You Had One Job

TRANSFORMING SOCIAL SECURITY SYSTEMS INTO THE DIGITAL WORKING AGE

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You had one job – Transforming social security systems into the digital working age

The European Liberal Forum (ELF)
+ NEOS LAB (editors)

First edition, first print

Printed by Printpool 2018

ISBN: 978-3-200-06038-8

Published by the European Liberal Forum asbl
with the support of NEOS LAB.

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Since 2016 he worked on the development of the social finance market for the European Commission, conducted studies on social finance for the Association of German Foundations among others and co-authored a book on “Impact Investing” published with Palgrave Macmillan. He is also a faculty member of the University Witten / Herdecke and gives lectures at other German universities on closely related topics.

The author would like to thank participants of the workshop held at the NEOS Lab in May 2018, various discussion partners at government agencies, insurance companies and universities and Dieter Feierabend for guidance on the development of the arguments.

Executive Summary

According to the latest figures, 2.3% of Europe's working-age population receive significant income from platform work while most of them have no social security protection such as maternity or unemployment benefits.

At the same time, platforms across Europe demand legal clarity for the employment status of platform workers and some have asked governments to allow them to buy collective social security benefits which they could provide to platform workers.

This study assesses the societal benefits of platforms and finds them to be overall positive. Some platforms have been justifiably criticized for exploitative business practices, poor labor rights and low and unreliable payments. However, they also generate new demands, help to diffuse innovation faster and are an employment option for persons who need to stay at home or need greater flexibility. It also assesses the deficiencies found in the sector (low levels of skill development, access to social security, reliability of payment and classification of workers). The analysis of the deficiencies will be used to develop a social security scheme for platform workers. This study also seeks to outline the shape of the platform economy. Billions of Euros are invested in business models which follow a different operating system and they become increasingly relevant. Platforms such as Uber, Foodora, 99Designs, Freelancer.com, TaskRabbit or lesser known private platforms match demand and supply within the labor market by using algorithms and managing all administrative aspects such as quality management, terms of services or payments.

One major issue remains the social security protection of those workers as the current systems were designed when employment relationships were distinctly different. This study develops a model for an "Ecosystem Fund" which would cover workers within the platform economy. The proposal includes specifications such as access and contributions to the fund but also waiting periods and benefits. It is innovative as it couples unemployment benefits with skills development and could be possibly expanded to other segments of the working population.

Contents

1 Introduction

Around the world, a heated debate has been emerging questioning the fundamentals of automation. Is it stealing jobs in various sectors or creating them? Others argue that it's impossible to predict whether jobs will be lost or gained due to automation. "Search algorithms reduced the need for travel agents, but Uber increased demand for drivers" (Mahtani & Miller, 2017). The developments with technology will depend on the ways that businesses implement these changes and how they will reflect on society.

This chapter will focus on the repercussions that the debate will have on business and society. The first part will introduce concepts and debates. These debates often reach staggering conclusions, translated as social risks, such as mass unemployment. Arguing that robots will be able to replace most of the working population soon. These results have to be taken with a grain of salt. Section 2.2 serves this purpose. Section 2.3 will address how the fundamentals of existing businesses will be addressed and the challenges they will bring. Section 2.4 examines the repercussions the trend has on insurance and public health. The last part, Section 2.5, will focus on the repercussions of automation in terms of global competitiveness around the world.

1.1 Relevance and aim of the study

According to the latest figures, 2.3% of workers receive significant income from platform work (Pesole et al., 2018). Out of those, 69.5% have no maternity benefits and 63.1% have no access to unemployment benefits (Forde et al., 2017).

At the same time, platforms across Europe demand legal clarity regarding employment status and some have asked governments to allow them to buy collective social security benefits which they can provide to platform workers (de Groen et al. 2018).

The current systems were designed at a time when employment relationships were distinctly different and most countries have long known either an employed or a self-employed status. Platform workers are a typical example of a hybrid form: They are able to choose their work but have limited flexibility in how they manage and structure the work.

These questions are the context for the study. The first chapter will look at the broader economical and societal changes and assess the potential role of platforms. The second chapter will look at the platform economy itself and describe it along the lines that describe the organization and allocation of work. The third chapter will analyze the deficiencies of the platforms when it comes to working conditions. The fourth chapter will develop a model for an "Ecosystem Fund" which might be able to cover the deficiencies described in the third chapter. The study will conclude with a summary of the findings and an outlook on what some first steps might be.

1.2 Background

Platforms are the result of broader economical, technical and societal changes. They would not be conceivable without the lower transaction costs enabled by digitalization and changing labor markets. We also know that Europe has a skills as well as a related productivity problem that will be described and discussed below.

1.2.1 PROBLEM: PRODUCTIVITY

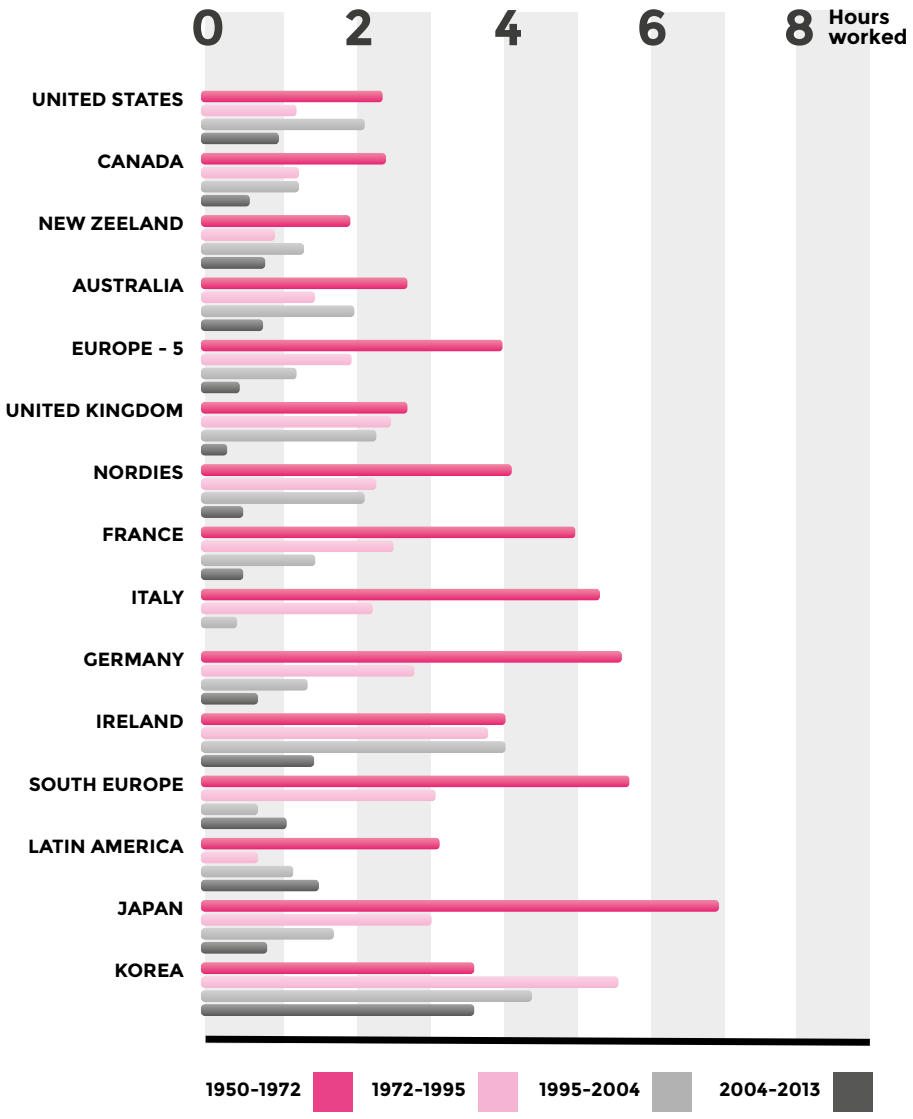
There has been a wave of studies, reports and books about the future of work and the impact of technology on work[1]. Most of the books and studies base their arguments on the exponential nature of technological change. Resulting scenarios can be bleak with artificial intelligence taking over the universe in search of energy and enslaving humans in the process. In less extreme scenarios machines are making humans redundant and replacing half of the human workforce often without taking into consideration second-order effects.

Given all these developments and well-known examples (e.g. robotic warehouses, driverless cars, drone delivery, automatic translation or IBM Watson) it is surprising that productivity growth is at a record low. Moreover, productivity gains are unevenly distributed and there are knowledge gaps ("frontier enterprises").

1 Some books include:
Bostrom, Nick. 2014. [(Superintelligence: Paths, Dangers, Strategies)]. Oxford University Press.
Friedman, Thomas L. 2016. Thank You for Being Late: An Optimist's Guide to Thriving in the Age of Accelerations. Allen Lane
Ross, Alec. 2016. The Industries of the Future. New York, NY: Simon & Schuster.
Rushkoff, Douglas. 2016. Throwing Rocks at the Google Bus: How Growth Became the Enemy of Prosperity. Portfolio Penguin.

Moore's law that predicted an exponential growth of computing power has held true for decades. However, labor productivity growth does not reflect the exponential nature of this computational development. The following figure shows that productivity growth is rather at a record low.

FIGURE 1: LABOR PRODUCTIVITY PERFORMANCE IN LONG RUN COMPARATIVE PERSPECTIVE



Source: Adalet McGowan et al. (2015)

One explanation is given by Adalet McGowan et al. (2015):

> Labor productivity at the global frontier increased at an average annual rate of 3½ per cent in the manufacturing sector over the 2000s, compared to an average growth in labor productivity of just ½ per cent for nonfrontier firms, and this gap is even more pronounced in the services sector.

This implies that there is room to boost productivity by allocating human talent more effectively and revive what they call the "diffusion machine". One could argue that there is a need to better allocate talent and to make talent more easily accessible.

1.2.2 PROBLEM: SKILLS AND TASKS

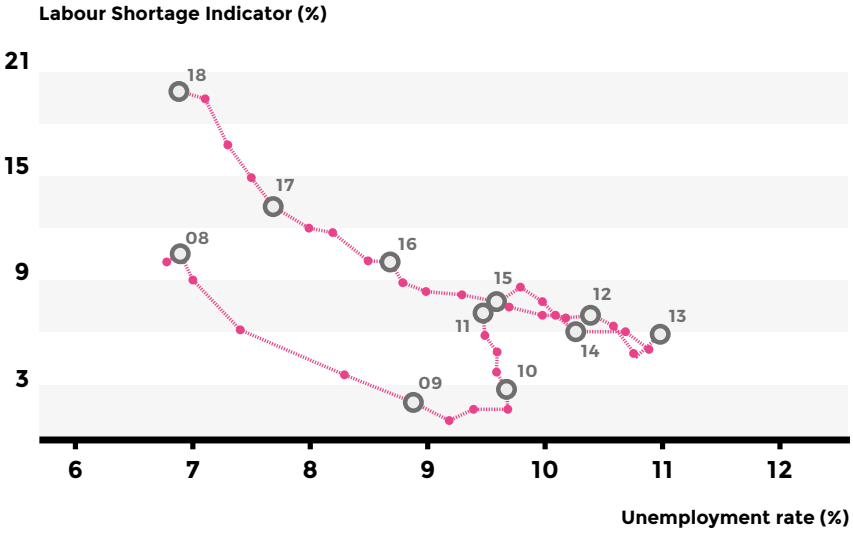
There is also a mismatch between supply and demand in the labor market. The first number to look at is the number of job vacancies.

Across the European Union there are 2.2% job vacancies with some variation between countries. While vacancies are higher in Germany (2.9%[2]), the Czech Republic (4.8%) and Austria (2.8%) they are lower in Greece (0.7%), Spain (0.9%) and Poland (1.2%) as of the first quarter of 2018 (Eurostat 2018).

Although there is a lot of talk about the loss of jobs, the evidence is pointing to the contrary. Job churn is at a record low even for the United States (Atkinson and Wu 2017)[3]. This leads many to argue that policy makers should be worried about productivity growth that is too slow.

Data from the European Commission (2018) illustrated in the Beveridge curve show that there is labor (i.e. skills) shortage but simultaneously low unemployment[4]. That might lead to the conclusion that skills need to be more efficiently allocated among European companies and platforms could take a role in this process. Moreover, skills need to be developed in life-long learning programs.

FIGURE 2: BEVERIDGE CURVE 2008-2018 – EUROPEAN UNION



Source: European Commission (2018)

The low rate of job losses might be explained by the dynamics of the economy and the development of job portfolios. Each job consists of a number of tasks and skills and a good example might be the liftboy. This specific job might have disappeared but has reemerged in another form. His duties included customer relationship management, security and concierge services among other things that can be now found in other roles. Each job requires thus a number of skills (language skills, technical skills, personal skills, methodological skills, IT-skills, project management skills, etc.) and is a bundle of different skills.

2 The equivalent of 1,179,774 jobs.

3 Job churn is defined as the sum of the absolute values of jobs added in growing occupations and jobs lost in declining occupations.

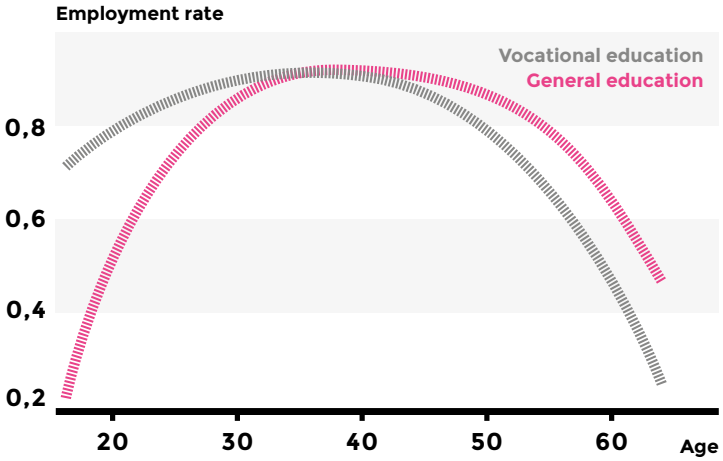
4 The current value is the highest since records began in 1982.

Skills remain an important driver of wages. There are two ways to estimate wages and both are related to skills. Thousands of studies are based on Mincer (1974) which links wages to years of schooling and experience. A recent study by Montenegro and Patrinos (2014) found that the cross-economy average rate of return is around 10% per year of schooling. Those studies are based on easily accessible and observable schooling data. Hanushek et al. (2015) use data from the PIAAC (Programme for the International Assessment of Adult Competencies) and show that a one-standard-deviation increase in numeracy skills (based on a normalized data set) is associated with an 18% wage increase among workers.

However, firms have the advantage that employees are investing in very specific skills as there is an implicit contract. Platforms that we will discuss in this study have no specific incentive to facilitate these productivity-enhancing long-term investments by employees.

The development of skills remains an issue as shown by the lifetime employment of persons educated in different systems. A vocational system might bring benefits earlier in the career but results in higher unemployment later in life as shown in the following figure.

FIGURE 3: EDUCATION TYPE AND LIFE-CYCLE EMPLOYMENT IN DENMARK, GERMANY AND SWITZERLAND



Source: Hanushek et al. (2017)

The higher unemployment for persons educated in the vocational systems underlines the need for life-long learning.

5 Global markets and scale effects have contributed to an unbundling of skills where single skills can be sufficient to earn a decent income.

1.2.3 OBSERVATION: LOWER TRANSACTION COSTS AND REDUCED INFORMATION ASYMMETRIES

Nobel Laureate Coase (1937) asked the simple question why firms exist. He argues that they are a response to the high costs of using markets and refers to them as the "costs of using the price mechanism". We can also refer to them as transaction costs which include search and information costs and all costs related to the delivery of the services or product.

Digitalization has reduced those transaction costs as market participants can be found with a few clicks. Digital markets offer new levels of transparency and thus contribute to reduced information asymmetries.

Mega companies were created because it was cheaper to keep activities in-house. Digitalization will continue to drive those costs down and will possibly lead to smaller firms as it increasingly is becoming easier to outsource and allocate work to on-demand workers and platforms.

The platform economy is an expression of this trend. Shared assets which also include labor have never been well so accessible and affordable with low entry barriers and easy payments (Aloisi 2015).

1.2.4 OBSERVATION: CHANGING LIFESTYLES

A final observation is of the changing lifestyles. Some refer to the new generation (e.g. Armour 2005), while others speak of a postmodern lifestyle (Reckwitz 2017).

Whatever the reasons might be, the results are obvious. It seems that the old workplace contract is becoming outdated. Co-working spaces are increasing their share of office space. Hybrid career models and changes between different sectors are becoming more common. Employees are looking for a more balanced life-style resulting in more family time and more impact in their daily work.

TAKE-AWAYS

1. Digitalization and changes in lifestyle have led to structural changes.

2. Productivity growth is at a record low.

3. Skilled labor shortage is at a record high.

2 Classification of platforms

2.1 Introduction

Imagine yourself setting up a dog walking company. You would hire a web designer to set up the website, a logo designer, an online marketing consultant to design the marketing strategy, and search for twenty or thirty people who you could hire as dog walkers on a freelance basis. You might even contemplate a system where dog owners can select their dog walkers. All those services can be procured on platforms and even the final design would be a platform matching supply and demand with very limited risk for the company.

Imagine that you are a translator living in rural France and translating Finnish to French with a focus on industrial engineering. You might want to join one of the 9,700 freelance translators in a private pool managed by the largest UK translation company or a pool of 6,000 freelance translators working out of a Hamburg-based translation company.

These two examples illustrate the relevance of platforms. Such platforms exist for designers, drivers, craftsmen, fitness coaches, speech-writers, consultants and language or tennis coaches among others. The Economist (2018) even mentions the recent category that engages people to remove spiders from the home.

2.2 Classification

Platforms are often discussed with Uber, Airbnb and Lyft in mind. This paper takes a slightly different view as it takes in private as well as entertainment platforms among others.

The topic of this study is not straightforward as there are myriads of ways to generate incomes using online platforms. Within this study four different categories will be used. This contributes to a better understanding of the sector and is clustered along the lines how work can be organized:

- Static and dynamic markets
- Tasks, skills and knowledge-based platforms
- Single and multiple-buyer platforms
- Low and high-risk platforms

Other criteria used are whether a platform is local or online, offer or contest-based, type of selector (client, platform or worker), scale of task (micro or larger) and skills level (low, medium or high) (e.g. Schmidt 2016; de Groen et al. 2018).

2.2.1 STATIC AND DYNAMIC MARKETS

The first distinction is on the dynamics of the platform. A platform like Streetbees is offering access to a local population that can deliver certain services or tasks. Helpling provides a database of local cleaners to hire through the platform. Static markets do not respond instantly to changes in the demand structure.

A dynamic market automatically matches workers and clients such as in the case of Uber or Foodora. Others are using sophisticated mechanisms or two-stage processes where workers are pre-selected with an algorithm and then apply for the "gig". Dynamic markets also use price mechanisms to better operate the platform.

2.2.2 SKILLS, TASKS AND KNOWLEDGE

A second category is based on the distinction between skills, tasks and knowledge. Freelance translators, consultants, logo designers or IT engineers are selling their skills to achieve a certain but somewhat open-ended goal while an Uber driver is working on a more easily definable task.[6] There are also opportunities to sell knowledge on certain platforms.

Skills: There are markets for skills such as translation, IT-services, design or open innovation processes. The results are often open-ended and subject to quality differences. Relevant skills need to be up-to-date and platforms might offer fewer opportunities to update them.

Tasks: Tasks typically involve data entry services, driving, delivery services or cleaning services. There are also some tasks related to property owned or managed by an individual. This would include client hosting at Airbnb or peer-to-peer car rental.[7]

Knowledge: Expertise platforms interview experts in certain areas and sometimes pay them substantial fees for their time. Some online survey platforms offer rather small amounts in exchange for participation in their surveys.

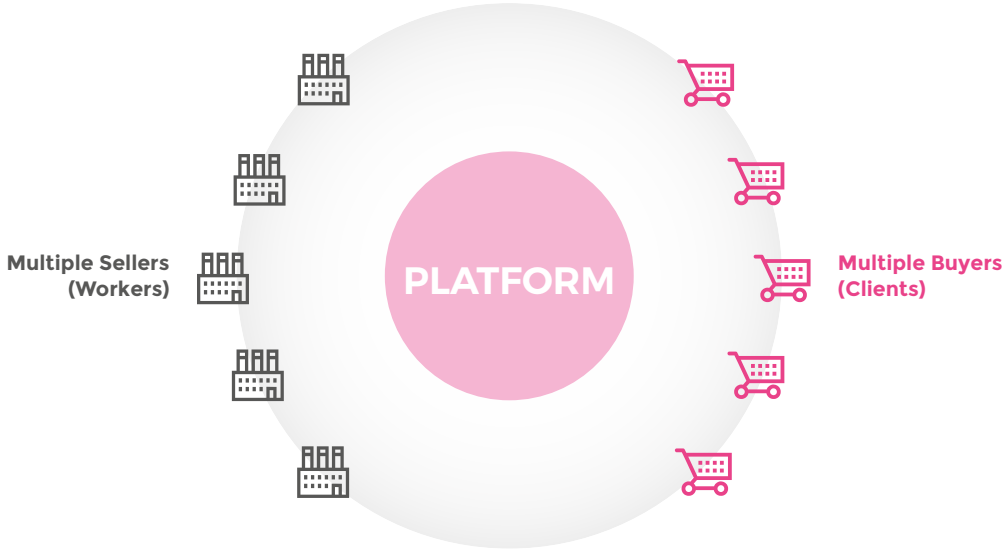
2.2.3 SINGLE AND MULTIPLE-BUYER PLATFORMS

The mechanisms of the platform economy are usually associated with open source and public access with many workers and many clients on both sides as shown in the following figure. There are multiple sellers (workers) and multiple buyers (clients) and the platform matches both sides. In some cases, the worker does not know the identity of the client and only interacts with the platform.

6 It is obvious that even a Uber driver needs certain skills to conduct his task but the focus is more on the tasks he has to deliver.

7 Other studies have excluded Airbnb but it includes almost daily work of cleaning, interacting with the guests and managing the accommodation.

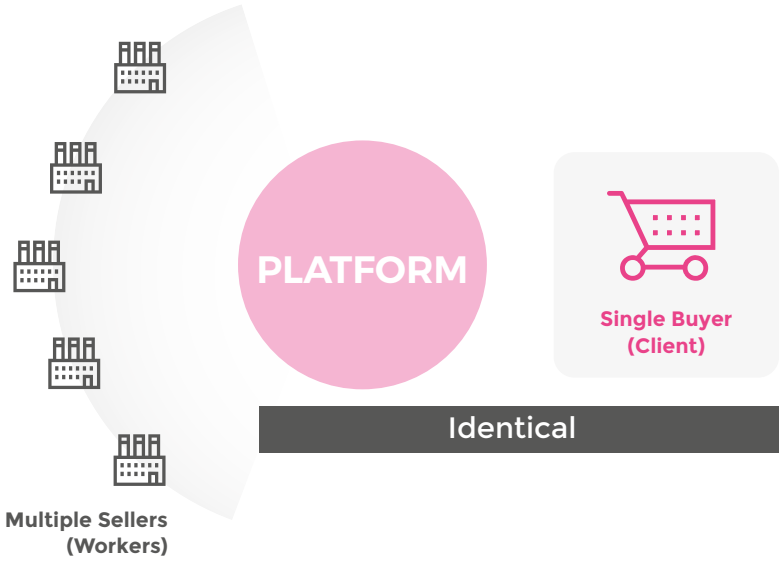
FIGURE 4: STRUCTURE OF A MULTI-SIDED PLATFORM



Source: own illustration

It is often overlooked but private platforms have been established for years and might even be older than public platforms. Even a small translation office might have a database with a few hundred translators available for regular work. The largest translation company has around 100,000 freelance translators. There are multiple sellers on the supply side but only a single buyer on the demand side.

FIGURE 5: STRUCTURE OF A SINGLE BUYER PLATFORM



Source: own illustration

2.2.4 LOW AND HIGH-RISK PLATFORMS

It is often mentioned that work on a platform requires significant investment. Building a presence on YouTube, generating 5-star reviews, buying a car for Uber use or renovating an apartment for Airbnb is cost and time-intensive. Signing up in a private pool for translators or a database for consultants might take a few minutes and carries little risk.

Building a presence and a following on YouTube might be an aspiration for many, although only a fraction achieves this. Once achieved it might become a regular income stream for a few hundred or thousand persons across Europe. The same applies for Instagram but also for such things as online poker or affiliation marketing.[8]

Low-risk platforms have no delay between activities and payments (e.g. translation, transportation) although some of them require substantial up-front investments (e.g. Airbnb or Uber).

2.2.5 OVERVIEW AND DEFINITION

The categories discussed above are summarized in the table below.

TABLE 1: STRUCTURE OF PLATFORMS

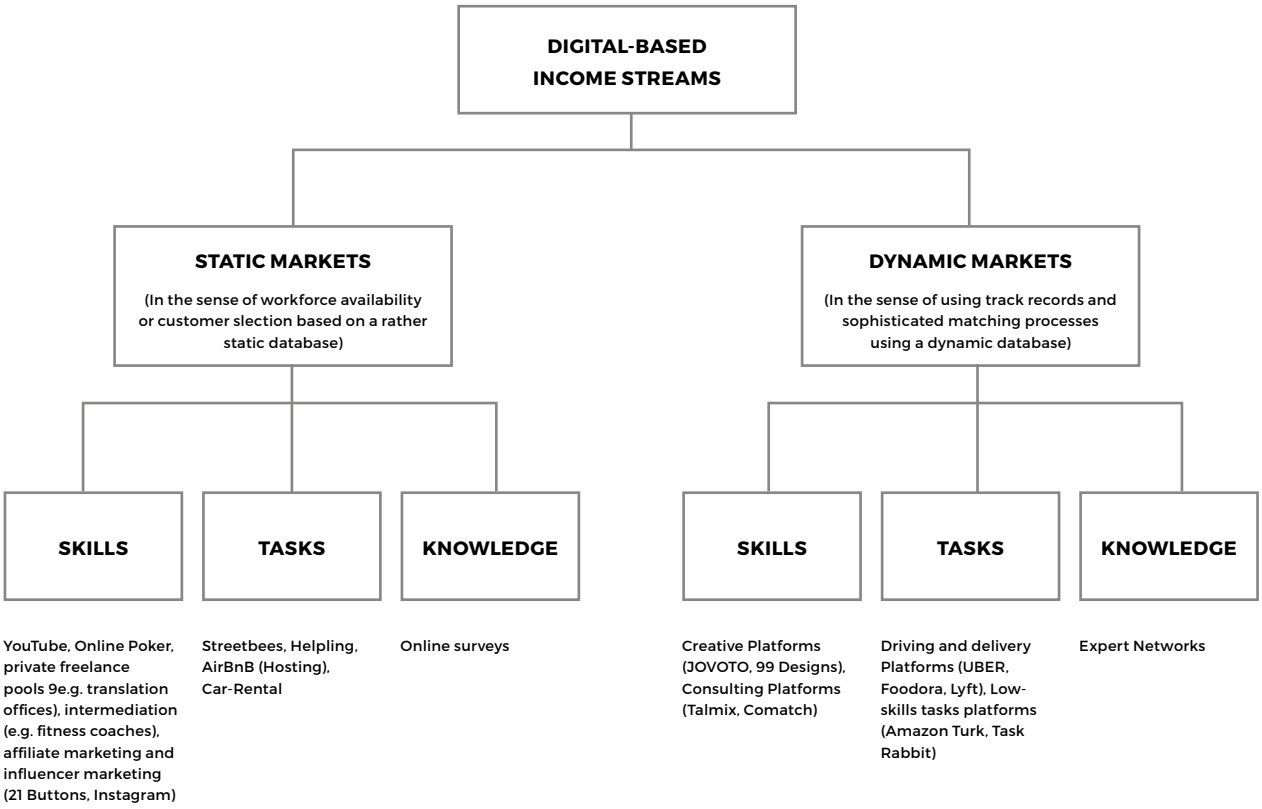
Criterion	Description
Dynamic matchmaking	Use of pricing mechanisms and dynamic or multi-stage matching processes
Focus of the platform	Skills, Knowledge and Tasks
Buyer structure	Private and open platforms
Risk / Personal investment	Investment and work requirements before any payouts

Source: own illustration

8 It might not be the focus of this study, but it is worth noting that such options exist.

The following figure shows the distinction between the platforms and illustrates the differences with examples from the platform economy.

FIGURE 6: OVERVIEW OF INCOME STREAMS ON PLATFORMS



While platforms can be defined in a number of ways, within this study the definition is as follows:

Platforms are defined as those mechanisms where (1) individuals can (2) sign up for delivering services on the platform (3) without a guaranteed or highly predictable income and (4) payment is arranged by the platform. In addition, there might be dynamic pricing and matching algorithms, private or public pools and different combinations of offline and online delivery.

This definition has some advantages. The focus on individuals excludes platforms such as MyHammer, in the German market, where only companies or business-owners can submit a bid. It also excludes those platforms that resemble business directories (e.g. Google Maps or Yellow Pages). Definition criteria (2) and (3) are the core of the platform economy. The payment criterion (4) is meant to exclude those platforms that only serve as lead generators where the transaction is done privately and without the interaction of the platform.

However, it includes gamers who stream their games and can earn income by earning a commission of the advertising. It also includes those individuals who have signed up in private pools and are exposed to the same working conditions.

2.3 Trends in the industry

Platformization or 'Uberization' has apparently reached every industry. In each market there are start-ups or established companies using the concepts pioneered by Uber and Airbnb. Interestingly, there are also movements trying to work on new organizational forms such as cooperatives.

The European Commission (2016b) published a study with underlying data from PwC on the collaborative economy. They estimate that platforms facilitated €28 billion of transactions and generated revenues for themselves of €3.6bn as shown in the following table. The largest segments were accommodation and transportation followed by collaborative finance.

TABLE 2: NET REVENUES AND COMMERCE GENERATED FROM COLLABORATIVE PLATFORMS

Sector	Net revenue	Total commerce	Percentage of net revenue	Percentage of commerce
P2P accommodation	1,150	15,100	31.9	53.7
P2P transportation	1,650	5,100	27.3	12.4
On-demand household services	450	1,950	10.2	5.4
On-demand professional	100	750	2.5	2.2
Collaborative finance	250	5,200	6.5	15.6
Total	3,600	28,100		

Source: European Commission (2016b)

This report also contains an overview of the market which is admittedly a non-representative illustration of the market. Some of the key figures are shown in the following table.

TABLE 3: SELECTED PLATFORMS (EMPLOYEES AND NUMBERS OF FREELANCERS)[9]

Company Name	Empl.	Freelancers	Company Name	Empl.	Freelancers
Airbnb	3,100	5 million listings	**Jovoto**	~20	80,000 creatives
Amazon Mechanical Turk	-	500,000 Turkers	**Klaiton**	~15	350 consultants
Cargo	~20	7,000 drivers	**Lionbridge**	6,000	100,000 professional cloud workers
CoMatch	85	4,300 Consultants	**Streetbees**	75	1 million bees
CrowdFlower	100	-	**Streetspotr**	-	325.000 streetspotrs
Delivery Hero	5,700	12,000 riders	**TaskRabbit**	65	60,000 Taskers
Fiverr	200	-	**Tolingo**	50	6,000 translators
Freelance.com	110	300,000 registered consultants	**Thumbtack**	600	200,000 pros
Freelancer.com	-	29.1 million registered users	**Uber**	16,000	3 million drivers
GLG	1,500	600,000 thought leaders	**Upwork**		12 million freelancers
Helpling	200	10,000 cleaners	**99designs**	120	1 million registered designers
Lyft	-	1.4 million drivers			

Source: own illustration

9 See appendix for full list including funding, valuation, field of activity, year of creation and seat of headquarters.

This market analysis led to some interesting insights. Platforms operate an asset-light business model. It means that they can generate revenues without having a large capital base. In general, platforms do not own the (shared) assets which are the backbone of their business model.

Platforms are not direct job creators. It is interesting to note that a few employees at the platform can manage hundreds or even thousands of platform workers. This is done by using algorithms and automatic processes which do not need human interactions. Machine learning is a big driver of crowd-working platforms. All major tech companies are using platforms to support their initiatives.

It is astonishing how quickly platforms are able to register new users or workers. It seems to be relatively easy to sign up potential platform workers. The retail intelligence company Streetsptr has signed up 325,000 users and their competitor Streetbees even has one million.

However, this might lead to a problem as revenues are currently rather low for most platforms.[10] Given the high expectations of users it might create periods of disappointment. Australian Freelancer.com has 29 million registered users but annual gross payments of AU$588 million. One result is a distribution curve in which some small subgroups have far larger earnings than others ("Matthew effect").

There are significant volumes of investments flowing in the market. Airbnb has received funding of $4.4bn. A company offering on-board sales for Uber drivers has received $8.7 million in funding. A Berlin-based matching platform for consultants has received €12 million in funding. General marketplace Thumbtack has received total funding of $273 million. Investments are often followed by exits and acquisitions are already taking place. IKEA has acquired TaskRabbit and translation company Lionbridge (operating a massive private platform) has also been acquired.

Platforms are often an additional sales channel for freelancers which gives them the flexibility to increase their prices. A designer might not expect income from a platform and might thus charge higher prices from the beginning. A cleaner might charge higher prices on an impersonal cleaning platform than with clients he meets personally.[11] Platforms also seem to be interested in giving their workers better conditions. Uber now allows clients to tip the driver, and the platform has also partnered with Cargo, which is offering Uber drivers the opportunity to sell on-board merchandises and earn a commission.

It is also becoming evident that there is competition between the sectors. There is a certain consensus in the field that people prefer a single job with less uncertainty and less pressure. It is less clear what happens during a full business cycle and how people will move between the sectors.

KEY MESSAGES

1. **Platforms can be classified along various lines (focus, mechanisms, structure and risk)**
2. **Private platforms are relevant in the platform economy**
3. **The industry attracts significant investment amounts and is evolving rapidly.**

10 The list in the appendix contains numbers on the revenues of the platforms.

11 It is obvious that the argument can be made in both directions.

This article covers cleaners on a German platform (Kunz 2018)

3 Assessment

This chapter looks at the deficiencies of the platform economy. The current systems were designed when different employment relationships were more prevalent. Analysis points to four main issues that will be discussed below:

1. Reliability of payments
2. Status of the employment relationship (self-employed / employed)
3. Access to social protection
4. Skill development

3.1 Reliability of payments

Work in the platform economy is often associated with low payments and that might be the case with some platforms such as Amazon Mechanical Turk (AMT) or those platforms that run contests and only reward the winner. Berg (2016) found in a sample of AMT and CrowdFlower crowdworkers that workers spent 18 minutes in unpaid work (searching and preparing) for every hour of paid work.[12]

The overall picture is rather nuanced. Hourly pay on platforms can be even higher than in traditional settings. Fabo, Karanovic and Dukova (2017) have collected information on hourly wages across different platforms. While some are rather low, some of the work conducted locally is well paid.

The median rate of pay varies. At the lower level they find hourly rates between €0.80 for CrowdFlower (data entry), €1.50 for Amazon Mechanical Turk (micro-tasks) and €3.60 for Upwork (admin support). At the upper level they find entries for animal care which pays €26.00 (Upwork) or software development on Upwork for €14.20.

De Groen et al. (2018) conducted interviews with platform workers and found:
In Austria, the employees of the food-delivery platform in this study earn €7.60 per hour and 60 cents per delivery, while self-employed workers earn €4 per hour and €2 per delivery. As a result, the self-employed workers have a greater incentive than the employees to deliver as quickly as possible. With tips, the Austrian interviewees claimed to earn a gross hourly wage of between €11 and €14, which compares favorably to average national wages for low-skilled work. In Italy, earnings per delivery stand at around €4 on Foodora, and the gross hourly earnings on the platform are around €8. For Deliveroo, gross hourly earnings amount to around €7 for bicycle couriers and €8.50 for motorbike couriers. A French platform worker with a micro-entrepreneur contract indicated that they received €7.50 per hour on weekdays and €11.50 per hour on weekends, with a bonus of €2 per delivery.

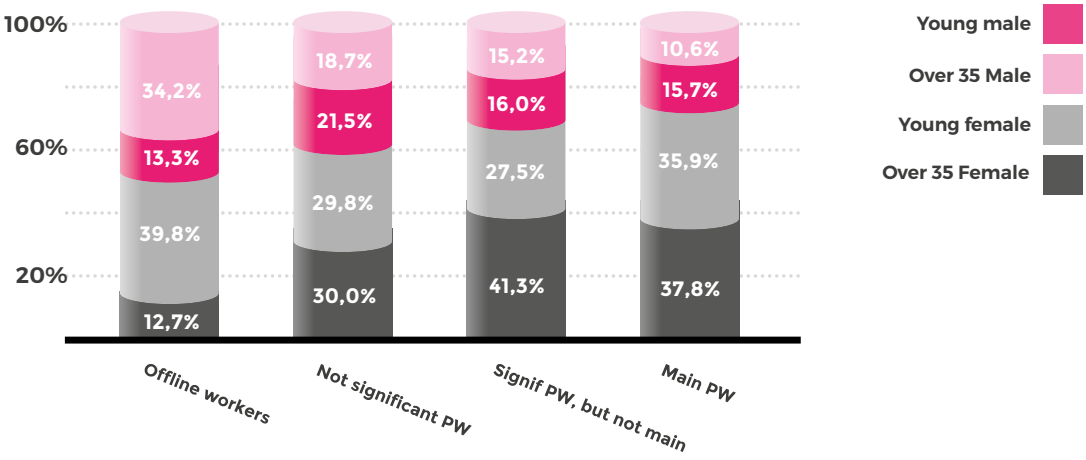
It seems that it is not the absolute level but rather the reliability of payments that is more important. Farrell and Greig (2016) from the JP Morgan Chase Institute analyzed the bank accounts of 6 million people in the US out of which 260,000 were classified as “Online Platform Economy Participants” as they received at least one payment from one of 30 major platforms over the study time period. They estimate that 4.2% of the adult population earned income in the platform economy. Capital platforms remain more important than labor platforms.

12 That might be comparable with the daily commute for office workers.

It was interesting to see that 1% of all adults earned income in every single month and more than 4% earned income at least once. Participants in the platform economy are younger than the average and have lower incomes than the average. 14% of all participants received income from more than one platform. It is also worth noting that in this sample 82% of the labor platform participants relied on platform earnings for less than 25% of their total income. They also found that platform work is a substitute for a fall in other income.

In Europe, the numbers are different. Pesole et al. (2018) estimate that a total of 2.3% receive significant income from platform work. They are mostly male and surprisingly evenly split between young and older males.

FIGURE 7: GENDER DISTRIBUTION IN COLLEEN SURVEY



Source: Pesole et al. (2018)

3.2 Classification of workers

The classification of workers remains one of the most controversial topics. The platform can exercise control over the work done on the platform and limit the flexibility of the workers in doing the work. That may again differ between delivery platforms and translation systems but overall, it is rarely comparable to self-employed work.

Generally, platform workers are considered to be self-employed by the platforms, but legal challenges remain. Delivery Hero even outlined the risk in its IPO prospectus: "The classification of our riders as freelancers or employees is unclear and is disputed in several of our markets. This exposes us to the risk of additional financial burdens, employment-related litigation and governmental sanctions, which could make our delivery service less profitable should we be required to treat our riders, who are currently classified as freelancers, as regular employees."[13]

The main legal criterion for assessing the relationship is whether a person performs services for and under the direction of another person. It includes freedom of scheduling the working time and freedom to organize the work.

Surprisingly, Pesole et al. (2018) find that 68% of the surveyed persons identify themselves as employees. This number implies that they either have a primary income source as an employee in a regular employment or that the worker sees himself as an employee although it is not the case in contractual terms. Forde et al. (2017) write that virtually all of those working on online platforms are not employed by the platforms themselves.

The current systems were designed when the labor market was rather clear-cut. There were either employees or self-employed persons. The rise of new labor forms has created a hybrid form of employment and challenges across Europe.[14] Although, the existing social security schemes can adapt to them it is worthwhile thinking about new forms as the nature of work itself has changed.

Between the two traditional forms are all forms of hybrid models. Spain recognizes the economically-dependent self-employed workers which receive 75% of their income from a single client (Corujo 2017). Vermeylen et al. (2017) have proposed a categorization of the approaches in the following table. While some countries aim to create a third status, others are trying to improve the criteria to distinguish between different approaches.

TABLE 4: APPROACHES TO ASSESS THE MIDDLE GROUND

Creating a third status		Improving criteria	
Hybrid status	Economically dependent worker status	Using criteria of economic dependence to combat and identify bogus self-employment	Establishing criteria to clearly distinguish employment from self-employment
Austria, Italy	Portugal, Slovakia, Slovenia, Spain	Germany, Latvia, Malta	Belgium, Ireland, Norway, Poland

Source: Vermeylen et al. (2017)

13 See https://ir.deliveryhero.com/websites/delivery/English/9999/pdf-download.html?filename=Delivery_Hero_AG_Prospectus.pdf&lg=en.

14 For an overview on national levels in Germany (Chesalina 2018), Italy, France and Spain (Corujo 2017, Donini et al. 2017).

3.3 Access to social security

Some argue that there is the need of a new category for digital workers as they neither fit as employee nor self-employed. Unemployment benefits might not be available as interruptions in employment history are more common (Chesalina 2018).

Forde et al. (2017) surveyed 1,200 platform workers and found that 69.5% have no access to schemes that cover pregnancy and 63.1% have no access to unemployment benefits, to cite just two examples. Similar numbers can be found for housing, caring and old age benefits. Only healthcare is available to most surveyed.

Most argue that platform workers have another job or protection that is partly underlined by the studies available although it neglects those who are financially dependent on those platforms. This lack of coverage might hinder the growth of this sector.

3.4 Skill development

Employees within companies can often access in-house training or paid training. Platform workers do not have the same benefits.

Some platforms do contribute to the development of individual skills. Design platforms using collaboration tools or platforms for consultants offer something like training on the job. Others do not offer the same opportunities. A delivery platform worker or a household cleaner has only rare opportunities to expand their skills. It is less obvious for a YouTuber, an online gamer or a professional poker player. They might learn something but the value for future employment is less clear. This is line with de Groen et al. (2018) who found in interviews that training is rarely available and there are also no career paths available for them.

KEY TAKE-AWAYS

1. **Platforms cannot offer the same reliability of payment as employers.**
2. **Classification of workers remains a legal risk.**
3. **Access to social security remains limited.**
4. **Platform workers have limited opportunities to develop their skills.**

4 Policy Design

4.1 Introduction

The previous chapters have described the market and assessed the deficiencies of the platforms. However, the benefits of these new platforms are clear. They increase the transparency of the labor market as well as the traceability of payments and thus the taxation of income (Donini et al. 2017). Moving work from the informal to the formal sector is also helpful. Skills-based platforms also help to spread knowledge and skills and help to start the "diffusion machine" discussed earlier.

Dettling (2017) has shown for the US that access to high-speed internet has increased the participation of married women with children and higher levels of education in the labor market. Fabo, Karanovic and Dukova (2017) see the benefits for workers who have less attractive opportunities and the promise of a job engine. A similar argument is made by the European Commission (2016a) which concludes that these new mechanisms can generate new employment opportunities and support persons who have not been able to be economically active in other forms of employment.

This report follows the argument that a new form of work needs new protection mechanisms even if old standards might be adapted (Todolí-Signes 2017). Within this chapter, a model similar to the German artist insurance model will be proposed to address the challenges outlined in chapter 3.

Social security systems are meant to protect individuals from risks. The following elements are usually covered by social security systems (Forde et al. 2017):

→ Healthcare (costs)

→ Sickness (benefits paid during sick leave)

→ Maternity (costs and benefits)

→ Disability (benefits)

→ Old age (pension benefits)

→ Survivors (benefits)

→ Employment injuries/accidents at work and occupational diseases (costs)

→ Family (benefits)

→ Unemployment (benefits)

→ Guaranteed minimum resources (benefits)

→ Long-term care (costs)

The appendix gives an overview of various social security systems. It is interesting to note that the systems are managed quite differently across Europe. While some are tax-financed, others are contribution-based.

Social protection should also cover workers in the platform economy and ways should be considered to include them more easily in terms of minimum periods of employment. It should also cover workers in different forms of employment. Suggestions are often made to adapt current systems to include platform workers (Chesalina 2018).

Social security rights are often tied to the employment status but there are exceptions. For example, in Germany homeworkers and artists enjoy social security protection disconnected from their employment status (Chesalina 2018).

Employed persons usually only cover a share of the costs, while self-employed are paying the full contribution rate. Additionally, their income is often volatile and low (International Labour Organization 2016)

The problem with policy development is the range of services. While some might earn €5 completing a survey once a month, a Uber driver might receive a new order every 20 minutes, while a freelancer might receive €25,000 for a three-months project irregularly.

There are new forms of work evolving and the policy framework should adopt to new circumstances. A new policy design should ensure coverage, transferability and transparency.

4.2 Access and contributions

As outlined above it is not clear why employed persons only pay a share of the overall contributions while platform workers pay all of the social security contributions because they are considered to be self-employed.

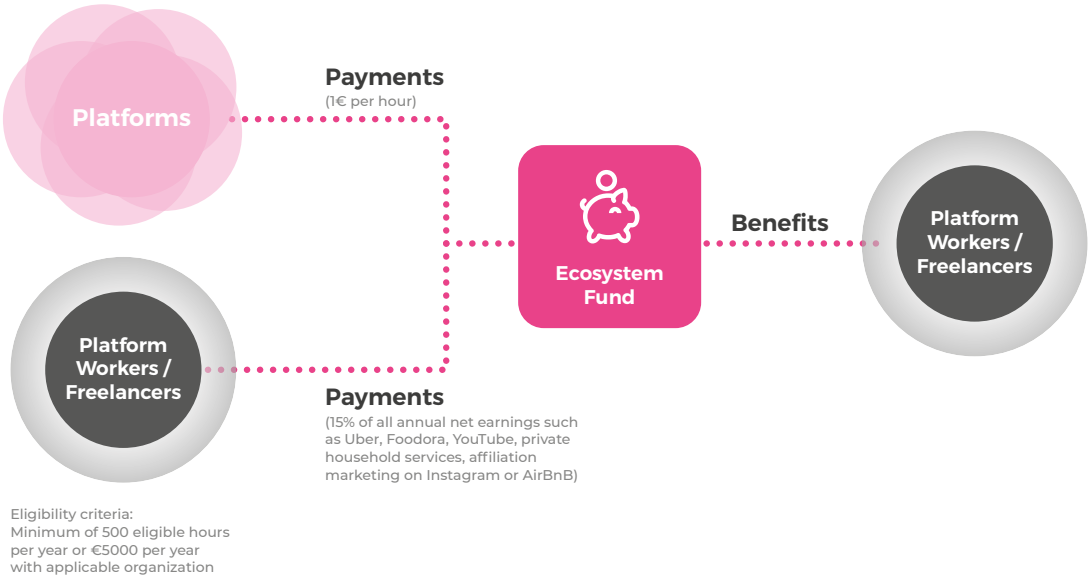
Platform workers share more similarities with employed persons and should be treated similarly. There should thus be a contribution from the platforms as well as from the worker himself, managed in a separate social security fund which we will call “Ecosystem Fund”.

A rough estimate would be that platform workers pay ~15% of all annual net earnings into the ecosystem fund. The German social insurance fund for artists charges 18.6% for old age / pension benefits and 14.6% for healthcare (each paid half by the artist).[15]

15 See also https://www.kuenstlersozialkasse.de/fileadmin/Dokumente/Mediencenter_K%C3%BCnstler_Publizisten/Allg._Infos_u._Anmeldeunterlagen/Aktuelle_Werte_in_der_SV_2018.pdf.

Platforms would pay a certain fee so that platform workers can access social insurance. This study does not calculate the costs but would estimate that €1 for every hour (or an equivalent) worked on the platform could cover the costs.

FIGURE 8: CONTRIBUTION TO THE ECOSYSTEM FUND



Source: own illustration

It should be attractive to sign up to this platform and there should be some requirement to detect and avoid fraud. Everybody can sign up but would need to prove within 18 months and thereafter every 12 months that s/he received at least €5,000 revenue with the relevant platforms or worked 500 eligible hours and declare that they have no regular employment relationship.

Some platforms are already requesting similar structures. It would give them legal certainty and make them more attractive as an employer.

4.3 Fund specifications

The fund would cover all relevant risks but only unemployment, old age and care will be discussed within this report.

4.3.1 SKILLS-BASED UNEMPLOYMENT BENEFITS

Self-employed persons often have fewer or costly options to receive unemployment insurance. This can be explained through the nature of their work.

Let us assume a platform worker is working on 3 platforms translating documents from Finnish to French or take the example of a YouTuber who stops uploading videos but is still earning commissions. You might also consider the cleaning person in Rome.

It might be imaginable, that there is less demand for their services but it is hard to imagine that the demand for their services completely dries up. There might always be some income from advertising or a few households requiring services.

The unemployment scheme would work differently and follow up on the idea that skills need to be updated regularly and continuously.[16] There would be the possibility to have a 6 month break to increase skills every 5 years. The first break would be possible after 18 months.

It would include payments to cover life expenses and pay half of the costs of the learning expenses. The insured person would receive payments in this phase, but benefits would be lowered if they surpassed a certain threshold.

This concept would guarantee that skills remain relevant and platform workers can restart their career if they feel that the current employment does not match their potential. Persons who fulfill the access criteria could potentially gain access to this lifelong learning element.

4.3.2 OLD AGE

A typical person would usually join the scheme at an earlier age when the retirement age is still far away. The system would operate on a contribution-based scheme. Platform workers or insured persons would contribute to the fund and receive proportional pension benefits once they reach their retirement age.

4.3.3 HEALTHCARE

Once persons register with the fund healthcare costs would be covered. This is comparable to other healthcare insurance models.[17] Given that the population of platform workers is younger than the general average one can estimate that healthcare-related costs should be lower than on average.

16 This scheme is based on the life-long learning concept LeLa 5000.

17 It is worth noting that some countries have a tax-financed regime with no separate fund or entity.

4.4 Additional segments

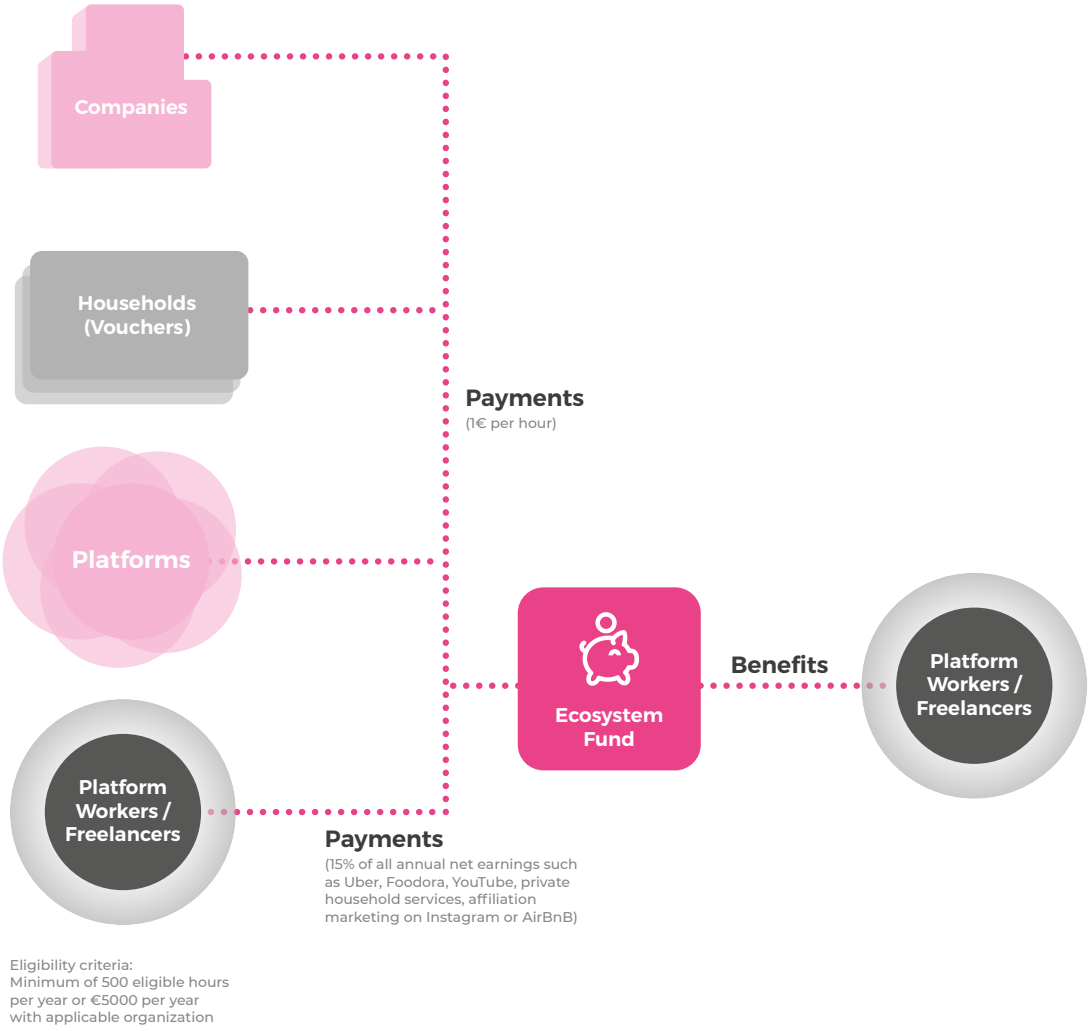
The next section will discuss how such a system might be expanded to also cover freelancers and one-person businesses.

Platform workers are one segment, but large segments of the European population share similar employment characteristics. They work as freelancers, help in households cleaning or caring or work as artists. They all have different employers and share similar characteristics with platform workers.

Some of them are already covered with mechanisms that work in a similar way. Household helpers can be paid with vouchers that guarantee that they have social insurance. These are often limited in terms of income levels.

The Ecosystem Fund model discussed above can be easily expanded to include household workers and even companies interested in offering this particular social insurance.

FIGURE 9: STRUCTURE OF A ECOSYSTEM FUND – EXPANDED VERSION



Source: own illustration

However, to avoid fraud there should be consistent but also pragmatic measures. Persons interested in joining this system need to provide evidence of the following features:

- → Invoices from at least three different companies
- → No regular employment relationship
- → No employees

4.5 Lifecycle

Let us now look at six fictional persons and how they might benefit from such a scheme.

Paul has been working for companies such as Uber, Foodora and Lyft from age 24 to 30 and changes to traditional employment afterwards. His insurance includes health care and old age benefits and after 18 months he would be eligible for skills refreshment. Blandine is working part-time in household services (e.g. Helpling) earning on average €700 per month to contribute to household income and to have enough time to care for her children. At age 40 she is considering a change of career and can access the skills trainings.

Johanna is living in rural Germany and working for three translation platforms. She receives enough work from the platforms to make a decent living and stay living in an area with limited other job opportunities. She receives all insurance from the Ecosystem Fund and will also receive retirement benefits from the fund once she retires.

Rodrigo finished his studies at age 24 and decided to travel the world for 12 months and work online during this time to cover part of the costs. He has access to health care insurance and contributes to old age pension payments. Given that he is only insured for 12 months he is not eligible for unemployment benefits.

Kristina started working as a model at age 18 and worked as a social media influencer from 24 to 37. At age 38 she decides to pursue other career opportunities and makes use of the skills refreshment opportunity.

Ludwig is working part-time regularly employed as a receptionist at a hotel. To supplement his income and to have greater flexibility he works as a platform worker online. Given that he fulfills the criteria it is feasible that he could be eligible for skills-based unemployment benefits.

TABLE 5: POTENTIAL CAREER PATHS

	Work path	Health Care	Old Age	Unemployment
Paul	24–30: Delivery and transportation services 30+: Change to employment	✓	✓	✓
Blandine	21–40: Household services (part-time) 40: Change of career	✓	✓	✓
Johanna	24-65: Translator for three platforms	✓	✓	✓
Rodrigo	24-25: Round-the-world-trip and freelance work 25: Change to employment	✓	✓	x
Kristina	18–24: Fashion model 24–37: Influencer (YouTube, Instagram) 38: Change of career	✓	✓	✓
Ludwig	24–35: Receptionist (part-time employed) 24–35: Additional income through online work	x	x	(✓)

Source: own illustration

5 Conclusion

This report has discussed the platform economy and how platform workers should be insured to protect them against life risks. Some elements would need further discussions.

It is less clear what the role of the private sector should be. Platforms seem to be interested in offering their workers some benefits as well, to make themselves more attractive to workers. It could also be an interesting field for private insurances to cover potential risks.

It is obvious that some of the fields are rather unproductive. For example, the author would see online poker playing as an unproductive field for society to name just one field. It would also be worthwhile to discuss the potential implications of how the lack of skills development over time has been and remains problematic.

Cook et al. (2018) have shown that 68% of Uber drivers in the US are no longer active 26 weeks after their first trip. This is one example of the fast-changing nature of the employment relationships in the platform economy and a social insurance fund should be flexible enough to allow workers to move in and out of the fund.

Overall, platforms could take a greater part of the risk when it comes to the availability of work. At the moment, workers bear the entire risk when there is less work available on the platform. There is also room for crowdworkers to take collective action (Donini et al. 2017).[19] It might be more complicated as unions would not know who else is working on the platform. Workers also need protection when remote requesters of work/clients can easily avoid paying fees (Milland 2017).

Bock et al. (2016) call for a reduction in the transparency around the portability of workers' data. It might be worthwhile to think how workers can transfer their rating from one platform to another.

A first step toward implementation might be a general tax regime for platforms that could be the basis for the financing of such an ecosystem fund.

19 Ronald Reagan started his political career as an organizer of workers in the ultimate gig industry: Hollywood. Before his governorship of California and the presidency of the United States he was the president of the Screen Actors Guild and helped to establish health and pension plans.

6. Appendix

6.1 Financing principles of social security elements

Table 6: Financing principles for three categories
Source: Extracts from MISSOC (2018)

	Sickness and maternity: Benefits in kind	Old-age	Unemployment
Austria	Contributions (insured persons and employers) and taxes.	Contributions (insured persons and employers) and taxes.	Contributions (employees and employers) and taxes (covering of the deficit).
Belgium	Part of the global management, which varies according to the branch's need: global contribution; alternative financing: by the Federal State to social security; overall state subsidy; miscellaneous income.	See first column.	See first column.
Bulgaria	Contributions (employer and insured person) and taxes.	Contributions (employer and insured person). Transfers from the State Budget. State Budget covers deficit.	Contributions (employer and insured person).
Croatia	Contributions (employers and self-employed persons) and taxes.	First pillar: Contributions (insured persons) and taxes. Second pillar: Contributions (members of the compulsory pension fund) and rates of return.	Contributions (employers and self-employed persons).
Cyprus	Financed by the State.	Contributions (insured persons and employers and State budget).	Contributions (insured persons and employers and State budget).
Czech Republic	Contributions (insured persons and employers) and State budget.	Contributions (fixed percentage of the earnings, paid by insured persons and employers).	Contributions (fixed percentage of the earnings, paid by insured persons and employers).

	Sickness and maternity: Benefits in kind	Old-age	Unemployment
Denmark	Taxes.	Old age Pension: Tax financed. The State covers 100% of the costs. Supplementary pension: Contributions (employees and employers).	Benefits paid by the unemployment insurance funds are financed by the State and the municipalities. However, mandatory State contributions paid to the unemployment insurance scheme by insured members cover part of the State expenditure on these benefits.
Estonia	Social Tax (sotsiaalmaks) (contributions by employers, self-employed and the State).	Old-age Pension: Social Tax (contributions by employers, self-employed and the State). Pension Supplements and National Pension: Taxes. Funded Supplementary Pension: contributions (employees and the State from social tax paid by employers).	Unemployment Insurance Benefit: Contributions (employees and employers). Unemployment Allowance: Taxes.
Finland	Public health care financed by local authorities. State pays a subsidy to municipalities for their social and health services. Sickness Insurance/ Sickness Benefits Insurance: Benefits in kind refunded under Sickness insurance are financed by contributions paid by the insured (55%) and a subsidy from the State (45%).	National pension and guarantee pension: Taxes. Statutory earnings-related pension: Contributions (employees, employers, self-employed) plus State subsidy (for the pension schemes for farmers, scholarship recipients, self-employed persons and seamen).	Insurance: Basic security: Taxes (65%) and contributions from salaried employees who are not members of unemployment funds (35%). Earningsrelated security: Contributions (three party financing: Employees, employers, State). Labour market subsidy: State.
France	Contributions (employers), special contributions and public authorities' participation.	Contributions (employees and employers), special contributions and public authorities' participation.	Unemployment insurance: contributions (employees and employers). Unemployment assistance: Special contributions and public authorities' participation.

	Sickness and maternity: Benefits in kind	Old-age	Unemployment
Germany	Contributions (insured persons and employers) and taxes.	Contributions (insured persons and employers) and taxes.	Unemployment insurance: Contributions (employees and employers). Unemployment benefit II for employable beneficiaries and social benefit for non-working family members (social assistance benefits for jobseekers): Taxes.
Greece	Contributions (employees, pensioners and employers). National Organisation for the Provision of Health Services: Financed annually by the State.	Contributions (employees and employers). Unified Social Security Fund: Financed annually by the State.	Contributions (employees and employers). Labour Employment Office: Financed annually by the State.
Hungary	Contributions (insured persons and employers) and taxes.	Contributions (insured persons and employers) and taxes.	Contributions (insured persons and employers).
Ireland	Mainly tax financed.	Contributions (employees, employers and self-employed).	Contributions (employees and employers). There is also a means-tested social assistance scheme for unemployment which is tax-financed.
Italy	Taxes.	Contributions (employees and employers).	Contributions (employers).
Latvia	Earmarked part of personal income tax and subsidy from State budget.	Mandatory contributions (employees, employers and self-employed). Voluntary contributions (e.g. persons who are not subject to mandatory social insurance or employees of a micro-enterprise paying the micro-enterprise tax). The State covers contributions on behalf of certain categories of individuals. Taxes.	Mandatory contributions (employees and employers). Voluntary contributions: employees of a micro-enterprise paying the micro-enterprise tax. The State covers contributions on behalf of certain categories of individuals.
Lithuania	Contributions (insured persons and employers) and taxes.	Social insurance old-age pension: contributions (insured persons and employers, self-employed). Social assistance pension: taxes	Contributions (employers).

	Sickness and maternity: Benefits in kind	Old-age	Unemployment
Luxembourg	Contributions (insured persons and employers) and State subsidies.	Contributions (insured persons and employers) and State subsidies.	Special tax plus State subsidies.
Malta	The healthcare system is financed from overall contributions from employers, employees, self-employed/self-occupied persons and the State.	Overall contributions from employers, employees, self-employed / self-occupied persons and the State.	Overall contributions from employers, employees, self-employed / self-occupied persons and the State.
Poland	Contributions (insured persons) and taxes.	1st pillar: Contributions (insured persons and employers) and taxes. 2nd pillar: Contributions (insured persons and employers).	Contributions (employers) and taxes.
Portugal	Tax-financed.	Contributions (insured persons and employers).	Contributions (insured persons and employers) and taxes.
Romania	Contributions (employees, self-employed).	Contributions (employees, employers, self-employed).	Contributions (employers)
Slovakia	Contributions (insured persons and employers) and State subsidy.	Contributions (insured persons and employers) and State subsidy.	Contributions (insured persons and employers) and State subsidy.
Slovenia	Contributions (insured persons and employers).	Contributions (insured persons and employers) and additional financing through the State budget or other sources.	Taxes and contributions (insured persons and employers).
Spain	Taxes.	Contributions (employees and employers).	Contributions (employees and employers).
Sweden	Health care is financed by the county councils (landsting) or regions (regioner).	Contributions (insured persons and employers) and taxes.	Contributions (insured persons and employers) and taxes.

	Sickness and maternity: Benefits in kind	Old-age	Unemployment
The Netherlands	Health Insurance Act: Half is financed by contributions of residents and non-residents working in the Netherlands and liable to wage tax; the other half is financed through the collection of nominal premiums paid directly to the insurer by the insured persons. Also, a state contribution is provided to cover the healthcare costs of children under the age of 18. Long term care act: Contributions by residents as well as non-residents who work in the Netherlands and consequently pay tax on wages.	General Old-Age Pensions Act: Contributions are made by employees and self-employed. Additional financing through general taxes.	Contributions (employers) for Redundancy Payment Funds and General Unemployment Fund.
United Kingdom	Services provided by the National Health Service: Financed by taxes and (to a lesser extent) from contributions.	Contributions (employees and employers).	Contribution-based Jobseekers' Allowance (JSA): Contributions (employees and employers). Income-based Jobseekers' Allowance: Taxes.

6.2 Market overview

Company Name	Head-quarter	Employees	Revenues	Year of Creation	Freelancers	Company valuation	Field	Geography
Airbnb	San Francisco	3,100	$2,6 billion	2008	5 million listings	Funding of $4,4 bn	Accommo-dation services	Global
Amazon Mechanical Turk	Seattle	-	See footnote	2005	500,000 Turkers	-	Human Intelligence Tasks	Global
Cargo	New York City	~20	$1 million	2016	7,000 drivers	Funding of $8.7 million	On-board sales for Uber drivers	US
CoMatch	Berlin	85	-	2015	4,300 Consultants	Funding of €12 million	Marketplace for Consultants	German-speaking countries
	San Francisco	100	See footnote	2007	-	Funding of $58 million, valuation of $110 million	Human-in-the-Loop AI platform	Global
Delivery Hero	Berlin	5,700	€3,8 billion, €544 million (net revenue)	2011	12,000 riders	€6,1 billion	Food delivery	Global
Fiverr	Tel Aviv	200 employees	-	2010	-	Funding of $111 million	General marketplace	Global
Freelance.com	Paris	110 employees	€422 million fees, €130 million net revenues	1995	300,000 registered consultants	Market cap €45.8 million	Consulting services	France, Germany, Morocco, Switzerland
Freelancer.com	Sydney	-	AU$588 million gross payment volume, AU$ 50.3		29.1 million registered users	Market valuation of AU$ 274	General marketplace	Global
GLG	New York City	1,500 employees	$500 million	1988	600,000 thought leaders	Funding of $212 million in 2015	Expert network, professional learning	Global
Helpling	Berlin	200 employees	-	2014	10,000 cleaners	Funding of €72,7 million	Marketplace for clearning services	Global
Lyft	San Francisco	-	$1 billion	2012	1.4 million drivers	$15.1 billion	Trans-portation services	US
Jovoto	Berlin	~20	€5 million	2008	80,000 creatives	-	Creative services	Berlin-based/ Online

Company Name	Head-quarter	Employees	Revenues	Year of Creation	Freelancers	Company valuation	Field	Geography
Klaiton	Vienna	~15 employees	-	2015	350 consultants	Funding of €0,6 million	Marketplace for Consultants	German-speaking countries
Lionbridge	Waltham, MA	6,000 employees	$560 million (2015)	1996	100,000 professional cloud workers	Acquired for $360 million	Translation	Global
Streetbees	London	75 employees	-	2015	1 million bees	Funding of $17,1 million	Microtasks, Intelligence for marketers	Global
Streetspotr	Nuremberg	-	-	2011	325.000 streetspotrs (2015)	-	Retail intelligence	Germany-based, expanding
TaskRabbit	San Francisco	65 employees	-	2008	60,000 Taskers	Acquired by IKEA; previous funding of $38 million	Marketplace for home services	US, UK
Tolingo	Hamburg	50		2007	6,000 translators	Funding of €0.6 million	Translation	Global
Thumbtack	San Francisco	600	$1 billion	2008	200,000 pros	Valuation of $1,3 billion, Total funding of $273,2 million	General marktet-place	US
Uber	San Francisco	16,000	$37 billion, $7.4 billion (net revenue)	2009	3 million drivers	$62 billion	Trans-portation services	Global
Upwork	Mountain View		$1 billion revenue	1999	12 million freelancers	Funding of $168,8 million	General market-place for freelancers	Global
99designs	Melbourne	120 employees	$60 million, $42 million paid to designers	2008	1 million registered designers	Funding of $45 million	Design marketplace	Global

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ISBN: 978-3-200-06038-8