 'sandboxes' can take the form of exempting platform start-ups from certain regulations in an initial phase to enable new technology to enter the market in a sustainable way. Denmark's regulative 'free zones' is one recent example of such initiatives (Finanstilsynet, 2019). In other cases, platform companies may only need clarification and/or guidance on existing regulation.

One initiative addressing this is the Danish Business Authority's (Erhvervsstyrelsen) secretariat and website for companies with new business models ([www.nyeforretningsmodeller.dk](http://www.nyeforretningsmodeller.dk)), where companies can communicate with the authorities when in doubt about existing regulation or when they observe unintended barriers for their business model. This also support a level playing field between companies competing to supply the same services in the market.

## 10.5 Professionals employed in outsourceable jobs will experience competitive pressure on wages

Above we argued that clients' demand for independent professional services will increase because the markets for independent professional services are more efficient. Nevertheless, the need to hire employees with certain types of knowledge and skills implies that digital platforms will affect groups of workers differently.

Professionals that have jobs that are outsourceable in the client organisation will experience a downward pressure on their wages. This follows from the fact that the price of independent services is more competitive. As shown in Appendix A, this causes clients to substitute hiring of workers with buying services in the market. Lower demand for employees puts downward pressure on these workers' wages.

The benefits of the efficiency gains provided by digital platforms are divided between independent workers and clients in some way.

If clients can reap some of the benefits from the efficiency gains, they gain an excess of resources. These may be used to compensate the core team, for example for increasing responsibility of managing projects and internalising external knowledge sources. If employees in the core team of the firm are able to reap these benefits, it would increase wage inequality among professional workers. Workers that are displaced may also want to supply their labour at a lower wage than before, amplifying the downward pressure on wages for employees in jobs that are outsourceable.

## 10.6 Unions have an important role in securing social protection and benefits for professionals working through digital platforms

If or when knowledge-intensive digital platforms grow, questions of the social rights of professionals working through platforms become an important issue for users, the platform company and society. If not properly dealt with, lack of sufficient social rights may weaken the platforms attraction among professionals, which in turn will weaken the platform's growth potential.

Ensuring social protection for all platform workers, both high skilled professionals and workers with less skill, is important to secure the Nordic labour market models. Skilled professionals do, however, have a far stronger position in the labour market than low skilled workers. Currently, independent professionals basically have a choice between regular employment and self-employment. Nevertheless, access and contributions to social security for independent workers are important to support the Nordic labour market models. To ensure social security for independent professionals through access to social benefits as sick pay, unemployment benefits, pension systems and safety at work should be a priority for trade unions.

Trade unions also have a key role to ensure that professionals working through platforms reap most of the benefits resulting from the efficiency gains. To exercise this role the strategic response of trade unions should be to organise independent professionals. Many unions are already experimenting with different approaches, as pointed out in chapter 9.

Excess resources from efficiency gains can be used to finance social security and welfare benefits for independent professionals. When the share of the benefits reaped by professionals increases, it implies that the price reduction for clients is also limited. Hence, solutions that allocate a larger share of the benefits to independent professionals affect the market for professionals in 3 ways. First of all, independent workers are better off with social security and welfare benefits. Second, smaller price reductions on independent professional services limit the increase in demand for services mediated by digital platforms. This also stabilises the situation for conventionally employed professionals, because they are to a smaller degree replaced by independent services. This alleviates the downward pressure on wages among professionals that have outsourceable jobs. At the same time, it reduces the potential for increasing income inequality among employees, as described chapter 6.

## 10.7 Given current preferences for employment, digital platforms may double the share of self-employed professionals in the Nordic region

It is uncertain how the platform economy will develop in the future. Realised changes in the labour market will depend on price mechanisms, organisation of internal and external structures of business and knowledge accumulation, preferences of workers, global competition and many other aspects.

If we limit the analysis to the Nordic labour markets, however, there are currently conventionally employed professionals that would prefer to be self-employed under the right conditions. If digital platforms can provide the right conditions for independent professionals, then a simple calculation of survey results on professionals' preferences for self-employment show that the share of independent professionals in the Nordic region may double, from about 5% to 10%.

Given these preferences, Denmark would experience the largest increase in independent professionals, increasing by almost 2.5 times the current share. Sweden, Norway, and Iceland would also experience at least a doubling in the share of independent professionals. Finland, who currently have the highest share of self-employed in the Nordics, would experience a 50% increase in the share of independent professionals.



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## 12 Appendix A

This appendix discusses how the KIPE can affect the labour market and the economy. The contents are related to the discussion in chapters 5,6 and 8, but take a theoretical and technical approach to the concepts, applying common economic models to the discussion. The conceptual models are used to ensure a uniform and precise discussion of economics effects of potential growth in KIPE.

We hypothesise that KIPE will impact the labour market through two different channels. The first channel is an efficiency channel, in which digital platforms facilitate more efficient matching between independent workers supplying labour and skills in the market and clients that demand these skills. The first channel will therefore mainly affect the activities of workers that are already working independently. The second channel, however, takes into account the substitutability between buying freelance services and hiring employees that clients face in the labour market. When freelance services are more efficiently conducted in the market, it may affect clients' demand for freelance services, as an alternative to hiring employees.

The first channel described above looks at the effects of digital platforms in the market for professional services in isolation. Analysis of the second channel take the whole knowledge-intensive labour market into account, including the effects on both independent workers and wage earners. The subsequent sections will theoretically discuss how the platform economy will affect economic growth, composition of the workforce and wages.

The analysis assumes that workers that are currently working independently (e.g. as freelancers or self-employed) have the lowest costs associated with utilising the benefits and participating in the platform economy. That is because these groups of workers are already active in the same labour market segment, but traditionally they have used other methods for sourcing work and matching with potential clients.

## 12.1 Channel 1: Digital platforms reduce the transaction costs in the freelance market

In chapters 5 and 8 we discussed how buying freelance services in the market is associated with substantial transaction costs, related to searching and bargaining to match with a worker, as well as monitoring effort and enforcing the contract. Figure 12.1 presents the effect of significant transaction costs in the freelance market for professional services, in a simple economic model. For simplicity, the model assumes that the wage for the worker is the only real cost associated with producing professional services.

$D$  is the demand from clients, which decreases with the wage level.  $S$  is the labour supply from independent workers, which increases with the wage level.

When there are no transaction costs in the market, the cost of supplying an additional unit of labour supply (e.g. an hour) is equal to the hourly wage:

$$C_{worker} = W_{worker}$$

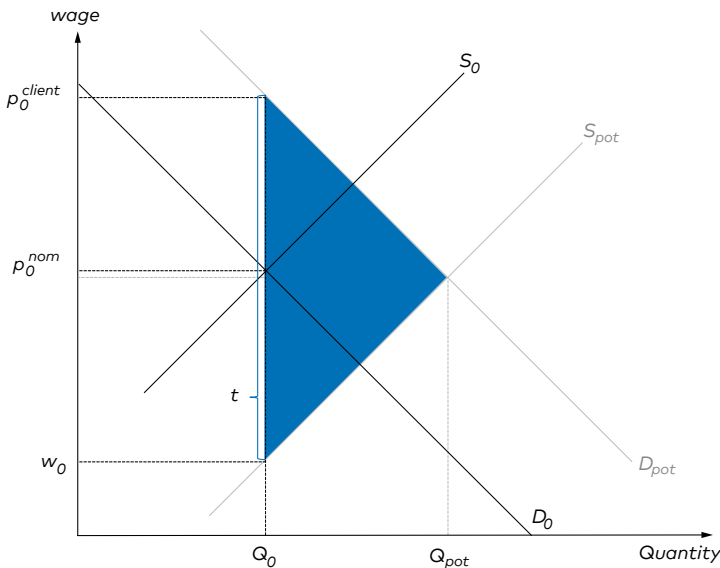
Equivalently, for the firm, the cost of buying services is only the wage of the worker:

$$p^{client} = W_{worker}$$

In this situation,  $S_{pot}$  and  $D_{pot}$  represent the 'real' demand and supply curves, and the market will realise production of  $Q_{pot}$  units.

When there are substantial transaction costs associated with clients and workers matching in the market, however, both demand and supply is reduced.

**Figure 12.1 Transaction costs in the market for freelancers**



Source: SØA.

The cost for the worker to produce an additional hour of services is now  $C_{worker} = w_{worker} + tc_{worker}$ , where  $tc_{worker}$  represents the transaction costs for workers in the market. For any given labour supply, the costs of production have increased, represented by the shift from  $S_{pot}$  to  $S_0$ , which is realised in the market with transaction costs.

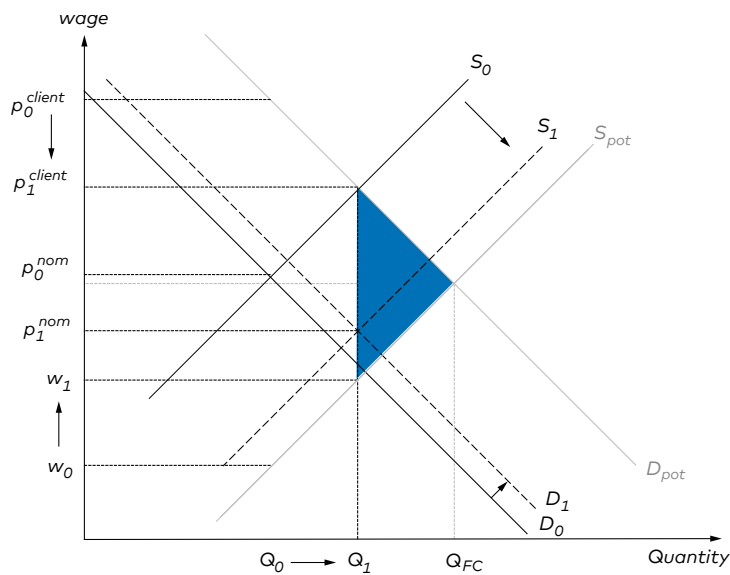
Similarly, clients are only willing to pay wages that take into account the transaction costs faced by the client,  $p_0^{client} = w_{worker} - tc_{client}$ , where  $tc_{client}$  represent the transaction costs faced by clients in the market. Implying that clients' realised demand curve is represented by  $D_0$ , which is lower than  $D_{pot}$ .

In Figure 12.1, the height of the red triangle,  $tc$ , represents the sum of the transaction costs for clients and workers. When there are transaction costs present in the market, the figure shows that the market actors will only realise production of  $Q_0$  units, which is lower than the optimal level of  $Q_{pot}$ . The area of the blue triangle represents the welfare loss that is created by transaction costs.

The assumptions in the model above imply that workers and clients share the burden of the welfare loss created by the transaction costs. In the market with transaction costs, the client will pay the worker  $p_{nom}$  for the service. However, the real cost for the client is denoted by  $p_0^{client}$ , which takes into account the transaction costs. Similarly, the worker is paid  $p_0^{nom}$ , but the real wage, accounting for transaction costs, is actually  $w_0$ .

As argued in chapter 5 and 8, platforms are likely to reduce the transaction costs currently associated with buying services in the market for freelance services. Specifically, by gathering information and creating a common market place with defined rules, where clients and workers can meet, interact and match. The effect of lower transaction costs is illustrated in figure 12.2. Both the demand and supply curves are positively affected by reduced transaction costs, for clients and workers respectively. In the figure this is illustrated with both curves shifting to the right. In this example, workers are assumed to get the largest efficiency gains from platforms, indicated by the large shift from  $S_0$  to  $S_1$ .

**Figure 12.2 How reduced transaction costs affects the market for current freelancers**



Source: SØA.

Lower transaction costs have resulted in several effects on the market for freelance services. The most obvious difference between figure 12.1 and figure 12.2 is that the area of the blue triangle is significantly smaller. Because transaction costs are reduced, the welfare loss is also smaller. Specifically, we see that the new equilibrium (where  $D_1$  and  $S_1$  intersect) realises production of  $Q_1$  units, which is more than  $Q_0$ .

The efficiency gains have also benefited both the clients and the workers in the market. For workers, we see that the real wage has increased from  $w_0$  to  $w_1$ . At the same time, the real cost for clients has been reduced from  $p_0^{client}$  to  $p_1^{client}$ . Because of how the benefits, measured in lower transaction costs, are distributed, the nominal price of services in the market has also been reduced to  $p_1^{nom}$ .

Keep in mind that, as long as there is an inter-mediate platform that charges clients and workers a 'cut' for facilitating transaction on the platform, the transaction costs will never be equal to zero.

Following the simple model above and limiting the analysis to the existing market for freelance services, all market actors are better off with more effective mediation of tasks. The potential reduction in transaction costs associated with digital platforms is crucially dependent on participation from a large number of both workers and clients, to ensure that there is a constant availability of both labour and tasks on the platform. Incentives for clients and workers to participate in the platform economy is discussed in chapter 5 and 6 respectively. Note also, that if there is a large increase in the supply of independent professional services, for example from global competition, the  $S_{pot}$  will shift to the right and the real wage will be decreased.

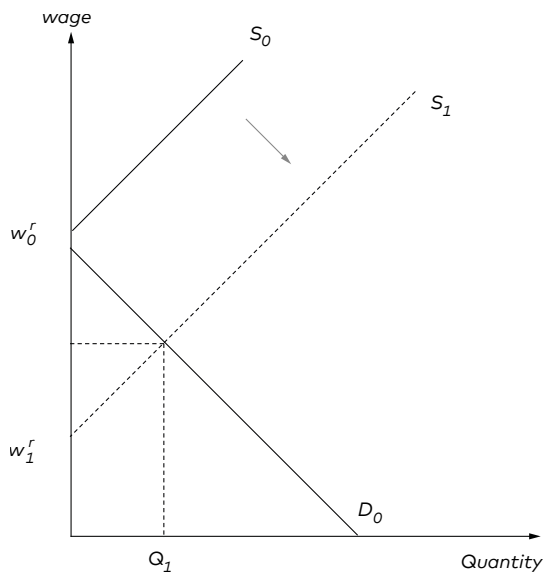
### 12.1 Reduced transaction costs can create new market opportunities

The previous section showed how lower transaction costs can increase production from a relatively low level. In other cases, transaction costs may be the reason why no workers and clients are able to match in the market. Figure 12.3 illustrates a situation where the reservation wage of workers,  $w_0^f = w_{worker} + tc_{worker}$ , is higher than what any client is willing to pay for the service.  $w_0^f$  is higher than any point on the demand curve  $D_0$ .

For simplicity, the benefit of reduced transaction costs is only illustrated for workers, by shifting the supply curve from  $S_0$  to  $S_1$ . With  $S_1$ , the new reservation wage,  $w_1^f$ , is lower than the intercept between the vertical axis and the demand curve, and the market can realise production of  $Q_1$  units of freelance services. In chapter 5 this is exemplified with new medical services like Legevisitt.no and legal services like Avtal24. If the new,  $Q_1$  units are produced by workers that would otherwise be unemployed, this change creates additional societal benefits.



**Figure 12.3** Transaction costs too large for clients and workers to match in the market



Source: SØA.

## 12.2 Channel 2: How KIPE can affect the composition of the labour market

There are two ways we can analyse how KIPE can affect the composition of the labour market. The first approach we will discuss looks at the decision for a representative client to buy freelance services that will contribute to their production. The second approach looks at the labour market in a macro perspective, comparing the relative labour supply of freelancers and wage earners, and how lower transaction costs in the freelance market affects the dynamics across employment forms.

Both of the following analyses assume that buying freelance services in the market is, at least to some degree, a substitute for hiring employees to complete the same tasks. The following analyses are also limited to the business market, implying that all clients are firms, not individual consumers.

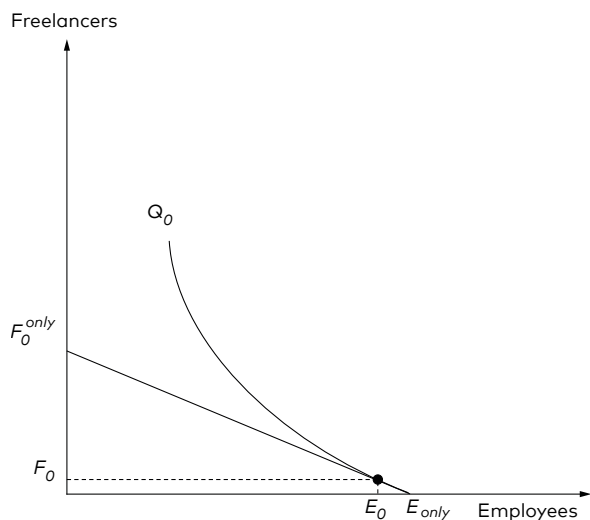
### 12.2.1 Lower transaction costs reduce the relative price of freelance services

Given the assumption that buying freelance services is an alternative to hiring employees to do work, a client has to choose which labour input is the best. To simplify the analysis, we assume that employees and freelancers competing for the same task have the same productivity.

However, we also assume that the firm is interested in keeping and accumulating an absolute minimum number of employees, as a core team in production. Without this core team, the firm itself would cease to exist. This analysis assumes that the firm takes the price of freelance services in the market and the wage of employees as given.

Figure 12.4 illustrates the client's choice between using freelancers and employees to produce.

**Figure 12.4 Optimal combination of freelancers and employees**



Source: SØA.

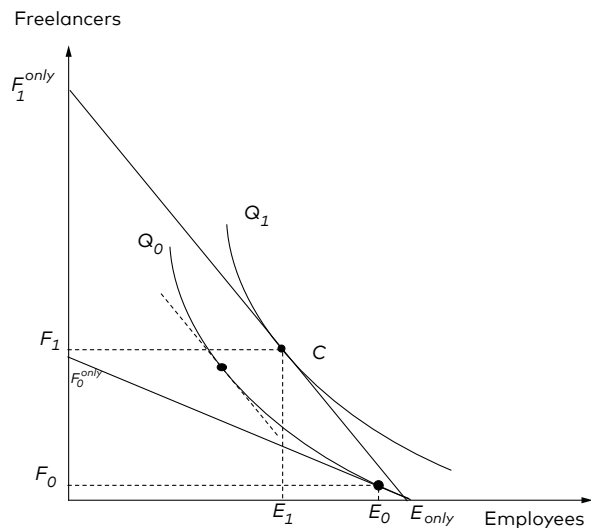
The line between  $F_{only}$  and  $E_{only}$  is the budget line.  $F_{only}$  is the maximum amount of freelance services the firm can buy, when it allocates the whole budget to buying freelance services instead of hiring employees. Equivalently,  $E_{only}$  is the maximum number of employees that can be hired with the same budget.

$Q_0$  is an iso-quant-curve. For any combination of freelance services and employees along the iso-quant, the firm will produce  $Q_0$  units.  $Q_0$  is drawn so that there is a corner solution, where the firm may find it optimal to only hire employees, and not buy any freelance services. The shape of  $Q_0$  is likely to differ across firms and industries but are also likely to vary across different tasks inside a single firm. Some firms may be able to substitute nearly all their employees with freelancers, which would imply that  $Q_0$  would move towards  $F_0^{only}$ , and become almost a straight line. Other firms may not be able to substitute their internal workforce with freelancers to the same degree, which would make  $Q_0$  more vertical. These differences can, for example, be explained by the need for specialised and expensive equipment or that the tasks are of special strategic importance to the firm.

In the example above, the firm mainly uses employees to produce, but supplement the staff with some knowledge-intensive services that are bought in the market. Statistics presented in chapter 4 suggest that most Nordic firms mainly hire employees to complete tasks, rather than freelancers.

As we have shown in section 12.1, however, digital platforms are likely to reduce the real cost of buying freelance services in the market. This implies that  $F_{only}$  will increase. With the same budget, the client can now afford to buy more freelance services in the market. This dynamic is illustrated in figure 12.5.

**Figure 12.5 Optimal combination of freelancers and employees, with lower transaction costs in the freelance market**



Source: SØA.

There are two steps to the process for the firm to adapt to the new prices of buying freelance services in the market. First, the firm moves from point A to point B, substituting employees with freelance services, which have become relatively cheaper. If the firm only wants to produce  $Q_0$  units, this is the total effect of the relative price reduction of freelance services. In this case we see that the firm will replace almost half of their workers with freelance services bought in the market<sup>27</sup>.

However, in point B, the firm also realises that lower prices on freelance services has decreased their overall budget, which is now represented by the line between  $E_{only}$  and  $F_1^{only}$ . If there is sufficient demand for their product in the market, the firm can increase their profits by producing  $Q_1$  units. The optimal combination of freelancers and employees is then found in point C. In point C, the firm hires more employees than in B, but still fewer than in A.

<sup>27</sup> This is referred to as the substitution effect.

However, depending on the location of the initial situation (point *A*), the shape of *Q* and the price effect of lower transaction costs, the number of employees in *C* may be even higher than *A*<sup>28</sup>.

As a result of the dynamics described above, the effect on the number of freelancers a firm will use is unambiguous. Lower prices for freelancers will result in increased demand for freelancers by the firm. When it comes to the number of employees the results are ambiguous. The first effect described above will reduce demand for employees, while the second increases demand for employees. Ex ante it is not possible to conclude which effect is largest.

### 12.2.2 Macro perspective of the labour force composition

In the previous section, we analysed how firms' decision to substitute employees with freelance services may be driven by differences in price. In this section, we will analyse how competition between workers supplying freelance services and traditional employees can affect the composition of the labour force. In this part of the analysis we assume that all firms that consider buying freelance services via platforms are indifferent as to whether the tasks are completed by a freelancer or an employee, implying that freelancers and employees are perfect substitutes. In figure 12.5 this would be the case in the area around point *A*.

Figure 12.6 illustrates the current composition of the labour force in the Nordic countries. Currently, about 7% of the tertiary-educated workers in the Nordic countries are self-employed. Because almost all tertiary-educated workers are currently active in the labour market, total employment can be illustrated by a 'bathtub diagram'.

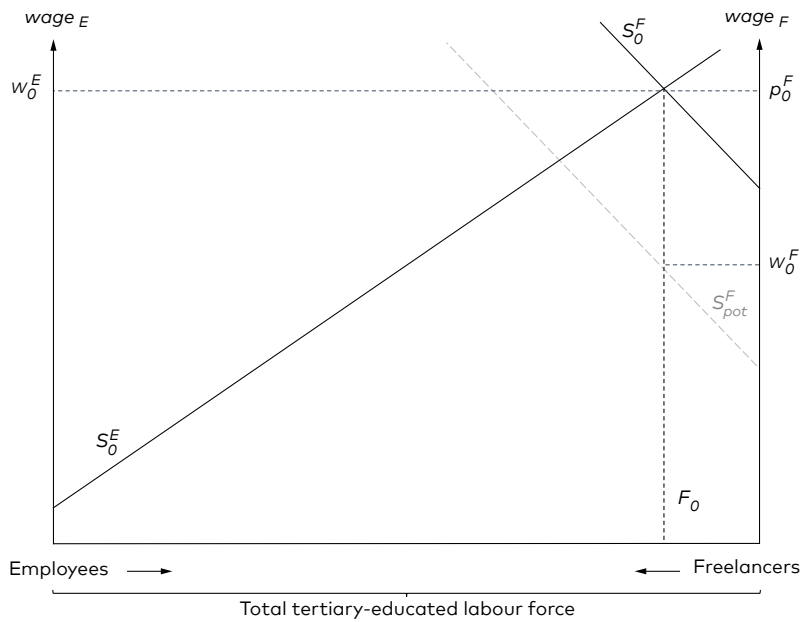
The left side of the diagram represents labour supply from traditional employees, which increases with the wage. For simplicity, we assume that there are no transaction costs in the market for traditional employees.

The right side of the diagram is essentially the supply of labour from freelancers, similar to figure 12.1, where there are transaction costs. As represented below, this figure suggests that there are workers willing to supply freelance services in the Nordics, but that there are barriers for them to supply their services at competitive prices in the market. This fact is reflected in table 6.2, which found that there are more workers that would prefer to be self-employed, under the right circumstances.

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<sup>28</sup> This is referred to as the income effect.

**Figure 12.6** Current composition of the tertiary-educated workforce in the Nordic countries

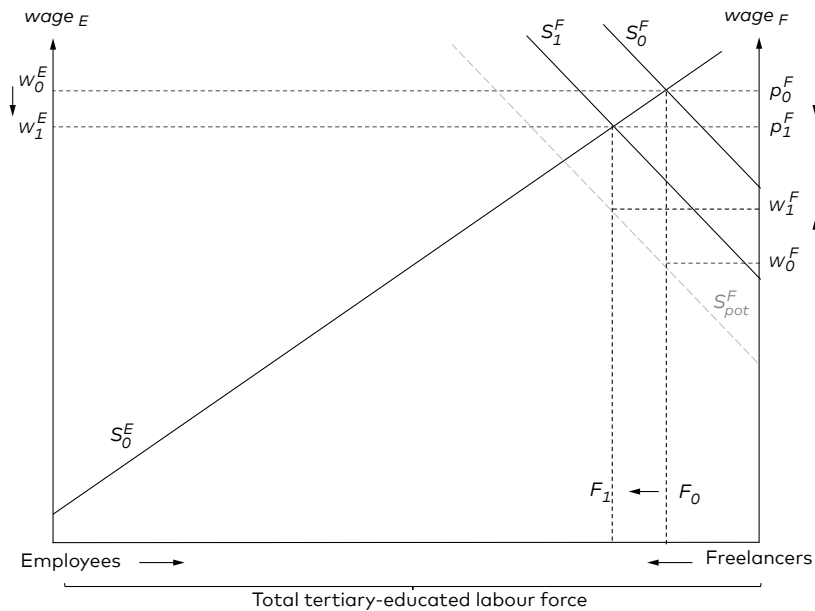


Source: SØA.

In the current labour market employees are paid the wage  $w_0^E$ . Clients pay  $p_{nom}^F$  for freelance services, but because of the transaction costs the real wage is  $w_0^F$ .

Again, more effective ways of organising work via platforms creates a positive shift in the supply curve for freelance workers. This results in  $S_0^F$  shifting to the left in the diagram. Figure 12.7 illustrates the shift from  $S_0^F$  to  $S_1^F$ .

**Figure 12.7** Composition of the tertiary-educated workforce, with lower transaction costs in the freelance market



Source: SØA.

As long as clients are indifferent between hiring employees and buying freelance services, reduced transaction costs have several important implications for conditions in the labour market for workers.

First of all, the shift in the supply curve of freelancers has lowered the price of freelance services in the market, from  $p_0^F$  to  $p_1^F$ . Because the transaction costs are decreased, this has at the same time increased the real wage of freelance workers from  $w_0^F$  to  $w_1^F$ .

Because freelancers are now able to supply their labour at a lower price than before (without lowering wages), they put downward pressure on the wages of employees. The new equilibrium wage is located where  $S_1^F$  and  $S_0^E$  intersect. This reduces the real wage of employees from  $w_0^E$  to  $w_1^E$ . This wage decrease is purely driven by the increased competitiveness of freelance workers, who are able to complete more tasks with the same amount resources. In this static case, the overall employment effect would be that the competitive pressure from platform workers cause some employees to lose their jobs and become unemployed. Specifically, the group of employees that are in the interval between  $F_0$  and  $F_1$  will lose their jobs in this setting.

There is a nuance to this result, that figure 12.7 does not reflect. In the second stage of figure 12.5 we argued that the number of employees does not necessarily have to decrease. The same dynamic is relevant here, because, an alternative to replace employees with freelancers is to use additional freelance labour supply to increase production. This would expand the width of the 'bathtub diagram', and the total effect on employment is ambiguous.

### **12.3 Digital platforms are unambiguously better for freelancers, the effect on employees is uncertain**

The overall result of the theoretical analysis in this chapter is:

- Freelancers will unambiguously benefit from digital platforms that make the organisation of freelance work more efficient. This is also caused by the opportunity to keep matches that are not made through platforms outside of the platform economy.
- Digital platforms make labour transaction for efficient, hence, they also increase productivity in the economy.
- Digital platforms increase the competitiveness of freelance services compared to hiring employees, hence they also create downward pressure on employees' wages. The total effect depends on how clients and workers utilise the efficiency gains.
- The effect of platforms on total employment is uncertain. Higher productivity implies that the same amount of output can be produced by fewer workers. On the other hand, higher productivity also implies that firms can increase production for a given price, to increase profits.



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