Crowd working and the gig economy: the awakening of a sleeping giant?

Werner Eichhorst and Ulf Rinne consider the ongoing changes in the labour market, but say that the massive upheaval and disruption scenarios do not match the evidence

Digitalization is the buzzword under which many ongoing changes in the labour market are summarized. One aspect, with potentially important implications, is labeled as 'crowd working', the 'gig economy', or the 'platform economy'. It refers to entirely new business models that include new real and virtual services to match demand and supply. It also includes online outsourcing, which may in fact be viewed as a form of (digital) Taylorism. Similar to developments during the industrial revolution, labour can once again be divided into its constituent parts – albeit this time, at least potentially, on a massive, virtual and global scale (Eichhorst and Rinne, 2017).

Potential implications of the new business model

The entirely new business models of the platform economy blur traditional definitions in the labour market. For example, the categories of self-employed and dependent employees appear not sufficient to properly classify and treat platform workers, the concept of a 'firm' cannot be easily applied to virtual companies that operate in the cloud, and also national and country-specific policy approaches, eg. in the area of taxation, are substantially challenged by the global scale of crowd working.

More specifically, standard employment relationships are fundamentally challenged by the platform economy – at least in areas where work does not require specific skills and can be sourced out easily. Following traditional categorizations, platform workers are usually classified as self-employed or freelancers and not covered to the same extent as dependent employees by social security, most notably contributory social insurance. This spurs unfair competition with traditional workers, who no longer act on a level playing field.

Perhaps the most prominent and often cited example is in the transport business, where Uber drivers compete with rather heavily regulated taxi drivers. As a consequence, many self-employed and freelancers also lack appropriate pension insurance. If crowd working is the main activity, the coverage and capacity to contribute to pension insur-

ance and other types of social security is limited. Under current circumstances, platform workers would thus be to a larger extent dependent on tax-financed basic welfare or social security.

Firms operating in the platform economy follow many different business models and only share some common features. This complicates applying a universal approach towards platform firms and their workers. In many instanc-

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es, platforms ultimately create their own 'markets' and also define the rules governing these markets. Platforms may regulate market entry, market transactions and data collection. This leads to unfair competition with traditional firms employing dependent employees, parallel labour markets, and an erosion of labour law. Many platforms can effectively externalize social security obligations to their workers, and a possible expansion of freelance work or self-employment could thus undermine the social security model. This has also to do with market structures, as the supply of digital online work usually exceeds its demand by far.

In addition, novel features which characterize the digital economy may lead to substantial challenges in the area of taxation, including an eroding tax base and profit shifting (Li, 2014). These features include strong reliance on intangible assets, massive use of data as a new production factor, new business models, and the difficulty of determining the jurisdiction in which value creation occurs. While these challenges are actually not limited to the digital economy, they become much more acute.

Current dimension of the platform economy

The platform economy has only just begun to unfold its potential. Current empirical evidence indicates that its actual importance is still small. For instance, even in the United States, which plays a leading role in this context, the proportion of the employed persons who offer their services through online platforms is estimated at only 0.5% in 2015 (Katz and Krueger, 2016). At the same time, available data suggest that in most cases these are secondary jobs, and that income from these jobs usually supplements other types of household income. Hence, online platform work can still be viewed as being predominantly a source of additional earnings on top of offline activities.

These findings are confirmed in Bonin and Rinne (2017) for the German labour market. Accordingly, less than 1% of German adults are involved in the platform economy. More detailed results show that about 0.3% of adults are engaged in crowd working, ie. these persons perform online-acquired jobs online (virtual services), while about 0.6%

of adults can be classified as being part of the gig economy, where online-acquired jobs are performed in the real world (real services). Working in the platform economy is more common among men, high-skilled individuals, and younger persons. Also in Germany, most activities in the platform economy can still be viewed as secondary jobs generating additional income.

Despite the empirical evidence that the dimension of the platform economy is still rather small, its growth potential is undoubtedly immense. It has the potential to develop very dynamically and expand to cover a wide range of real and virtual services. The task is therefore to engage early enough with its associated challenges, in particular by establishing a framework for dynamic skill formation and a framework creating a level playing field between different types of suppliers – without impeding digital growth. This is in fact an important constraint as any policy responses have to master a balancing act: on the one hand, they have to accommodate digital growth and promote the chances of digitalization, and on the other hand, it is essential to confine new social inequalities and to avert a digital divide.

Education, training, and lifelong learning

On the individual level, it appears crucial to combat a digital divide by adequately preparing workers for imminent changes. Labour markets will become more complex and more flexible, with profound impacts on employment forms, occupations, and skill requirements. In this context, the focus should be on education, training, and lifelong learning.

In addition, the traditional perspective on occupations may change. Already today more and more occupations share common sets of tasks, skills and competencies – almost independently of the specific job profile, sector or industry. For example, almost every job requires at least some basic IT knowledge, and more and more jobs require

also programming skills. This trend will likely continue, also reflecting the fact that data becomes another main production factor in the digital economy (see, eg. Li, 2014).

A fresh perspective on occupations may therefore require to 'unbundle' skills and qualifications, ie. to provide a general set of skills independently of specific occupations. Vocational education and training systems will also have to increasingly focus on providing specific skills in a very dynamic fashion over the entire course of a person's labour market career. Individuals will need to learn and adapt their skills more or less continuously rather than acquiring a fixed set of skills at the beginning of their working life.

With respect to the future development of jobs at different skill levels, there are two very popular, but also entirely different scenarios (see, eg. Hirsch-Kreinsen, 2016). The first of the two scenarios, usually labelled as 'polarization', offers a more pessimistic outlook with a growing gap between complex, high-skilled jobs on the one hand and simple, low-skilled jobs on the other hand.

This growing gap is accompanied by a dramatic decline of jobs in the middle of the skills distribution. In stark contrast, the second scenario offers a more optimistic outlook. Often referred to as 'upgrading', the level of skills and qualifications is assumed to rise across the entire distribution. The increasing use of robots, machines and algorithms leads to an occupational upgrading and a specialization of workers in this scenario.

It is, however, important to realize that these two different outlooks are just scenarios about future developments – reality might still be very different. For example, while a tendency towards employment polarization can be observed in a number of countries, this trend has been, at least so far, clearly less dramatic in Germany than in other European countries (Goos *et al*. 2014; Eurofound, 2015).

In this context, it can be shown that Germany's dual apprenticeship system is related to less employment polarization (Rendall and Weiss, 2016). This proves once again that institutional settings, in this case especially in the area of education and training, can make a difference – also regarding the question whether a scenario of 'upgrading' or a scenario of 'polarization' is more likely.

What should be the appropriate policy response in order to increase the chances of the 'upgrading' scenario as a future outcome on the labour market? First, a general requirement for tomorrow's workforce is referred to as 'upskilling' (European Commission, 2016). Qualification requirements will most likely increase across the board in the future, and important skills that will be required include creativity, social intelligence, and entrepreneurial thinking (see, eg. Rinne and Zimmermann, 2016). The education system, and more specifically the vocational education and training system, therefore needs to find effective ways to equip workers with the required skills and qualifications.

In this context, Germany's dual apprenticeship system, which combines vocational schooling and structured on-the-job learning (Eichhorst, 2015), may actually serve as a role model – at least with respect to two important aspects that it involves. The first important aspect is its strong demand orientation. It guarantees that graduates' skills are tailored to the demands of the labour market, and it avoids obtaining useless qualifications. The second important aspect are some universal skills that are implicitly promoted, including fundamental problem-solving competencies, a high identification with the employer, a specific working spirit and work ethic, and a general openness for new challenges.

In addition, the need for hybrid and interdisciplinary vocational training models will very likely increase significantly in the future – also in response to the rising complexity of the world of work (BMWi, 2017). This will require, among other things, revised and new curricula that span multiple disciplines and that are more strongly oriented towards

real working processes. Hence, stronger cooperation and closer links between educational institutions, training providers, and firms are needed, too.

The good news is that digitalization also offers new possibilities in the area of vocational education and training. These vast opportunities should be adequately used, requiring to prepare students, but importantly also to prepare teaching professionals to effectively and efficiently use the new instruments such as e-learning or blended learning approaches.

A new institutional perspective on workers, firms, and the welfare state

The new business models of the platform economy also require a new institutional perspective on workers, firms, and the welfare state. Challenges with respect to workers concern, for example, the areas of social security and income declaration of platform workers. Another important issue (with many implications, among others in the area of taxation) is finding an appropriate approach for the profit allocation of online or virtual companies.

From a conceptual perspective, the platform economy involves a transfer of risk to individual workers. As online firms and virtual companies usually do not consider themselves as employers, but only as platforms, networks, marketplaces or intermediaries, their workers are formally self-employed, with all the associated risks like accidents or sickness, and costs such as for pensions, unemployment or long-term care (Eichhorst *et al.* 2017).

To deal with this transfer of risks, a first approach is to trace the conventional distinction between dependent employment and self-employment. In this context, the introduction of a third category of workers, next to self-employed and dependent employees, is heavily debated, eg. in the form of 'dependent contractors' or 'independent workers' (see, eg. Maselli, 2016). Also in the United States, the introduction of a new category of 'independent work-

er' is discussed – specifically to harmonize the social security system with the requirements of the platform economy and to bring it into the digital world of work (Harris and Krueger, 2015).

A second approach is to extend employment-related social security also to employment forms that are currently not included, especially also to self-employment, both in case of online and offline freelancing, and both for main and secondary activities. This applies in particular to social insurance for old age and disability, but also for unemployment (Eichhorst *et al*. 2017).

For example, in Germany only certain groups of 'employee-like' self-employed individuals are currently required to pay into the statutory pension insurance scheme (eg. teachers, nurses). Other groups have access to different or occupation-specific models (eg. artists and journalists, doctors, architects, lawyers). A major advantage of a more universal social security insurance system lies in the fact that the problem of identifying the currently important distinctions between different employment forms, and even occupations, will be mitigated.

Against this background, it seems plausible to bring self-employed workers of all types into the social security system. For example, it may be reasonable to require all self-employed workers to pay at least a minimum amount of contributions into the statutory system. Of course, this would require the self-employed to take taxes and contributions into account when setting their prices.

The contributions of the self-employed workers themselves could also be supplemented by compulsory contributions from the customers or the intermediaries and platforms, which are in the platform economy the equivalent to traditional employers. These contributions could be paid directly or could be claimed by the self-employed when invoicing for their services.

The German model of social security for artists (*Künstlersozialkasse*) is an existing example in which the liability for one part of the contributions is with the users. In addition, a certain percentage of tax financing could be considered – which would, of course, also be generated from tax revenue of platform-based entrepreneurial activities.

Another more general challenge, which requires stronger international cooperation and coordination, is to implement tax liability in the platform economy. Also tax rules have to adapt to a changing business environment in the digital economy. In particular two concepts are hardly applicable for virtual and global firms with intangible assets (Becker and Englisch, 2017a).

The first concept is the so-called permanent establishment. Here, it appears necessary to find a practicable way to also include virtual establishments. The second one is the so-called arm's length principle for transfer prices. As platform firms or digital companies often create their own markets, it is indeed very hard – if not impossible – to find an appropriate comparison to value their goods, services and intangible assets such as very unique patents. While in this context the introduction of a destination-based cash flow tax is proposed in the United States (Becker and Englisch, 2017b), the introduction of an equalization tax is discussed in the European Union (BMF, 2017).

One issue appears to be key in the ongoing debates about social security, taxes, and the welfare state: It is precisely the question if and how virtual value creation can still be located in the real world. Current social security and tax concepts rely on the physical presence of workers and firms in a precisely defined location.

When value-added chains become more and more complex and diffuse, and the role of firms as employers increasingly blurry, it could be reasonable to consider the perspective of consumers in this context. They can rather precisely located in the real world, and therefore shifting the perspective towards consumers in the areas of social security and taxation could mitigate some of the challenges discussed above.

Consumers may serve as the much-needed anchor point through which (employers') social security obligations and taxes can still be determined and collected also the digital economy, for example, via consumption taxes – if intelligent ways can be found to shift their incidence not also from firms to consumers, which also depends on both the demand elasticity and supply elasticity.

Conclusions

Digitalization has indeed the potential to fundamentally change the functioning of our economies and labour markets as we currently know them. However, the full dimension of the digital transformation is only now emerging, and scenarios of massive upheaval and disruptions are not (yet) matched with the evidence at hand.

Nevertheless, from a policy perspective this situation of a gradual transformation offers a window of opportunity to redesign established institutional solutions, in particular regarding skill formation, social protection and taxation. There is no need to panic, but now is time to prepare for the emerging changes. ■

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