

**The end of the subordinate worker?
Collaborative economy, on-demand economy,
Gig economy, and the crowdworkers' need for protection.**



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Abstract: The Digital era has changed industrial relationships dramatically. This has caused a considerable legal uncertainty about which rules apply to cyberspace. Technology is transforming business organizations in a way that makes the employee -as subordinate work- less necessary. A new type of companies "on demand economy" "sharing economy"- dedicated to connecting customers directly with individual service providers are emerging. Thus, these companies develop their core business completely through workers classified as self-employed workers. In this context, employment law is facing its greatest challenge, dealing with a very different reality compared to the one existing when it was created. However, workers still need protection. This study aims to analyse the reasons behind this conclusion.

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The employee of the future¹.

Some years ago it would have been impossible to discuss capitalism without reference to the labour market. Much less conceivable would have been a criticism of capitalism that omitted the position of workers in the system. Now it seems that things have changed. The famous book by Thomas Picketty, entitled “Capital in the Twenty-First Century”, offers an analysis and a critique of capitalism without referring to the labour market. Perhaps the "exploitation" of workers has finished and it is no longer necessary to discuss it? Or maybe the new capitalism is no longer based on the "exploitation" of workers?

It seems that “exploitation” still exists but its ways are changing. The 19th century industrial relationship model is different from the 20th century model, and it seems it will be far more different in the future if predictions come true. At the beginning of the 21st century, alongside the transformation of the economic system, new organisational methods also appeared. These methods require different tools from the ones we currently have to protect the person who makes a living from her work.

1.1 The migration to cyberspace

¹ Research developed within the framework of the project entitled "The regulation of the collaborative economy" of the Ministry of Economy and competitiveness, n° DER2015-67613-R.

In the last twenty years, Labour law experts have been concerned about how new information and communications technologies affect job positions. Several research papers have been published about workers' privacy (computer monitoring, CCTV, GPS, social networks)², about increased workload after working hours through teleworking, emails³, and so on. All these concerns arose from the increase in the employer's powers over the worker. However, of late, it seems that new technologies are hitting employees in another way: by causing their disappearance.

Since the times of Ned Ludd, workers have been aware of the possibility of being replaced by technology. For this reason, this question does not seem new, nor does it seem worth talking about in research which aims to study the challenges of the 21th century. Nevertheless, the way that technology could be “finishing off” employees is not taking place in the way it was perceived.

New technologies allow a decrease in transaction costs that was unthinkable up until just a few years ago. Transaction costs are the main reason firms exist. Specifically, firms prefer to do the job themselves rather than outsource it because of the transaction cost⁴. In the past, firms were aware that outsourcing the work was expensive. Information used to travel slowly and the a posteriori monitoring of the quality of the work done meant a huge loss in productivity. Thus, firms used to prefer to have in-house people – employees – do the work. These included employees trained by the company to ensure the quality of the product or the service offered by the company, employees who had passed a hiring process (interviews, recruitment process), employees under surveillance during their working hours (middle manager monitoring), and a disciplinary system (dismissals). However, this system changes completely when new technologies decrease transaction costs to almost zero levels.

Currently, firms have no incentives to have large organisational structures. Reality shows that outsourcing is increasing, thus leading to the building of organisational

² C. San Martín Mazzuconi, C., *Navegar por Internet en horas de trabajo ¿Quién? ¿Yo?*. AS. 19 (2), 41-48 (2010).

³ A. Baylos Grau, *Teletrabajo y legislación social*, In Rafael Casado Ortiz (coord), *Trabajar en la sociedad de información: el teletrabajo: problema o solución: cómo contratarlo*. San Sebastián de los Reyes: Fundación Universidad Empresa (1999), J. Thibault Aranda, *Aspectos jurídicos del teletrabajo*, Revista del Ministerio de Trabajo e Inmigración. 11: 93-108 (1998) and J. Thibault Aranda, *Teletrabajo forzado a domicilio*, AL. 4: 386-396 (2006).

⁴ R. H. Coase, *The Nature of the Firm*, *Economica*, New Series 16 (4), 386-405 (1937).

networks of small firms. With the reduction of transaction costs, the specialisation of the company becomes the main objective. The important thing for firms is no longer to be able to offer multiple services by sharing synergies with each other, but specialisation in an industry or product, and outsourcing the rest.

However, as technologies improve and transaction costs are further reduced, it is beginning to be seen, in some industries, that decentralisation is not enough. Conversely, firms are giving way to a balkanisation of the market. Some firms do not hire workers (except technological workers), providing all their services through independent contractors. These firms claim that their business is to match clients with service providers, although these providers will not be a company but an independent contractor. Outsourcing is carried to the extreme: the fragmentation of the whole labour market⁵.

Hence, without technology replacing workers, it has been claimed that the figure of the employee (subordinate) created at the dawn of the industrial revolution could be nearing its end⁶.

Jeff Howe was one of the first to identify this new business model⁷. This author described how the picture suppliers industry has collapsed because of the emergence of iStockphoto and other stock photo sites. The traditional picture suppliers hire professional photographers to comply with the customers' requests. Nonetheless, iStockphoto does not hire any photographers, but has a large pool of photographers ready to do the job. These photographers registered at iStockphoto compete with the other workers registered on the website to do the job, thus pushing down the price. Thus, in 2009, the company iStockphoto became the third largest photo supplier in the world without hiring a single photographer.

⁵ As Prof. Valdés Dal-Ré says, not all companies are in crisis. Big businesses with a vertical organisation and hierarchical integration are being dismantled, but businesses as the centre of the concentration of capital will be strengthened. For more information see Valdés Dal-Re, *Descentralización productiva y desorganización del derecho del trabajo*, Sistema: Revista de Ciencias Sociales 168-169, 61 (2002). These strengthened companies will be the ones that control the virtual platforms and business know-how.

⁶ See M. Cefkin, et al., *A perfect Storm? Reimagining work in the Era of the End of the Job*, Ethnographic Praxis in Industry Conference Proceedings, 3-19 (2014) and A. Hines, *The end of work as we know it*, Career Planning and Adult Development Journal, Summer 2015, 10 (2015).

⁷ J. Howe, *The rise of Crowdsourcing*, Wired June 2006, 176-179 (2006)

These virtual platforms create a market to match supply and demand by facilitating the interaction between those who provide services with those who need one. Moreover, these platforms take advantage of the less protective regulation of independent contractors and a freedom of pricing that does not exist in the field of labour protection (minimum wage). A traditional company cannot compete with a company that provides all its services with independent contractors, as a traditional company has to pay the minimum wage. In this sense, in a free market economy, without public intervention, the traditional organisational model is doomed to disappear⁸. In the end, these online platforms have profound social implications, since they challenge traditional business models and undermine the structure of jobs⁹.

The aim of this paper is to argue that crowdworkers face the same vulnerabilities as traditional workers. Accordingly, by applying a purposive interpretation of the employment contract – instead of the traditional right-to-control test – I will defend the idea that they need Labour law protection. The following part describes the new business model and tries to explain how these firms get the job done without controlling (in the traditional sense of the word) the worker. The third part explains how, despite the fact that the business model has changed, crowdworkers face the same vulnerabilities as the traditional, more controlled, workers and how that justifies the application of the Labour law to them. The fourth part deals with the need to apply a purposive interpretation of the employment contract to protect crowdworkers. The paper ends with some conclusions.

The new business model: “On-demand economy”.

Typological differentiation and terminological confusion

What has been described so far has been called the “On-demand economy”¹⁰. This term refers to a business model where the internet allows platforms to have large pools of workers waiting for a customer's request. As we can see, the on-demand economy is

⁸ Low barriers to entry and low entry costs of new businesses ensure their rapid expansion. See A. Franzetti, *Risks of the Sharing Economy*, Risk Management April 2015, 10-11 (2015)

⁹ A. Aloisi, *Commoditized Workers. The Rising of On-Demand Work, a Case Study Research on a Set of Online Platforms and Apps*, Comparative labor law & Policy Journal V. 37, 3 (2015).

¹⁰ The term started to be used in the article *Workers on tap*, The Economist, January 3 (2015), and has subsequently been popularised by other authors like Dagnino, E., *Uber law: perspectiva jurídico-laboral de la sharing / on-demand economy*, Revista Internacional y Comparada de Relaciones Laborales y Derecho del Empleo 3, 1-31 (2015) and Franzetti, *supra*, n. 3 at 10.

defined as exactly the opposite to the traditional concept of fixed worker committed to an individual company¹¹.

Yet, this name can be criticised, since before online platforms the service industry was already “on-demand”. In the traditional economy, no service is provided without a previous customer request. In this sense, “On-demand economy” is not a valid term to distinguish between old and new business models. If we want to highlight the fact that in this new economy the worker will be hired only when someone orders a product or service and dismissed (or stops getting paid) immediately afterwards, maybe it should be called “on-demand work”, but not “on-demand economy”. However, it is the term that the literature appears to accept more than any other.

Some of the literature also defends the term “peer-to-peer economy”. This denomination focuses on the disappearance of the company and its substitution by the idea of the consumer going directly to the worker. It also means that there are equal conditions between clients and workers. However, this term can be misleading because it implies that there is an identical position between the one who does the job and the one who pays for it. But, as is well known in the labour market, the worker usually has a weaker position because of the urgent nature of the work¹². For these reasons we believe that “Service providers through an online platform” would be a more descriptive and neutral term to refer to this new business model¹³.

Moreover, “On-demand economy” is an umbrella-term that covers a series of quite different businesses altogether (although they all share the idea of using an online platform to match supply and demand). Technology can be used in many ways and its sociological, economic and legal consequences for the labour market are different. According to their characteristics, at least three business models can be found: i) Sharing economy, ii) Online Crowdsourcing, and iii) Offline Crowdsourcing.

2.2 *Sharing economy*

¹¹ A. Felstiner, *Working the Crowd: Employment and Labor Law in the Crowdsourcing Industry*, Berkeley Journal of Employment and Labor Law 32, 1, 143-204 (2011).

¹² The work that is not sold today cannot be sold tomorrow, whereas money has a durability and could even increase over time. This causes a weakness inherent in any provision of services. But then there are other characteristics specific to the working class that weaken workers. For example, the economic weakness of workers. See Aloisi, *supra* n. 9 at 9.

¹³ It is not surprising that CEOs of companies are the ones who are more committed to calling their business model “peer-to-peer”. See the interview with the Zipcar CEO in Rafter, 2015.

A sharing economy is a kind of companies that work through an online platform. Such companies exploit underused goods (a room, a car, a kitchen and meeting rooms, among others). The owners (micro-entrepreneurs) put their goods on the market through an online platform, thus increasing competition and providing the users with more options. Sharing economy companies offer owners the opportunity to share their goods with potential users through online platforms. The difference between sharing economy and other types of companies within the on-demand economy is that the market is focused on the goods shared. The services provided by the owner are a secondary issue¹⁴.

For example, Airbnb is a worldwide company which claims to be the largest temporary accommodation provider in the world¹⁵, although Airbnb itself does not own any accommodation premises. Airbnb trusts its users to offer their homes (or just a room) to its clients. In the same sense, Bla Bla Car shares empty seats on trips that the owner of the car is going to do anyway. As we can see, the service provided is secondary while what is relevant is the goods shared. For this reason, this business model has been called “renting economy”¹⁶. In these cases, obviously, there is some work to be done, such as driving the vehicle by the car owner or the guests' accommodation by flat owners. However, these activities are completely secondary in comparison to the rental of the goods¹⁷. Therefore this kind of businesses lie outside the scope of Labour law¹⁸.

¹⁴ There are authors that use the concept “Sharing economy” for any kind of business without taking into account their specificities. See A. Sundararajan, *The Sharing economy. The end of employment and the rise of crowd-base capitalism*, MIT press (2016).

¹⁵ See Tecnohotel News, *Airbnb, proveedor oficial de servicios de alojamiento alternativo en los Juegos Olímpicos de Río 2016*, <http://www.tecnohotelnews.com/2015/03/airbnb-proveedor-oficial-de-servicios-de-alojamiento-alternativo-en-los-juegos-olimpicos-de-rio-2016/> (accessed 25 Nov. 2016)

¹⁶ A. Ravenelle, *Microentrepreneur or Precariat? Exploring the Sharing Economy through the Experiences of Workers for Airbnb, Taskrabbit, Uber and Kitchensurfing*, First International Workshop in Sharing Economy (4-5 June 2015), Copernicus Institute of Sustainable Development, Utrecht University, Netherlands (2015).

¹⁷ For example, in the case of Bla Bla Car, the vehicle owner will also make the trip with or without rental seats. For this reason, we are not facing a transport service where the customer chooses the destination and the driver provides the service, but to the under-utilisation of free vehicle seats left over for a trip that would take place anyway.

¹⁸ Sharing economy, understood as the business model based primarily on the letting of goods by their owner whose provision of services is incidental or residual, does not seem to need labour protection. In fact, in the case of the rental of housing, the protective rules, historically, have been designed to protect the tenant. It is understood that the owner of the property to be rented is in a position of power that does not require safeguards. Therefore, a first observation consists in distinguishing between when we are faced with a true sharing business, where goods are the main element of the transaction, and when an exchange revolves around service delivery. In the first case, labour laws would not apply, nor does it seem necessary for them to do so, since there is no imbalance of positions.

2.3. Crowdsourcing

Crowdsourcing consists in taking a job, traditionally performed by an employee, and outsourcing it to an undefined, generally large, group of people in the form of an open call¹⁹. The model tends to follow a tripartite structure: i) first, there are the “requesters”, which are companies that require a task; ii) second, there are the “workers”, that is, those who perform the task; and iii) third, there is the provider of the online platform, which develops the “platform” upon which requesters can post their tasks, and workers accept, perform and submit the work²⁰. This business model can be used for almost any kind of service, specialised or not. Some examples can be: transportation, delivery, laundry, personal training, assembling furniture, graphic design, photography, teaching, guided tours, translations, cooking and so on.

Almost any job can be transformed under the new model, but not every task has the same characteristics or faces the same risks. In this sense, there are two groups. On the one hand, there are those tasks that can be performed completely online and, on the other hand, those which require physical performance. This differentiation is meaningful, since the online tasks have less risks and lower external costs for the workers. For example, graphic design can be performed anywhere in the world by anyone with the right knowledge and a computer. In contrast, taking pictures requires the physical movement of the worker to the place the client wants to be portrayed. This movement involves risks and costs (accidents, traffic fines, etc.) that the online tasks do not have.

Another important differentiation, still within crowdsourcing, is to distinguish between those activities that can be offered globally and those that require local execution. In the event that the offer is global, that is, the provision of services is not designed to be performed anywhere in particular, workers in all parts of the world could perform the task. In these cases, the labour laws of all the countries in the world are competing against each other, since workers from more protective countries will automatically be excluded from the "auction" to get the job. With these platforms, workers around the world can compete for these virtual jobs, in a kind of tender, where only workers who are willing to perform work at a lower price may be employed. Thus, the compulsory local (national) rights of workers are an impediment to entering the global labour market. This should

¹⁹ See Howe, *supra* n. 7.

²⁰ See Felstiner, *supra* n. 11 at 148.

change the focus of the social demands towards a global scale: as long as a country with lower protection – minimum wage – exists, this will push down the rights of all the other countries²¹.

For jobs that must necessarily be executed in a certain place, competition will be weaker. Workers will compete in equal conditions (equal labour rights) with other potential workers.

Finally, from the point of view of the companies that hold the virtual platform, where supply and demand cross, we must distinguish between two types, namely, generic platforms and specific ones. The first group includes platforms such as Amazon Turk, Microtask, Clickwork, TaskRabbit or Field Agent. In this group, requesters can demand any kind of tasks. In the second group, there are specific platforms which only offer a particular service like Uber – city transportation; Sandemans – guided tours; FlyCleaners – laundry; Myfixpert – electronics repairs; Chefly – cooks at home; Helping – housekeeping; Sharing academy – Tutor at home; and Entrenar.me – personal training.

The difference is important since the specific platforms exercise greater control over workers. As a traditional company would do, a company dedicated to transport services wishes to keep its brand highly valued. In order to achieve this, the platform needs to ensure that the workers on the platform provide a good service. In contrast, generic online platforms act as a bulletin board where activities can be advertised and where the platform's reputation is not linked to any particular service or activity. This will make generic platforms exercise less control on how workers perform their tasks, that is, there is less subordination. Generic online platforms seem to act more like employment agencies that provide labour to a third party²².

2.3.1. Online Crowdsourcing

As seen above, the main feature of online crowdsourcing is that all the work can be performed virtually without any physical work by the service provider. Crowd labour

²¹ This idea has been developed in the past as globalisation arises. See, H. Arthurs, *Reinventing Labor Law for the Global Economy: The Benjamin Aaron Lecture*, Berkeley Journal Of Employment & Labor Law, 22, 2, 271 (2001)

²² Of course, despite appearances, the reality is not so clear, since both the lack of integration into the platform's business and the lack of managerial prerogative and control by the platform can be challenged. For more informatio, see J. Prassl and M. Risak, *Uber, Taskrabbit, and CO.: Platforms as employers? Rethinking the legal analysis of crowdwork*, Comparative Labour Law & Policy Journal V 37, 3, (2016).

has no physical job site. It is performed and compensated entirely in cyberspace, often anonymously, and governed by compulsory “click wrap” or participation agreements²³.

Typical compensation is piecework regardless of the time used to complete the task. However, the worker is not always compensated. Voluntary crowdsourcing is spreading. Wikipedia has revolutionised the encyclopaedia publishing industry without a single paid worker behind the project. The preparation of encyclopaedia articles for Wikipedia is done by volunteers who contribute to its creation without receiving any compensation²⁴.

Contest crowdsourcing is where the requester offers compensation only to the first one to complete the task successfully. So far, contest-based crowdsourcing has been used to solve complex mathematical equations and algorithms. Companies, instead of hiring a team of experts to solve the question, decide to upload the problem to the online platform in the form of an open call. Only the first one to obtain the solution to the question will receive compensation. Before online platforms existed, these forms of work would be unfeasible because it was impossible to reach such large numbers of interested people and the costs of transmitting the open call were too high. Today, with the availability of such platforms, it is easy to reach experts around the world, thereby getting enough people interested in solving the problem for the prize²⁵.

Returning to compensated crowdsourcing, in this model, unlike traditional employment, which involves a one-to-many relationship between employer and employees, crowdwork is characterised by many-to-many connections, with some connections lasting as little as a minute or two²⁶.

²³ See Felstiner, *supra* n. 11 at 146.

²⁴ Voluntary crowdsourcing has been very powerful in being able to engage participants in questions of general interest carried out by the government, public interest groups and charitable organisations. For example, NASA launched a project based on online volunteers with the aim of identifying topographical structures on Mars through photos. The task was completed in record time due to the number of participants who volunteered their time. See S. Michael, *Clickworkers on Mars*, *American Scientist*, May-June, 226 (2002). Moreover, many employees donated their time online to check the images taken by rescue planes in the search for a missing aviator in the Nevada desert. See S. Fosset, *The Search for Steve Fossett: Turk and Rescue*, *The Economist*, September 22nd, 97 (2007). As always, the ethical issues are in the use and not the existence of technology: Blue Servo created in 2008 by the Sheriff of the Texas border established a network of cameras on the border with Mexico requesting the help of online volunteers to look out for any suspicious entry; it can be seen at blueservo.net.

²⁵ It is also called competitive crowdsourcing. For example, Innocentive.com

²⁶ See Prassl and Risak *supra* n. 22 at 630 and Felstiner, *supra* n. 11 at 146.

This way of organising production can be applied to any sector. Complex tasks can be divided, using technology, into much simpler tasks. In this way, after a process of division, the worker will find a simple, repetitive and short task. With the use of technology, processes are being simplified so that any unskilled worker can perform tasks that usually require well-trained workers. One example is the company SpinWrite (spinwrite.com). This company creates duplicates of papers – including scientific papers. To achieve this, the company breaks the article down into sentences and gives it to workers through virtual platforms to amend only that sentence. Later, the article is reassembled in a new form. Modifying a whole text, without changing the meaning, might be a job for an expert linguist, specifically hired for this task, but changing one sentence is a much simpler task that anyone can perform. In this case, the skilled worker would be, in the best of cases, a work supervisor²⁷. This would be a kind of 21st century Taylorism (or Neo-Taylorism).

The "scientific management" of Frederick Taylor (1911) was based precisely on splitting production into small tasks assigned to each of the employees. In this method, supervisors must monitor the entire process, ensuring the quality of the work and compliance with the deadlines and schedules. In this context the skilled worker is a supervisor.

We can find similarities between “scientific management” and the work of the virtual platforms. With new technology, the division of labour leads to a kind of virtual assembly line, where tasks are divided in order to be simplified. Furthermore, in Neo-Taylorism working time is irrelevant since it is compensated by piece rate, not by hours (schedules are irrelevant for the employer). In the same sense, as it is paid by piece rate, the way the work is done is not the employer's concern (less supervision)²⁸. Employers will not control the productive process (how the work is done), but the

²⁷ M. Marvit, *How Crowdworkers became the ghosts in the digital machine* (2014) in <https://www.thenation.com/article/how-crowdworkers-became-ghosts-digital-machine> (Accessed 25 Sept. 2016)

²⁸ In traditional work, when the compensation was piece rate the consequences were the same. See M. Finkin, *Beclouded work, beclouded workers in historical perspective*, *Comparative Labour Law & Policy Journal* V 37, 3 (2016).

outcome of the work (ex-post control), together with an ex-ante control (employers will not hire workers who do not have good evaluations on their online record²⁹).

This work organisation is used by companies such as Elance (elance.com). Elance offers all kinds of professional services such as administration, design, engineering, copywriting and web design without hiring in-house employees. The company has a large pool of workers willing to do the job who sign in on the platform. LiveOps is another company which uses a networked crowd of communication workers to create virtual call centres for tech support and direct marketing. Liveops delivers telemarketers to companies that need them. The worker is remunerated by the number of calls made. This would mean that the worker is free to choose how many calls she makes and when. Given the large number of workers offered through this platform, companies do not fear running out of telemarketers, so they do not need to hire full-time or to have any kind of assurance that telemarketers are going to work a minimum number of hours. In addition, telemarketers can work for several companies at once without a lasting relationship with any of the companies. In this regard, crowdsourcing resembles domestic subcontracting, temporary staffing and business products outsourcing. However, unlike passive middlemen in a supply chain, all crowdsourcing vendors exercise some form of control over the creation and continuance of work relationships, and extract revenue from a proportion of the volume of business conducted on their platforms. With this, an employer does not need to hire managers to supervise workers and can avoid turnover and recruitment expenses. Employers do not require human resources planning and neither do they pay for unproductive time³⁰. There is no need for lay-offs if needs decrease or a need to pay workers who are working “on call”. In the end, flexibility is carried to its finest expression.

2.3.2. Amazon Mechanical Turk

²⁹ This could mean a threat to the “Knowledge economy”. Some literature argues that work on the assembly line has come to an end. They explain that the new economy would value highly-skilled, smart and competent workers. See K. Stone *From widgets to digits Employment. Regulation for the Changing Workplace*, Cambridge University Press, 5 (2004). However, the fragmentation of the whole labour market can revert or reduce this tendency. It is possible that in the future unskilled workers would have work on these virtual assembly lines, where skilled workers would be only occasionally needed as supervisors. See M. Cherry, *Working for (virtually) minimum wage: Applying the fair labor standards act in cyberspace*, *Alabama Law Review* 60 (5), 1095 (2009).

³⁰ See Felstiner, *supra* n. 11 at 152.

Amazon Mechanical Turk is a model of the generic crowdsourcing online platform. MTurk was created in 2005. The objective was to get online workers to do simple tasks for a human but which computers were still unable to perform³¹. Currently, there are more than half a million "Turkers" (as MTurk workers have been called) around the world³². It operates as follows. Requesters, through the MTurk platform, provide a task and establish a fee. These may set the conditions for acceptance, so that any worker who does not meet these conditions would not be able to take the job. The compensation offered per task is not negotiable. In addition, Amazon – the owner of the platform – allows requesters to refuse a task, once completed and submitted, without any obligation to pay the worker or to give the task back. Requesters do not have to justify the rejection. Requesters can evaluate workers and this information is made public to other requesters³³. However, the platform does not allow workers to evaluate requesters. Finally, Amazon maintains the right to close a worker's account, which means that the worker could not work through its platform again³⁴.

All of these conditions, including workers' being considered independent contractors (micro-entrepreneurs) and not employees of Amazon or any company for which they work, must be accepted by workers before they can be registered on the virtual platform. Amazon, through these terms and conditions, also forbids the worker to perform her task using "robots, scripts or any other automated device". It also prohibits the contracting parties from reaching agreements outside the Amazon platform, thereby

³¹ This is precisely the idea that lies behind the name of the platform. Mechanical Turk is the name of an eighteenth century wooden "robot" with humanoid form, adorned with a turban, which was able to play chess. They said it was the first "robot" in history. However, it was discovered that inside the wooden humanoid was a person suffering dwarfism, who in actual fact ran the "robot". This analogy may seem a curiosity, but responds to a far more worrying philosophy: workers who carry out functions that are completely dehumanised on the other side of the wiring of a computer. They perform totally repetitive, monotonous tasks that are far from the final product, without, in many cases, any knowledge of what they are really working on. See Marvit, *supra* n. 27. In particular, the issue has raised some criticism regarding the ethical implications. Workers, without knowledge, could be working for the benefit of dictators who use this work to oppress their people. For example, it could be used to identify protesters in photographs taken during protests. This could be done without telling the worker performing the comparison between photos. See J. Zittrain, *Work the New Digital Sweatshops*, Newsweek December 9th, 41 (2009).

³² Nevertheless, there are many other platforms like Amazon Mturk, such as CrowdFlower, Clickworker, CloudCrowd, so the number of workers in the industry remains unknown. See Marvit, *supra* n. 27.

³³ A. Kittur *et al.*, *The Future of Crowd Work*, 16th ACM Conference on Computer Supported Cooperative Work, CSCW 2013, 1303 (2012)

³⁴ See Aloisi, *supra* n. 9 at 11.

limiting their contractual freedom³⁵. The minimum price that Amazon allows as payment per job is 1 cent³⁶ and the requester has 30 days to evaluate and pay for the task. Amazon takes 10% of the fee and specifically states that it will not mediate in any disputes between the parties³⁷.

As can be seen, even online and generic crowdsourcing platforms exert some control over workers. In this case, in particular, it is the requester who controls the service provision. She could establish requirements for acceptance, check past assessments of each worker, issue instructions on work, and finally the requester is the one who controls the work done. However, the platform also issues some instructions and establishes some requirements. It seems that we are before an unregulated temporary employment agency³⁸ that can skip all the guarantees for the weaker party in the relationship.

In fact, the platform conditions cause a deep imbalance between the requester and the worker. Obviously, the platform wants to attract requesters of work, who are the ones with capital. Thus, in the absence of any legislation that prevents it, the platform is designed entirely to appeal to the requesters. The clearest example comes from the existence of the "satisfaction clause". This clause says that a requester would not be required to pay for a service if it is not considered satisfactory and neither do they have to justify their reasons for doing so. Furthermore, the requester will not be forced to return the work rated as unsatisfactory. In short, this imbalance, added to the fact that there appears to be no applicable regulation, results in the fact that the average earnings of an MTurk worker are \$ 1.25 per hour of actual work³⁹.

2.4. *Offline Crowdwork*

Crowdsourcing that requires local and physical performance shares many of the above features. Both are based on the existence of a virtual platform that allows customers to connect with a large pool of workers. However, since offline crowdsourcing requires

³⁵ G. Davidov, *Who is a Worker?*, ILJ, 34, 1, (2005).

³⁶ However, it is also possible that the requester pays in money that can only be spent on Amazon or on specific video games. This has been criticised by the literature because it is understood that the goal is to attract child labour. See Marvit, *supra* n. 27.

³⁷ See Felstiner, *supra* n. 11

³⁸ See Felstiner, *supra* n. 11 at 145

³⁹ *Ibid.* at 167.

physical implementation of the work, it is necessary for the person to be in the right place at the right time. On the one hand, this would mean less competition among workers to get the job (increasing wages) and, on the other hand, it allows effective application of national labour regulations. The Labour law of the place in which the service is performed cannot be neglected since all workers in that territory shall be subject to the same legislation⁴⁰. However, the physical execution of the work involves a cost to the worker, such as travel expenses or accident risks, etc., that do not exist in the case of online crowdsourcing.

2.4.1. Uber

The most famous company of the specific offline crowdwork type is Uber. Uber owns a virtual platform where you can obtain city transport⁴¹. Operation is simple. Any user can download its app for free. The app allows users to find, by means of GPS, the closest driver and ask for a ride. Uber does not hire drivers or own any cars – on the contrary, Uber expects its collaborating drivers to do the job and provide the means. These collaborators have to send an application to Uber and pass a test in order to be authorised to be part of the platform. This authorisation process includes a request to send their driver's license, car's registration number and car insurance. Sometimes, depending on the city, drivers can be examined about their geographical knowledge of the city and they may be interviewed by an Uber employee. A driver's vehicle has to be less than ten years old. The price of the service cannot be negotiated by the parties, but is established by Uber. Tips are forbidden and Uber takes between 10% and 20% (or even 30% in some cases⁴²) of the price. Users can evaluate drivers and the evaluations are made public for other clients⁴³. If the evaluations are negative, Uber can forbid a driver's access to the

⁴⁰ Most of the problems arise because we have rules based on national territories that regulate global markets.

⁴¹ The Generic type refers to platforms where you can find any kind of service offered, e.g. TaskRabbit.com or Gigwalk.com, where you can hire workers for delivery, assembling furniture, housework, warehouse auditing and "phantom customers" among others.

⁴² See E. Huet, *Uber Raises UberX Commission To 25 Percent In Five More Markets*, Forbes (2015).

⁴³ A. Asher- Schapiro, *Against Sharing*, Jacobin, <https://www.jacobinmag.com/2014/09/against-sharing/> (accessed 1 Oct. 2015).

platform through deactivation. Uber can also disable a driver's access to the platform for other reasons, e.g. for criticising the company in social networks.

Drivers are free to choose when to work and for how long. They can also refuse rides, but if a task is accepted it has to be completed⁴⁴. Moreover, the "drivers' manual" provided by Uber says that a driver's acceptance of all jobs is expected. Uber will investigate – with the possibility of being deactivated – if too many rides are rejected. The manual invites drivers to wear professional-style clothes. It suggests that the radio should be switched off or, if left on, it should play jazz music. The manual also recommends opening the car's door for users' convenience and keeping an umbrella in the car⁴⁵, so that, in case of rain, the customer does not get wet when entering or exiting the vehicle⁴⁶.

The driver has to pay for all the expenses (petrol, insurance, taxes) arising from the use of the car, as well as assuming all responsibility should an accident occur. Uber offers insurance to all its drivers for less than the market price.

Crowdworkers' and employees' vulnerabilities. Do they respond to different situations?

3.1. Subordination as an essential element for protection.

For the purposes of this study, one of the most relevant labour effects of the business model described is “apparently” the lack of dependence, or subordination, of the worker. In all cases, the crowdworkers will be able to choose when (schedule) to work, and for how long (working hours), and she even seems to have considerable freedom in the way the work is executed. Thus, these businesses will not control the execution of work (as much as in the past) because they will evaluate the results. This change is not trivial. Worldwide, the main characteristic that leads to Labour law protection is the existence of a subordinate relationship⁴⁷. The current model of employees' protection

⁴⁴ See Uber Terms and Conditions at www.uber.com/legal/usa/terms (accessed 4 Sep. 2016).

⁴⁵ ROGERS, B., “Employment as a Legal Concept” Legal Studies Research Papers Series, Temple University, 2015

⁴⁶ Case O'Connor v. Uber Technologies, Inc., No C-13-3826 EMC, 2015.

⁴⁷ It is true that some countries put most emphasis on “control”, while others refer to “integration” and yet others to “subordination”, but notwithstanding such variations, the tests are surprisingly similar across jurisdictions. See G. Davidov, M. Freedland and Kountouris, *The subjects of Labour law: “Employees and Other Workers*, in M. Finkin and Mundlak (eds.), *Research Handbook in comparative Labour Law*, 119, (2015). For an analysis of the concept of worker in international law, see B. Creighton

revolves around the existence of subordinate work as the main characteristic of the employment contract⁴⁸. Today, in interpreting the employment contract in order to find out whether a worker is an employee or an independent contractor, courts rely, by default, on the “right-to-control test”⁴⁹. The “right-to-control” test is a common law-based test which focuses mainly on the right of the employer to control, which means that the more control exerted by the employer over the work done by the worker, the more likely it is that the worker will be considered an employee⁵⁰. In the new business model and with this kind of control test, the lesser control exercised by the firm could lead to workers not being classified as employees, but as independent contractors.

In short, under the right-to-control test, it is understood that workers that are not being “controlled” by the firm do not need protection. From a legal interpretation point of view, it could be a matter of discussion as to whether these “new” workers (crowdworkers) are really independent. Or we could even argue that we are just before a new kind of dependence. However, in this work, I would prefer to focus on other issues: Do crowdworkers and classical employees actually face different realities? Put in other words, is the working situation faced by crowdworkers different enough to exclude them from all Labour law protection?⁵¹ We will use this analysis at the end to justify the

and S. McCrystal, *Who is a “Worker” in International Law?*, *Comparative Labour Law & Policy Journal* V. 37, 3, (2016).

⁴⁸ Art. 1 of the Statute of Labour in Spain establishes dependency as the main characteristic of the employment contract. See M. Rodríguez Piñero, *La dependencia y la extensión del ámbito del Derecho del Trabajo*, RPS, 71: 155, (1966). In the USA, the courts mainly apply the “right-to-control test” to find out whether there is subordination and the situation thus qualifies as a labour relationship. See R. Sprague, *Worker (Mis)Classification in the Sharing Economy: Square Pegs Trying to fit in Round Holes*, 31 A.B.A. Journal of Labor & Employment Law. University of Wyoming, 16, (2015). In Italy, art. 2094 of the Civil Code that regulates the ordinary contract of employment refers to subordinate work. In the Netherlands, the employment contract is governed by art. 7: 610, para. 1 of the Civil Code, where the only qualification element is the fact that one person works for another.

⁴⁹ Michael Harper, *Focusing the Multifactor Test for Employee Status: The Restatement's Entrepreneurial Formulation* (October 1, 2015). Boston Univ. School of Law, Public Law Research Paper No. 15-51, (2015). Available at SSRN: <http://ssrn.com/abstract=2684134> or <http://dx.doi.org/10.2139/ssrn.2684134> (accessed 18 Dec. 2015)

⁵⁰ Griffin Toronjo Pivateau, *Rethinking the Worker Classification Test: Employees, Entrepreneurship, and Empowerment*, (November 30, 2013), 2. Available at SSRN: <http://ssrn.com/abstract=2361789> or <http://dx.doi.org/10.2139/ssrn.2361789> (accessed 24 Nov. 2015)

⁵¹ Remember that, as we have seen so far, this new production model focuses precisely on the fact that the workers are not protected by labour law. In fact we can say that the different regulation is used as a comparative advantage over traditional businesses. Companies which do not hire protected workers can provide services at lower prices due to the reduction of costs resulting from the non-enforcement of labour protection. Therefore, this business model does not seem to be succeeding in creating more efficient and productive networks but simply as a means to avoid the imposition of protective rules.

necessary change towards a purposive interpretation of the employment contract applied to crowdworkers.

The employment contract, born in the industrial revolution, was created to protect workers in large factories⁵², who were mainly identified by subordination as the main characteristic. At that time, workers' subordination was manifested by several situations. Firstly, as membership of an organisational structure owned by a businessman. Secondly, as a hierarchical worker dependent on the employer. Thirdly, alienation from the means of production, as workers would never be owners of the factory or machines, as well as alienation from business risk, as workers would not bear the business risks⁵³. In the same sense, subordination was manifested by the fact that workers would never have access to the market (market alienation)⁵⁴ or to the products they made during their work (product alienation)⁵⁵. Since these workers back in the nineteenth century (the ones to be protected at the time) had these characteristics, the protection system was built on this basis⁵⁶.

However, this does not mean that the "new workers", who have different characteristics due to the evolution of the production model, do not suffer the same risks or that they do not deserve similar protection by the legislator.

As described by Davidov in a series of articles⁵⁷, what makes an employee especially vulnerable and thus deserving employment and labour protections are the democratic deficits and psychological and economic dependence. The first characteristic – democratic deficit – means being under control of another, having a boss that you have to answer to, lacking the ability to influence the way the work is performed and choose the work to be performed. The second characteristic, economic dependency, should be interpreted in a sense of being unable to spread the risks among a number of different

⁵² See Valdés Dal-Ré, *supra* n. 5 at 45

⁵³ G. Bayon Chacon and E. Pérez Botija, *Manual de Derecho del Trabajo*, Marcial Pons, (1976)

⁵⁴ M. R. Alarcón Caracuel, *La ajenidad en el mercado: Un criterio definitorio del contrato de trabajo*, Civitas 28, (1986)

⁵⁵ M. Alonso Olea, *Introducción al Derecho del Trabajo*, Revista de Derecho Privado, 18-19, (1968).

⁵⁶ F. Pérez Amorós, *El trabajador como sujeto del Derecho del Trabajo Español*, Revista de Política Social 133, 87, (1982).

⁵⁷ G. Davidov, *The three axes of employment relationships: A characterization of workers in need of protection*, U.TL.J., 52, 357,(2002). See also Davidov *supra* n. 35 at 62, and G. Davidov, *A Purposive Approach to Labour Law*, Oxford, 35-45, (2016).

relationships. In the following part I will argue that the crowdworkers suffer from the same vulnerabilities as employees and therefore need protection from Labour law.

3.2. Objectives of the Labour law applied to crowdworkers.

Literature identifies three main sorts of reasons or justifications typically laid down for regulating work relations: i) market failures, ii) distribution of wealth /welfare concerns and iii) unbalanced bargaining power.

First, market failures justify employment regulation since the employment market has efficiency problems that the law should fix. The main failures that characterise labour market can be summed up as follows⁵⁸: i) information asymmetry; ii) inelasticity in labour supply; iii) collective action problems; and iv) low investment in human capital. Hyde⁵⁹ has already argued that these market failures affect all personal work arrangements and not only employment relations. In order to address these market failures and promote efficient regulation, laws have to be passed allowing workers to group together in organisations and bargain, as a collective, minimum terms of employment (minimum wage and maximum working hours), restrictions on child labour, health and safety rules, among others. To sum up, social rights are a necessary source for those conditions that markets require for their operation⁶⁰. As we are going to systematically analyse below, these market failures can also be spotted in crowdwork and, therefore, the same regulations are needed.

Secondly, distribution of wealth and workers' welfare has been argued as justification for Labour law. Prosser (2006) develops the idea that the workers' labour conditions should not be decided by the market, but should be an outcome of a democratic deliberative process. This author defends the existence of a range of values in society that

⁵⁸ J. Fudge, *Fragmenting work and fragmenting organizations: The contract of employment and the scope of labour regulation*, OHLJ, 44, 4, 626 (2006). See also Hugh Collins, *Justification and techniques of legal regulation of the employment relations*, in Hugh Collins, Paul Davies & Roger Rideout (eds.), *Legal Regulation of the Employment Relation*, Kluwer International, 7-11 (2000) and Alan Hyde, *What is Labour Law*, in Davidov & Langille (eds.), *Boundaries and Frontiers of Labour Law*, 37-38, (2006).

⁵⁹ See Hyde *supra* n. 58

⁶⁰ S. Deakin and F. Wilkinson, *The Law of the Labour Market: Industrialization, Employment, and Legal Evolution*, Oxford, (2005), pp 290-303.

can be infringed in employment relations that justifies labour regulations. As society values change over time and they are mainly subjective, Prosser's view to justify the application of Labour law is the most difficult one to implement in the case of crowdworkers. However, I think that society values, such as child labour and wages below the poverty threshold, are also being infringed in crowdworkers' relations.

The third basic, and probably the most accepted, reason for the existence of worker protection that has been argued is the inequality of bargaining power⁶¹, understood as the lack of genuine autonomy when it comes to accepting working conditions⁶². Indeed, in the industrial revolution workers could not freely negotiate their contract terms, given the difference in power with respect to the capitalist (the factory owner). Today, we are faced with the same situation when we speak of the workers on virtual platforms. Uber drivers cannot negotiate their conditions to be part of Uber, but can only accept or reject them⁶³. The same applies to other platforms.

This imbalance in bargaining power seems to be the cause of all the risks workers are subject to (both the old and the new workers): low wages, excessive flexibility of working hours, the transfer of the risks inherent in the business to the worker, and so on. Today, the owner of the virtual platform establishes the working conditions to its advantage and workers have to either accept them or they cannot work. Therefore, the employment contract is based primarily on mandatory rules which cannot be changed by the parties. The labour standard has to be imposed on the parties, since the power imbalance means that there is no real contractual freedom for the worker. Labour laws had to impose limits on the acceptability of certain working conditions by the workers because it was understood that the conditions were not accepted voluntarily but were imposed on them by the company.

In the end, the three justifications for Labour law seem complementary rather than exclusionary, and that is why I will try to justify the application of Labour law to crowdworkers from the three perspectives. To do so, I will be analysing how some Labour

⁶¹ P. Davies and M. Freedland, *Kahn-Freund's Labour and the Law*, Stevens, 18 (1983).

⁶² See Valdés Dal-Ré, *supra* n. 5 at 45

⁶³ A. Murray, "Uber-nomics" *Fortune*, (2014) <http://fortune.com/2014/12/29/uber-nomics/> (accessed 1 Oct. 2015) and R. Hillman and J. Rachlinski, *Standard-Form Contracting in the Electronic Age*, *NY Law Review* 77, 2,440-441, (2002).

law regulations are needed for employees and for crowdworkers alike in order to fulfil the Labour law objectives (described above).

3.2.1. Minimum wage and temporary contracts

In the nineteenth century workers queued up at the entrance to the factory, or in the countryside, every morning waiting to have work that day⁶⁴. The contracts were daily without any commitment to fixity (or compensation for unfair dismissal) and the employer could choose at any time the number of workers she wanted. The employer could hold an auction over employment as well. She could offer the job to those who were willing to receive lower amounts as payment. All these features are quite similar to the model described above. In virtual platforms, employers can hire workforce, not by days but by tasks, which can last minutes or seconds, fully adapting the workforce to the needs of the moment. That situation leaves workers totally unprotected. The workers will not know whether a minute later they will have a job or not.

In addition to this, the large number of workers on the platform causes an auction – a race to the bottom – that lowers the value of work. The immense competition created among workers (which exceeds the competition that might have existed in the nineteenth century) inevitably means that the price of labour will tend towards zero (unbalanced bargaining power' justification). Specifically, studies have been conducted showing that on these platforms, workers, regardless of the level of payment for work, are going to work until they obtain the profits proposed (the minimum subsistence level). Since no rules on maximum working hours are applied, even if they are receiving wages under the minimum subsistence level, they will accept the task and they will continue to work the necessary hours until they reach the earnings that allow them to survive⁶⁵.

Moreover, it should be noted that the rules on minimum wages not only aim to protect workers, but also the broader market. Low wages prevent purchasing power from existing in society, thereby perpetuating a downward spiral of downturn and unemployment⁶⁶. The minimum wage is the necessary legislative response to stop this

⁶⁴ See Cherry *supra* n. 29 at 1083

⁶⁵ J. J. Horton and L. B. Chilton, *The Labor Economics of Paid Crowdsourcing*, Proceedings of the 11th ACM conference on Electronic commerce, 216, (2010) and Janine Berg, *Income security in the on-demand economy: Findings and policy lessons from a survey of crowdworkers*, Comparative Labour Law & Policy Journal V. 37, 3, 561, (2016).

⁶⁶ R. Edsforth, *The new deal: America's response to the great depression*, Oxford: Blackwell Publishers, (2000)

spiral⁶⁷. If, under the institution of independent contractors, we remove the labour force from that regulation, there will be a return to the dangers of weak domestic demand derived from a low purchasing power of citizens (market failures' justification).

Furthermore, it has been argued that the major goal of minimum wage laws around the world is to redistribute resources in favour of low-wage workers, minimise social exclusion and reduce inequalities of income among workers⁶⁸. Considering the latter, it does not make much sense to leave out crowdworkers, who are, as we have seen, the most needed ones. After all, a worker who earns \$1.25 per hour (less than the minimum wage) for her time is not likely to have the skill, entrepreneurial investment or economic independence one would expect of a true independent contractor⁶⁹ (workers' welfare justification).

Finally, there is human dignity, as human beings dictate a minimum level of compensation at work regardless of whether the work is subordinated or independent. There are some social values that cannot be infringed at work. That means that to ensure that our dignity as human beings is respected, it is necessary to prevent workers from selling their work for under the minimum acceptable price. More often than not our self-esteem and self-respect depends on how society values us. Accordingly, paying a ridiculously short wage (such as \$1.25 per hour) is a way to look down on people and goes against human rights and social values.

3.2.2. Maximum working hours

It goes without saying that before the imposition of the eight-hour working day working hours were much longer. The statistics confirm that most of the workers on these platforms have another full-time job but need more work to get sufficient income⁷⁰. As wages have been declining in traditional employment, workers need to supplement their income with other forms of alternative work, in this case, using "flexible" jobs where they

⁶⁷ See Cherry *supra* n. 29 at 1105

⁶⁸ See Davidov, *supra* n. 57 at 77

⁶⁹ R. Carlson, *Why the Law Still Can't Tell an Employee When It Sees One and How It Ought to Stop Trying*, Berkeley J. Emp. & Lab. L. 22, 361, (2001)

⁷⁰ R. Teodoro *et al.*, *The Motivations and Experiences of the On-Demand Mobile Workforce*, CSCW'14, 5, (2014)

can provide services only in their "free time"⁷¹. However, this "flexibility" cannot be seen as advantageous for workers, since many of them have to do full days of work in addition to their work on the platform. Therefore, these people are not freely choosing this type of job, but instead low wages are forcing them to accept the situation (unbalanced bargaining power' justification).

Moreover, the existence of maximum working hours is not only a protection for workers but improves society in general. First, long working hours cause major health problems that end up being paid for, in many cases, by society in general. Second, the maximum number of hours' work per day also responds to a question of division of labour in order to reduce unemployment. There are social interests behind these regulations, which remain applicable regardless of how the work is organised (with or without subordination).

3.2.3. Payment in kind

The Labour Law had prevented employers from paying their workers in vouchers which could only be spent in shops owned by the employer⁷². Today, in some cases, the same type of behaviour is still seen. The Amazon platform allows the requester to pay its workers with money that can only be spent on buying goods on Amazon. Once again, the permissibility of this situation harms not only the workers but also the overall market. The restriction on the purchasing power of citizens to one company reduces market competition, leading to a captive clientele and increasingly monopolistic markets (market failures' justification).

3.2.4. Child labour

It has already been mentioned that some companies remunerate work with vouchers that can only be spent on video games. This has been criticised, since this form of remuneration can encourage child labour⁷³. In this sense, some studies have already shown that workers on virtual online platforms are underage youths working in their free time⁷⁴. As I have already said, child labour infringes the most basic social values.

⁷¹ 60% of workers on Amazon MTurk hold other jobs besides crowdwork. See Berg *supra* n. 65 at 556.

⁷² Protection of Wages ILO Convention, 1949 (No. 94). E.g. art. 26 Statute of Labour in Spain

⁷³ See Aloisi, *supra* n. 9 at 9.

⁷⁴ See Teodoro et al *supra* n. 70 at 240.

3.2.5. Organisational inefficiencies and being “on call”

The imbalance in the bargaining power of the parties can easily cause certain risks or errors to shift to the bottom of the chain: the worker. Specifically, in factories or in agriculture, when workers were compensated by piece-rate or as performance-pay systems, workers used to bear the burden of delays, the lack of supply, the lack of work or any other administrative mismatch caused by the company. Thus, when workers could not produce at the factory, due to these "errors" on the business side, the worker was on duty, but without remuneration. Over time, the law has regulated such situations preventing the employer from being able to impose on the worker errors or inefficiency committed by the company⁷⁵.

Now, with the on-demand economy the costs caused by such inefficiency have once again been reallocated to the weaker party. Note that these regulations, which prevent the imposition of these inefficiencies on workers, not only benefit the workers themselves, but also national productivity. If a company can shift its risks and mistakes to workers, the employer will have no incentive to improve her organisation or to improve its productivity or even to invest in any kind of improvements.

Specifically, finding tasks to be done in crowdsourcing is highly costly for crowdsourcers. They have to spend a lot of time “on call” in order to get a task. Berg⁷⁶ found in the analysis that “the toughest part of turking for a living is actually finding the jobs, for every hour I spend working I most likely to spend 2 hours monitoring (...) to see what jobs show up”. That means – in this model – that the worker has to bear the cost of unproductive time due to a bad organisation of work⁷⁷. Workers do not have the capital or the information to improve the organisational system of work. However, as long as the platform – which does have the capital and information to improve the organisational system – is able to put this risk over workers, they will not have any incentive to improve

⁷⁵ E.g. art. 30 Statute of Labour in Spain.

⁷⁶ See Berg *supra* n. 65

⁷⁷ Judgement of Supreme Court Spain, 22nd December 2000 (rec. 1438/2000) establishes that the worker has the right to be paid the salary due for “being on call”. In this case the employer was a transportation company which only paid when the driver was offered a job. The Supreme Court concluded that the driver was entitled to wages for the entire shift according to art. 30 of the Spanish Statute of labour.

the organisational system and to increase productivity. This market failure is solved by Labour Law, which makes sure that the employer bears this kind of risks.

3.2.6. Highly variable wages

As regards compensation, the literature shows that it is much more efficient for society in general and for workers to receive a part of their salary as a fixed or invariable amount. This is so due to the following reasons:

- *Risk aversion workers*: The first reason is that workers (as individuals) do not bear risk well, which means that variations in income cause higher costs to workers than to employers. For workers, salary variability involves large costs based on the need to support the family, pay the mortgage, and so on⁷⁸.

- *Limitations on the loans market for workers*: Economic theory states that operators who are facing changes in their lifetime earnings go to the capital market to borrow today what they hope to have in the future. This theory works well in perfect capital markets, where there is perfect information, but in reality the capital markets are often closed to most of the (subordinate or independent) workers, which means they cannot reduce volatility in their income through the use of these financial markets. In contrast, companies have easier access to credit and because of this they can cope with variations in income more comfortably.

- *Limitations in risk insurance*: Another option for agents who are risk averse is to get insurance. The operator, who recognises that its income can suffer large variations, could insure that risk. But, again, it is very difficult for workers to insure that risk on the market, so they must rely on their employer to provide that insurance⁷⁹.

- *Risk diversification*: The employer can easily reduce the total risk assumed by diversifying investments in different projects, which is far more complicated for the worker. Workers concentrate all the income they earn in their ability to work, so they are not able to spread the risk of a variable salary.

⁷⁸ J. E. Stiglitz, *The design of labor contracts: The economics of incentives and risk sharing*, in Nalbantian Haig R. (ed.), *Incentives, cooperation, and risk sharing: Economic and psychological perspectives on employment contracts*, Totowa, New Jersey: Roman & Littlefield, 48 (1987). See also B. Ríos Salmerón, *Inembargabilidad del salario*, in A. Montoya Melgar (dir.), *Enciclopedia Jurídica Básica*, vol. III, Madrid: Civitas, 3549 (1995).

⁷⁹ See Stiglitz *supra* n. 78 at 48

This risk aversion trend justifies the need for wages protection granted by Labour Law. As Carlson⁸⁰ pointed out, one of the main aims of Labour Law in its origins was to protect wages. Some laws, such as those granting preferences to wages in bankruptcy or creating liens to secure indebtedness based on unpaid wages, had the objective of protecting people who depended on a regular income in order to be able to face the cost of leaving. Actually, those regulations, in the beginning of Labour Law were applicable regardless of the dependence on the employer, as the important thing was to protect the needy (workers' welfare justification).

In general, as Davidov⁸¹ argued, independent contractors seem able to protect themselves – to some extent – from work-related risks since they can self-insure themselves by hedging their risks, while employees find themselves in a position of inability to spread theirs out. In this context, it seems obvious that crowdworkers who work for an online platform are unable to diversify their risks since their income depends on the wishes of the platform – i.e. the possibility of deactivation. Apart from that, as online reputation is not transferable from one online platform to another, workers cannot hedge their risks working for different platforms. In fact, the costs of changing the platform can be even higher than the costs of changing job since workers have to start building a reputation every time they want to change the platform (considering that the platform is not asking for exclusivity, which some do). In the end, a crowdworker has to “place all his eggs in one basket”⁸², as employees do.

Even if a crowdworker is able to work for more than one platform (which is not easy for the reason explained above), this does not mean that they can self-insure themselves by hedging their risks. An employee who has more than one job (part-time) is still an employee because legislation considers that the risks are not sufficiently diversified. Working for two platforms is not enough – in my view – to conclude that they can self-insure themselves by hedging their risks.

3.2.7. Collective Bargaining

⁸⁰ See Carlson *supra* n. 69 at 307

⁸¹ See Davidov, *supra* n. 57 at 47

⁸² Paul Weiler, *Governing the Workplace: The Future of Labour and Employment Law*, Harvard University Press, 142 (1990).

Collective bargaining is not a workers' protection in itself but an instrument allowing workers to protect themselves. However, as it is one of the fundamental labour regulations throughout the world, it seems fair to wonder whether crowdworkers need collective bargaining as employees do. The function of collective bargaining has been described as threefold: increasing workplace democracy, redistribution and efficiency⁸³. As I have already explained, the platform unilaterally lays down the working conditions (i.e. “satisfaction clause”). Thus, crowdworkers bear an inequality of bargaining power. With collective bargaining, crowdworkers could gain some bargaining power and try to change the way their workplace operates, the way they are being treated, rather than just quit. It is important to bear in mind that collective bargaining allows workers to get a voice and participation in decisions on matters that affect their daily lives. That is why it is considered a basic human right. In this sense, the way the crowdworkers do the job – under instructions or with autonomy – does not seem a sufficient reason to deprive them of their right to collectively participate in the way the online platform organises their work.

On redistribution of power from employers to employees, once again there are no distinctions between traditional employees and crowdworkers. The online platform holds the power. As a result, crowdworkers suffer as unfair or unjust terms of engagement as employees would get from the employer without collective bargaining.

Regarding efficiency, laws on collective bargaining were designed to limit industrial conflict, which is obviously seen as detrimental to efficiency⁸⁴. Nowadays, we are facing the same situation with crowdworkers. Collective conflicts concerning “On demand” economy companies are arising all over the world⁸⁵. Shortly, crowdworkers will be organised and will be ready to take industrial action⁸⁶. Contractual law is not qualified to solve these problems, which will result in efficiency issues.

In the end, all these questions described remain applicable to both crowdworkers and employees. These workers on virtual platforms are not, economically speaking,

⁸³ See Davidov, *supra* n. 57 at 86-95.

⁸⁴ *Ibid.* at 94

⁸⁵ News has been reported about social conflict; as an example see: <http://qz.com/619601/uber-is-using-its-us-customer-service-reps-to-deliver-its-anti-union-message/> (accessed 2 Nov. 2015)

⁸⁶ See the Irani and Silberman experiment in I. Irani and S. Silberman, *Turkopticon: interrupting worker invisibility in Amazon Mechanical Turk*, Changing Perspectives, Paris, (2013).

entrepreneurs. On the contrary, they are individuals whose reality is much closer to that of employees. Crowdworkers are risk averse, have limited access to financial and insurance markets and, as they are directly dependent on their labour to survive, they cannot diversify their risks and they cannot individually bargain their conditions.

IV. How to get crowdworkers' protection: a suggestion.

4.1 Vulnerabilities and the need for protection.

As we have seen, employees' vulnerabilities are the same as crowdworkers'. Davidov put forward three main sorts of vulnerabilities; i) organisational viewpoint, ii) social viewpoint, and iii) economic viewpoint. First, concerning the inability of the workers to organise their own work – democratic deficits. Such a deficit can be seen as a result of power struggles between labour and capital, in which the latter has the upper hand. The same occurs in crowdworking, where organisational conditions are settled by the online platform and the worker may only accept them. Moreover, conditions can change over time and the worker has no alternative other than to accept them or stop working with this platform. The possibility of the crowdworkers to choose how many hours they want to work or when to work is not sufficient to argue that crowdworkers organise their work, and this is for two reasons. First, freedom is more of a utopia than a reality. As data shows⁸⁷, crowdworkers would like to work more than they are able to due to the lack of tasks. This means that there is no real freedom concerning how many hours they want to work. Second, the online platform organises the work and establishes the conditions at its convenience. And here we are not only referring to the initial conditions. They change the organisational instructions over time as the online platform changes its business model⁸⁸.

Second, the social point of view refers to work as the major framework for social interaction and work as a provider of the means to dignity, self-respect and self-esteem. As workers trust a specific employer for the fulfilment of those needs, they are vulnerable when they can lose the job. In the case of crowdworkers, as data shows⁸⁹, the workers trust the platform to provide enough work to fulfil their necessities, so they can be

⁸⁷ See Berg *supra* n. 65 at 560

⁸⁸ As an example form Amazon MTurk see, <http://turkrequesters.blogspot.co.at/2013/01/the-reasons-why-amazon-mechanical-turk.html> (accessed 12 Nov. 2015)

⁸⁹ See Berg *supra* n. 65 at 560

strongly affected if they are “deactivated”. Third, concerning the economic viewpoint, we already discussed how crowdworkers are unable to spread out their risk. In fact, since they are paid on a piece-rate basis, they need more protection as they are assuming more risks than traditional employees (fixed wages)⁹⁰.

Finally, in economic, social and organisational terms, crowdworkers and traditional employees respond to the same reality and they require legislative protection. For this reason, in my opinion, it may not make much sense to debate whether or not 21st century workers legally fit into a definition of employment contract from the 19th century – whether their work is controlled or not. Instead, the real issue is that the reality to which the protection is applied is the same.

4.2. The lack of “control” is not a reason not to protect crowdworkers.

Davidov⁹¹ has advocated for extending labour protection to dependent workers – the ones who have economic dependency. He defends that workers without subordination but with economic dependency are in a vulnerable economic position as well, so they need Labour Law protection. This purposive approach tries to differentiate workers from independent contractors by the vulnerabilities of employers that explain the need for protection⁹². As I have tried to argue in this paper, regulations like minimum wage, working hours, annual leave (we will add: child labour ban, limitation on payment in kind, organisational deficiencies, risk aversion regulation, collective bargaining) are all based on the assumption that a solution reached by the market cannot be guaranteed and the Law should correct such deficiencies despite the degree of control exercised by the employer over the worker⁹³.

Indeed, in the case of crowdworkers the only thing that can be argued to defend that they are independent contractors is the degree of control exercised by the online platform – and probably not even that, since the control is exercised indirectly by the monitoring system⁹⁴ and the online reputational system. However, as we have proved in

⁹⁰ See Davidov, *supra* n. 57 at 46

⁹¹ See Davidov, *supra* n. 35

⁹² See Davidov, *supra* n. 57 at 35

⁹³ See Davidov, *supra* n. 35

⁹⁴ M. Cherry, *Beyond misclassification: the digital transformation of work*, Comparative labor law & Policy Journal, 3, 583, (2016).

this paper, even if there is no control in the way the work is performed, there are still enough reasons to protect workers and apply Labour Law. Vulnerabilities, market failures and the need to maintain certain social values are still there. In the end, the lack of instructions dictated by the employer should not be a reason not to apply Labour Law. Neither “subordination” nor “dependency” should be seen as a synonym for “control”. Control refers to the instructions dictated by the employee – having a boss who tells the workers what to do and how to do it – but subordination and dependency are much broader terms, which include economic dependency (impossibility of diversifying risks) and psychological dependency.

As new technology allows firms to provide work to third parties without giving direct instructions, the traditional “control test” could easily fail to provide protection to workers who need it as much as traditional workers.

In this sense, in order to protect crowdworkers from vulnerabilities, Courts should not apply a strict “Right-to-control test” but a purposive interpretation of the employment contract.

4.3. Crowdworkers and independent contractors

The exclusion of some workers from Labour Law protection is not only a collaborative economy issue. It is known that technology could aggravate this situation exponentially and it has particularities worthy of study, although it would be naïve to think that we are facing a completely new problem. In the labour market evolution of the last few years we can observe a rise in the use of self-employed workers. Indeed, the extreme flexibility and the transfer of risks from companies to workers through the use of self-employees extends far beyond the on-demand economy⁹⁵. Hence, it would be reasonable to think that crowdwork and the collaborative economy is just a part of a bigger tendency towards the use of self-employed workers.

It could be argued that, in general, the self-employed also need minimum wage protection, control over payment in kind, etc., so what is the key difference between crowdworkers and independent contractors? In my view there are two differences. First, independent contractors can diversify their risks (as has been discussed above) and,

⁹⁵ V. De Stefano V., *The rise of the “just-in-time workforce”, on-demand work, crowdwork and labour protection in the “gig-economy”*, Conditions of work and employment series, 71, 6, (2016)

second, independent contractors do not have someone who can take care of complying with labour regulation, that is, an employer.

Indeed, as I see it, the main problem to apply labour regulations to “non-controlled” workers is that when there is no-one dictating instructions – controlling the work – it is not always easy to find the employer. This is the case of freelancers, independent contractors and small vendors, who are really independent contractors and do not have a clear employer who can be held responsible for complying with labour regulations. It is true that without an employer it will be difficult to apply Labour Law protection⁹⁶.

Nevertheless, that should not be a problem in the case of crowdworkers, since the online platform – regardless of the direct instructions – is the one that organises the work and dictates most of the contractual terms. So the clearest option is to make the online platform responsible for complying with Labour Law protection.

A second possibility has been suggested by Prassl and Risak⁹⁷. These authors argue that the conceptualisation of the term “employer” needs to move from the current rigidly formalistic approach to a flexible, functional concept. In short, these authors distinguish five functions of the employer and they considered it possible that, in the case of crowdworking, some of these functions were carried out not by the online platform but by the requesters. In this context, some of the responsibilities concerning compliance with Labour Law should be shared among the requester and the online platform or be assigned according to their functions. In any case, this is no longer a Labour Law subjective scope problem but just an issue to find the employer responsible.

Conclusion

Technology, in the coming years, will continue to change the organisational businesses model by making the workers less directly controlled. In the services sector, companies will not need to give instructions or to supervise work performance.

⁹⁶ For more information about the challenges to incorporate non-market work into employment law, see D. Zatz Noah, *The impossibility of Work Law*, in Davidov and Langille, *The Idea of Labour Law*, OUP (2001). The absence of an employer makes most of the employment law regulations unuseful. It has been said that for unpaid care work and for small vendors (who do not have a clear employer) the regulations addressing their needs will have different means, compared with laws protecting employees; see Davidov, *supra* n. 57 at 8.

⁹⁷ See Prassl and Risak *supra* n. 22 at 619

Conversely, through technology, firms will rely on the evaluations made by their customers about the quality of the work. Those same assessments will be used to select future workers (hiring and dismissals). Some firms will not have any reasons to train their workers, as these, if they want to work, must be already trained and ready to work. Modern work, through virtual platforms, is configured with lower subordination and greater freedom for workers to perform their work and choose their working hours. For this reason the definition of contract of employment existing to date (as is interpreted by courts through the “right-to-control test”) could not fit in this modern organisation. However, this should not imply that crowdworkers do not need protection.

This new business model is not based on improving competitiveness and production efficiency, but on cutting costs by reducing social protection and allowing competition among workers as regards remuneration. All this will lead to the disappearance of companies that do not want to enter into this organisational model because they will have to bear more costs. From the moment that certain firms are allowed to exploit such "comparative advantages", the rest either join the model or disappear.

We should not accept a new production model based on a paradigm of exploitation and degradation of human dignity at work. It is completely fair that technology improves organisational forms and business productivity, but legislation cannot allow the competitive advantages of the business models in the 21st century to come from exploiting loopholes and avoiding the protection for workers obtained in past centuries.

Workers on virtual platforms are not entrepreneurs who can negotiate on equal terms and use their initiative to maximise profits. They are interchangeable manpower on a long list of virtual job-seekers. So, in the case that they do not fit the courts' interpretation of employee, it is not because they do not face the same social reality, but because we have an outdated law (or an outdated legal interpretation of the concept of worker) that is not well adapted to the new business models.

In this paper I have argued that, since workers and crowdworkers face the same reality, they both need protection. A purposive interpretation of the employment contract is needed in order to allow Labour Law to fulfil its objectives (solving market failures, maintaining social values and balancing bargaining power).

The following issue, which is not the goal of this paper, is to identify exactly what kind of protection crowdworkers need. In this paper, I conclude that, despite the degree

of control exercised by the employer over the worker, at least regulation concerning minimum wage, working hours, annual leave, ban of child labour, limitation of the payment in kind, organisational deficiencies risk regulation, risk aversion regulation, collective bargaining, etc., are required.