

# GIG Economy in Europe

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## Abstract

This report wishes to explore the dimension, quality and characteristics of Gig Economy in a comparative way. Platform capitalism represents the most appropriate form to interpret the ongoing capitalistic transformations. But the modalities to analyze this phenomenon and the normative efforts appear as still very much contaminated by the prevalent narratives among public opinion. This comparative analysis looks at the main studies carried out at a European and national level on the quality and diffusion of platform economies, in an attempt to go beyond mainstream narratives, and therefore offer a new angle for policy actions. This study is divided transversally by topic (definitions and terminology, occupational comparison, working conditions) and five chapters dedicated to different platform typologies:

- Cloudwork as a growing modality for “offline” companies to outsource work and divide work globally;
- Food delivery, and a gallery on the main existing platforms, followed by an analysis and evaluation of future trends and evolutions in the sector;
- Domestic work and a European comparison proposing a report on the main platform and a study on growth trends;
- Digital tourism, to understand the impact on the sector and potential future scenarios.

Lastly, the report closes with an analysis on the interaction between Gig Economy and industrial relations, trying to investigate the theoretical underpinnings and the experimentations adopted in the EU28. Facing a lack of coherent legislation on the platform system, collective bargaining has moved towards the proposal of benchmark standards and the safeguard of working conditions of digital workers. Even though these are still not widespread, there are contractual experimentations dedicated to platform workers going on in various countries (Italy, Spain, Sweden, Denmark, Switzerland) which try to surpass the hurdle represented by the juridical employment status (autonomous or subordinate) which has often created problems for lawmakers.

**Keywords:** Gig Economy; Crowdworkers; Domestic Work; E-commerce; Food Delivery.

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## I. Introduction

### 1. *Gig Economy*: Defining a Framework

Digitalization is changing, and has now changed, economic and social processes, and the definition *webplatform capitalism* probably appears to be the most appropriate to interpret the transformations taking place<sup>1</sup> because it does not necessarily imply a discontinuity with capitalist transformations and indicates the appearance on the market of a new type of enterprise as a "hybrid between a market and a hierarchical organization".<sup>2</sup> Platform capitalism therefore represents a transformation of capitalism whose destination takes on trajectories that are not yet fully understood, swaying between optimistic and pessimistic perspectives. While behind the emergence of the sharing economy one could get a glimpse of post-capitalist scenarios, we have nevertheless reached a very distant reality of "work without workers"<sup>3</sup> and a change in future scenarios, from a *jobless* future to a *bossless* future<sup>4</sup>. As a capitalist form, platforms express an extractive drive<sup>5</sup> in the process of enhancing value not only of activities that are usually part of the informal economy, such as food delivery or *short-term renting*, but also of data,<sup>6</sup> the new raw material from which to extract value<sup>7</sup>. In an increasingly digital society, data becomes more and more valuable not only in a strictly commercial sphere but also in an organisational-political one, and its collection, management and sale becomes a strategic market. Platforms are in fact configured as *two-sided* markets where platforms do not directly offer the services sought by the consumer/user/ but create the conditions for the transaction to take place.<sup>8</sup> In this way it is also understood how platforms offer services at a loss, or free of charge, with the sole purpose of having access to user profiles and the collection of information giving rise to a trade union saying "*when the price is too low you are the product*". The monopoly of the network, or the monopolistic trend, becomes a forced way of strategic positioning because the more users the platform has, the more it gains economic value and positions in the market: what is known as the *network effect*<sup>9</sup>.

Although there are different classifications of platforms and different classification criteria, there is a general convergence on the meaning of platform, i.e. a digital infrastructure that allows two or more groups to interact, thus giving rise to an activity of online intermediation. Digital environments that allow to integrate production processes in new forms, to organize management processes. Virtual spaces governed by algorithms, the so-called invisible engines, in which the transaction costs - which represent the theoretical and

<sup>1</sup> Garibaldi F., *Il capitalismo delle piattaforme*, in Somma A. (ed.), *Lavoro alla spina, welfare à la carte – Lavoro e Stato Sociale ai tempi della Gig Economy*, Maltemi, 2019.

<sup>2</sup> Sundararajan A., *The Sharing Econoy. The End of Employment and the Rise of Crowd Based Capitalism*, Mit Press, 2016, 54.

<sup>3</sup> Referring to how Friedman G. describes the *Gig Economy* in "*Workers without employers: Shadow Corporations and the Rise of the Gig Economy*, in *Review of Keynesian Economics*, 2, 2014, 171.

<sup>4</sup> Daugareilh I., Degryse C., Pochet P., *The platform economy and social law. Key issues in comparative perspective*, in *Working Paper* 10, 2019, ETUI, 30.

<sup>5</sup> Marrone M., *Gig Economy e sindacalismo informale*, in Somma A. (1).

<sup>6</sup> Srnicek N., *Platform Capitalism*, Polity Press, 2017.

<sup>7</sup> Mason P., *Post-Capitalismo*, il Saggiatore, 2016.

<sup>8</sup> Cattero B., *Oltre i confini della contrattazione collettiva?*, in *Quaderni di Rassegna sindacale*, 4, 2018, 23-32.

<sup>9</sup> Parker G., Van Alstyne M., *Two-Sided Network Effects: A Theory of Information Product Design*, in *Management Science*, 51, 10, 2005, 1494-1504.

economic presupposition of the very existence of the concept of company as a preferable alternative to free market exchange - are substantially reduced to zero favouring their attractiveness in practically all sectors. Although formally companies and platforms act and are comparable to a market where the main product is not so much the service itself but the reduction of transaction costs<sup>10</sup>.

There is no common vocabulary among the EU member states in the semantic sphere that can be traced back to platform capitalism. The Dublin Foundation tried in 2018<sup>11</sup> to sort out the different definitions and the use and meaning of the same term in different national contexts. Generally speaking, the term *sharing economy* or *platform economy* takes on a broader meaning than that of *platform work*, since the former usually includes platforms for the exchange of goods or services without any monetary exchange, while the latter usually includes also those platforms for financial services and housing. Gig Economy, or the economy composed of small size jobs, is the most used term in Anglo-Saxon countries and includes on location, app-based and on-demand services while in Denmark, Italy and the Netherlands the term refers more to physical tasks (such as domestic work or riders).

Chart 1 – European map of terms used for platform work

| Country        | Sharing economy | Platform economy | Gig economy | Crowd employment | On-demand economy | Collaborative economy | Crowd sourcing | Peer-to-peer economy | Freelance |
|----------------|-----------------|------------------|-------------|------------------|-------------------|-----------------------|----------------|----------------------|-----------|
| Austria        |                 | X                | X           | X                |                   |                       | X              |                      |           |
| Belgium        | X               | X                |             |                  |                   |                       |                | X                    |           |
| Bulgaria       |                 |                  | X           | X                |                   |                       |                |                      | X         |
| Croatia        | X               | X                |             |                  |                   |                       |                |                      |           |
| Denmark        | X               | X                | X           | X                |                   |                       |                |                      |           |
| Estonia        | X               | X                |             | X                |                   |                       |                |                      |           |
| Finland        | X               | X                | X           |                  | X                 | X                     | X              | X                    |           |
| France         | X               | X                |             |                  |                   | X                     |                | X                    | X         |
| Germany        |                 | X                | X           |                  |                   |                       | X              |                      |           |
| Ireland        |                 |                  | X           |                  |                   |                       |                |                      |           |
| Italy          | X               | X                | X           |                  | X                 | X                     |                |                      |           |
| Latvia         | X               | X                |             | X                | X                 | X                     | X              |                      | X         |
| Netherlands    | X               | X                | X           |                  | X                 |                       |                |                      |           |
| Poland         |                 | X                |             |                  |                   |                       | X              |                      | X         |
| Slovenia       | X               | X                |             |                  |                   | X                     |                |                      |           |
| Spain          | X               | X                |             |                  | X                 | X                     |                |                      |           |
| Sweden         | X               | X                | X           |                  |                   | X                     |                |                      | X         |
| United Kingdom | X               |                  | X           |                  |                   |                       |                |                      |           |

Fonte: Eurofound, 2018

In Italy, moreover, the term Gig Economy has a negative connotation as it is often associated with precariousness as well as in Finland, Germany, and to a lesser extent in Austria, where Gig Economy refers to precarious jobs, discontinuous and not necessarily performed through an online platform. It is interesting to observe how in Poland the concept of platform work, precisely because it is less widespread and known, is often associated with distance work, externalizations, outsourcing, freelance and self-employment, while the Finnish trade union SAK has opted for the term platform economy and has invited its members to adopt it, trying to define it from above. The term Gig Economy came to the

<sup>10</sup> Del Prato F., Stagnaro C., *Take it easy, rider! Perché la flessibilità dei lavoretti è un valore e non un limite*, in *Briefing paper*, 167, 2018, 1-12.

<sup>11</sup> Eurofound, *Employment and working conditions of selected types of platform work*, Publications Office of the European Union, Luxembourg, 2018.

fore in July 2015 after the following statement<sup>12</sup> by Hillary Clinton: "Meanwhile, many Americans are making extra money renting out a small room, designing websites, selling products they design themselves at home, or even driving their own car. This on-demand or so-called Gig Economy is creating exciting economies and unleashing innovation. But it is also raising hard questions about workplace protections and what a good job will look like in the future"<sup>13</sup>.

The worldwide turnover generated by the Gig Economy is estimated to exceed \$ 82.4 billion in 2017, with an annual growth of 67% on an annual basis testifying that the trend is strongly expanding<sup>14</sup>. Leaving aside here the breakdown by type of work proposed by Staffing Industry Analysts, a consulting and monitoring company on the Gig Economy - as it cannot be superimposed on the analytical approach most frequently used in Europe - it seems however interesting to observe that a large part of the turnover (76 billion, 92.6%) is represented by Business to Consumer (B2C) platforms and the smaller part (6.4 billion, 7.4%) by Business to Business (B2B) platforms, recording however an annual growth of 19%. It is also interesting to note that 75% of the turnover of the Gig economy B2C market is concentrated in just 3 platforms (Uber 49%, Didi Chuxing 23% and Lyft 9%), while in the B2B market 5 platforms account for 42% of total annual turnover (Upwork 21%, GLG 8.2%, Work Market 5%, MBO Partners 3.9%, Axiom 3.1%).

Starting from the outline made by various authors (De Stefano, 2016 and 2018<sup>15</sup>; Graham and Shaw, 2017<sup>16</sup>; McKinsey & company, 2016<sup>17</sup>) jobs related to the Gig Economy, as also reported in the INPS 2018 Report, can be grouped into three broad categories:

- *On-demand* work through apps, in which each task is assigned to a person who performs a material and concrete activity. These are platforms that operate locally, such as Deliveroo, TaskRabbit, Handy, Wonolo, Uber, BeMyEye, Lyft, Care, Foodora and others;
- *Crowdwork*, the so-called *work of the crowd*: programmers, freelancers, computer scientists, professionals, who from home (or from their own studio) make themselves available to perform a multitude of different jobs. These are platforms that operate globally, such as UpWork, Freelancer, Amazon Mechanical Turk, Twago, GreenPanthera, CrowdFlower, Vicker and others;
- *Asset rental*, renting and leasing of goods and property, sharing economy. In these cases, the work performance, if there is one, is optional, as in the case of the owner of an apartment for rent on Airbnb who also takes care of the reception and final cleaning.

Some authors adopt a more restrictive approach, excluding the third category, asset rental, while other authors further broaden the definition to a fourth category, the sales platforms

<sup>12</sup> "Meanwhile, many Americans are making extra money renting out a small room, designing websites, selling products they design themselves at home, or even driving their own car. This on-demand or so-called *Gig Economy* is creating exciting economies and unleashing innovation. But it is also raising hard questions about workplace protections and what a good job will look like in the future".

<sup>13</sup> Howard A., *It's time to talk about the Gig Economy*, in *The Huffington Post*, 14-07-2015.

<sup>14</sup> SIA (Staffing Industry Analysts), *The Human Cloud, the Gig Economy & the Transformations of Work*, 2018.

<sup>15</sup> De Stefano V., *Nuovi lavori, nuove regole?*, Paper presented at the Festival dell'Economia in Trento, 1st June 2018.

<sup>16</sup> Graham M., Shaw J., *Towards a fairer Gig Economy*, 2017.

<sup>17</sup> McKinsey Global Institute, *Independent work: choice, necessity, and the Gig Economy*, *Executive summary*, 2016.

such as Etsy, eBay, Dawanda. The first two categories represent two substantially different types of workers. If on-demand workers via app are matched by an executive off-line translation (rider) in a physical place, crowdworkers perform their work online and therefore potentially anywhere with online access. While the former is physically interceptable and therefore subject to the laws of a State, compared to the latter the legislative attribution appears more complex. Usually when referring to platform workers we include crowdworkers (or even cloudworkers) and workers on demand via app whose description can then take place according to six professional, organizational and content related criteria:

- Task/activity scale: from highly fragmented tasks to more complex tasks
- Type of business: software development, translations, design and graphics
- The form of the service, i.e. services that are provided online or require an offline translation on location: in many countries the two types coexist, while in Belgium, Estonia, Finland, Holland and Slovenia the on-location service prevails;
- Required skill level: high and low professional content;
- Matching modalities through a tender or an offer;
- The method of selection and choice of the worker: customer, platform or worker.

*Chart 2 – Platform typologies in the EU, 2017*

| type of platform                                      | required skill level | form of service     | scale of tasks | selector   | matching modalities | % of total platforms | % of total gig workers | Examples    |
|-------------------------------------------------------|----------------------|---------------------|----------------|------------|---------------------|----------------------|------------------------|-------------|
| on-location client-determined routine work            | low                  | in person (offline) | large          | client     | offer               | 13,7                 | 1,3                    | GoMore      |
| on-location platform-determined routine work          | low                  | in person (offline) | large          | platform   | offer               | 31,5                 | 31,2                   | Uber        |
| on-location client-determined moderately skilled work | medium-low           | in person (offline) | large          | client     | offer               | 11,3                 | 10,9                   | Oferia      |
| on-location worker-initiated moderately skilled work  | medium-low           | in person (offline) | large          | lavoratore | offer               | 4,2                  | 5,5                    | ListMinut   |
| online moderately skilled clic-work                   | medium-low           | online              | micro          | platform   | offer               | 0,6                  | 5,3                    | CrowdFlower |
| on-location client-determined higher-skilled work     | medium               | in person (offline) | large          | client     | offer               | 2,4                  | 3,3                    | appJobber   |
| on-location platform-determined higher-skilled work   | medium               | in person (offline) | large          | platform   | offer               | 1,2                  | 4,2                    | Be My Eyes  |
| online platform-determined higher-skilled work        | medium               | online              | large          | platform   | offer               | 0,6                  | 1,9                    | Clickworker |
| online client-determined specialist work              | medium-high          | online              | large          | client     | offer               | 5,4                  | 30,3                   | Freelancer  |
| online contestant specialist work                     | high                 | online              | large          | client     | tender              | 5,4                  | 4,6                    | 99designs   |

Source: Eurofound JRC database (Fabo et al, 2017) and De Groen et al (2017).

The Eurofound study (2018) estimates that in terms of workers, the types of platform work by 2017 with the greatest occupational weight are on-location platform determined routine work (such as Uber) - and therefore platform with offline operational translation in which matching is determined by the platform itself and with routine tasks - that collect the 31,2% of platform workers as of 2017 and 31.5% of the total of platforms and online client determined specialist work (such as Freelancer) - and therefore a platform with online service provision in which matching is determined by the customer with specialist tasks - with 30.3% of workers but only 5.4% in terms of number of platforms. Of particular interest is the on-location client determined routine work type - i.e. platforms with off line performance on

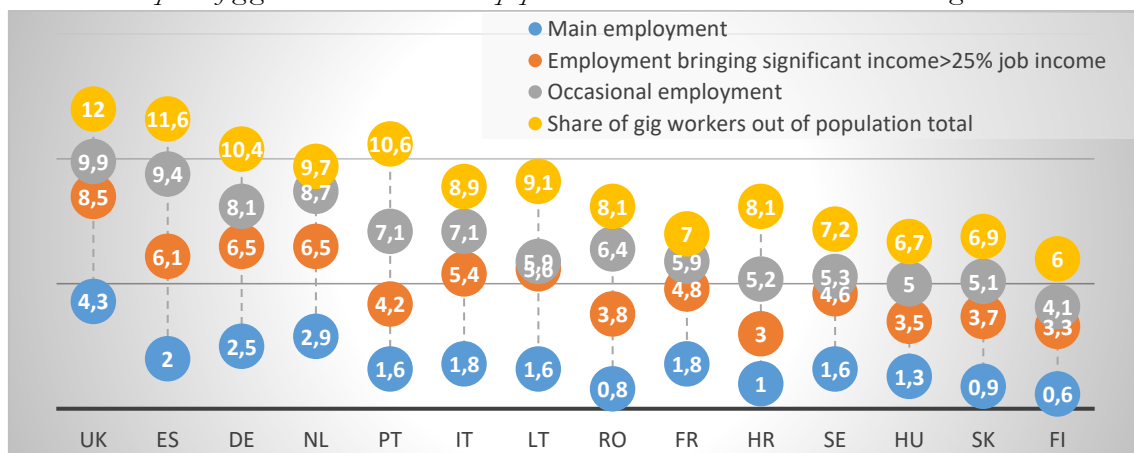
site whose matching is determined by the client and for routine work - which accounts for 13.7% in terms of number of platforms and only 1.3% in terms of platform workers.

## 2. GIG Workers: a Quantitative Dimension.

The number of jobs attributable to the Gig Economy seems even more difficult to determine than the measurement of the number of labour platforms, the number of which varies from 173 (2017<sup>18</sup>) on the basis of some studies conducted on the European level to 273 of the European Commission (2016)<sup>19</sup> depending on the breadth of the starting definition.

Some studies<sup>20</sup> estimate that for about 2% of the active population in 14 EU Member States, work for a labour platform represents the main occupation, for 6% it determines a significant income (i.e. at least 25% of the average salary of a full time worker) and for about 8% it determines a working mode at least once a month. The same studies show an incidence and frequency of gig workers divided by individual country, with highest peaks in the United Kingdom, where for about 4% of the population the income from work is determined for more than 50% by the work of the platforms, and in Spain, however, with a greater dispersion of work, and with lowest peaks in Finland, Slovakia and Hungary where the share of those who find in the Gig Economy the main employment is very marginal.

Chart 3 – Impact of gig workers on the active population in the labour market and among internet users



Source: Ires Emilia-Romagna data processing based on COLLEEM dataset, European Commission

Separate surveys have been carried out in individual countries, the results of which are in line with the results of the Community surveys.

<sup>18</sup> Fabo B., Beblavý M., Kilhoffer Z. and. Lenaerts K, *An overview of European platforms: Scope and business models*, Joint Research Centre, Publications Office of the European Union, Luxembourg, 2017.

<sup>19</sup> European Commission, *Assessing the size and presence of the collaborative economy in Europe*, Publications Office of the European Union, Luxembourg, 2016.

<sup>20</sup> Pesole A., Urzi Brancati, C., Fernández-Macías E., Biagi F. and González Vázquez I., *Platform workers in Europe*, Evidence from the COLLEEM survey, Joint Research Centre, Publications Office of the European Union, Luxembourg, 2018.

| Countries | Source                                   | Year | Results                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|------------------------------------------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Austria   | University of Hertfordshire e IPSOS MORi | 2016 | <p>37% of the sample searched for work in the last year through UpWork, Clickworker or MyHammer and only half found it.</p> <p>Generally, crowdworkers are only 11% students and 33% are over 45 in contrast to the common narrative.</p> <p>36% of crowdworkers interviewed also use digital services, confirming the overlap between platform users and platform workers</p> |
| Italy     | INPS De Benedetti Foundation             | 2017 | <p>In 2017 there were 753,248 platform workers, of whom about 10,000 were riders (of which 67% were under 35 years old). 38% of the platform workers declare to have little or no autonomy while 50% declare that their activity is controlled and organized by an algorithm.</p>                                                                                              |
| Spain     | Research Group PAIDI SEJ-332             |      | <p>About 700 thousand Spaniards consider platform work as the main form of employment, and the main motivation is the absence of other possibilities.</p>                                                                                                                                                                                                                      |
| Bulgaria  | Eurofound                                | 2018 | <p>Freelancers registered in 2015 to the main platforms have gone from 23 thousand in 2015 to 43 thousand in 2018</p>                                                                                                                                                                                                                                                          |
| Finland   | Statistics Finland                       | 2017 | <p>0.3% of the active population who have earned more than 25% of their income from platform work in the last year</p>                                                                                                                                                                                                                                                         |
| Germany   | Huws e Joice                             | 2016 | <p>22% of the working population says they have sought work on online platforms and only 14% of them have found it</p>                                                                                                                                                                                                                                                         |
|           | Ohnemus                                  | 2016 | <p>77% of companies are aware of the possibility of outsourcing online, but only a small proportion use it: 6% in the media and 1.2% in manufacturing.</p>                                                                                                                                                                                                                     |
|           | Porgratz e Bormann                       | 2017 | <p>The cloudworkers (at least once at least) are between 100 and 300 thousand of which only 5 thousand considers it the main source of income</p>                                                                                                                                                                                                                              |

Source: Etui

## 2.1. Online Outsourcing.

Although this report is more focused on other types of online platforms, the audience of labour platforms most immediately attributable to crowdwork or cloudwork appears to be interesting as well, both for the direct impact on the market and for the consequent process of online outsourcing by the "traditional" economic entities. Some studies show results of

certain value to read the dynamics in place<sup>21</sup>. Online outsourcing is a win-win solution for businesses and workers alike:

- Companies have access to a highly professional labour market, with flexible and fast hiring processes without transaction costs and with 24-hour productivity;
- For workers, access to a global labour market with low entry barriers.

Processes of online outsourcing concern both microwork (where the work project is segmented into smaller parts - microtasks - and entrusted to a plurality of workers) and freelancing (where the project is entrusted to profiles with a higher professional content). The most popular online outsourcing platforms are Freelanceer, Upwork, Crowdfunder, Amazon Mechanical Turk (AMT) Samasource and Cloudfactory.

The demand for online freelancing comes mainly from small businesses while the demand for microwork from medium to large businesses. A survey of Fortune 500 companies shows that between 2016 and 2017 online outsourcing projects have increased by 26%, that 28% of Fortune 500 companies have used Upwork in the last year and that in 2017 companies such as Airbnb, Dropbox, GE and Samsung have posted more than 30,000 projects on Upwork. According to the Future Workforce Report 2018<sup>22</sup>, 90% of HR managers prefer to use online freelancing rather than temporary employment agencies for administrative savings and faster performance. The McKinsey Global Institute<sup>23</sup> estimates that by 2025 cloudwork platforms will produce about 2% of the world's GDP.

Every single attempt to measure a phenomenon in such strong expansion, however, suffers from an inevitable delay in detection: today's snapshot risks representing the scenario of yesterday. Precisely for this reason, ILO has developed an online Labour index capable of tracking all the online "small jobs" uploaded on the top 5 online English labour platforms, which represent approximately 60%-70% of the existing cloudwork market<sup>24</sup>. The index is normalized by setting the volume of "small jobs" to 100 in May 2016 so as to be able to constantly track the trend over time. Despite some interpretative precautions also recognized by the ILO and the difficulty of an exhaustive measurement of such an elusive phenomenon, the indicator shows that work projects transited by online platforms in the world grew by about 40 percentage points in about one year (May 2016-June 2017) and then remained constant in the following two years, with negative peaks in January.

<sup>21</sup> Kuek S. C., Paradi-Guilford C. M., Fayomi T., Imaizumi S., Ipeirotis P., *The global opportunity in online outsourcing*, in *World Bank Group*, G.F., & Lehdonvirta V., *Platform Sourcing: How Fortune 500 Firms are Adopting Online Freelancing Platforms*, Oxford Internet Institute, 2017. An electronic version is available at: <https://www.oii.ox.ac.uk/publications/platform-sourcing>.  
<http://documents.worldbank.org/curated/en/138371468000900555/The-global-opportunity-in-online-outsourcing>.

<sup>22</sup> <https://www.slideshare.net/upwork/2018-future-workforce-report-hiring-manager-insights-on-flexible-and-remote-work-trends/1>.

<sup>23</sup> McKinsey Global Institute, *A Labour Market that works: connecting talent with opportunity in the digital age*, 2015 [https://www.mckinsey.com/~media/mckinsey/featured%20insights/Employment%20and%20Growth/Cconnecting%20talent%20with%20opportunity%20in%20the%20digital%20age/MGI%20Online%20talent\\_A\\_Labor\\_Market\\_That\\_Works\\_Executive\\_%20summary\\_June%202015.ashx](https://www.mckinsey.com/~media/mckinsey/featured%20insights/Employment%20and%20Growth/Cconnecting%20talent%20with%20opportunity%20in%20the%20digital%20age/MGI%20Online%20talent_A_Labor_Market_That_Works_Executive_%20summary_June%202015.ashx)

<sup>24</sup> For additional information on methodology: <http://ilabour.oii.ox.ac.uk/how-the-online-labour-index-is-constructed/>

Chart 4– Online Labour Index

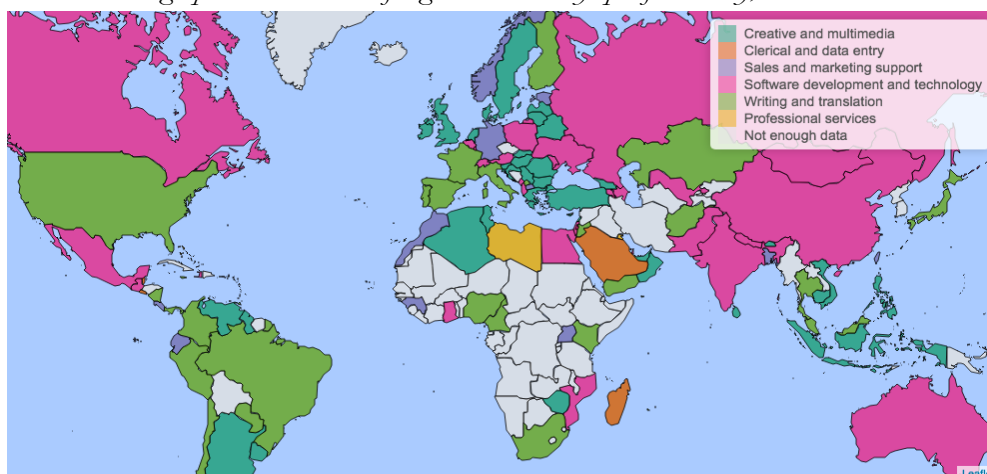


Source: ILO, Otto Kässi, Vili Lehdonvirta, *Technological Forecasting and Social Change*, Volume 137, 2018, Pages 241-248.

Since 2017, the ILO's online labour indicator has also made it possible to map the type of activity and the country of the person performing the work. This gives a broader view of the extent and distribution of online work. Although it is a part of digital work, not counting those "jobs" on demand through the app, you can discern some important data:

- The global map shows how, except for some areas of Africa, online work is distributed all over the globe, thus highlighting its scalability (Chart 5);

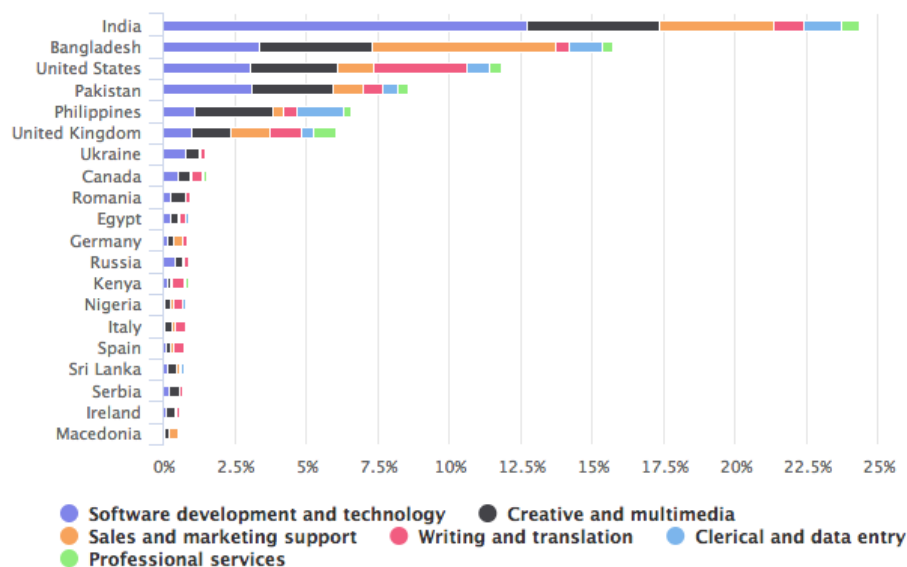
Chart 5– Geographic distribution of digital workers by specific activity, 2017



Source: ILO, Otto Kässi, Vili Lehdonvirta, *Technological Forecasting and Social Change*, Volume 137, 2018, 241-248.

- Although there are geographical differences in terms of specialisation, the trend over the years shows that online work focuses mainly on the ICT industry. As ILO acknowledges in its reports, if other sectors were to open to the online sector, territorial differences would arise;
- The global map (figure 5) shows the main activity for each country. If in almost the whole continent the prevailing online work concerns the development of software, Europe appears more diversified;

Chart 6 – Online Labour Index top 20 per worker's country (% of labour demand), 2017



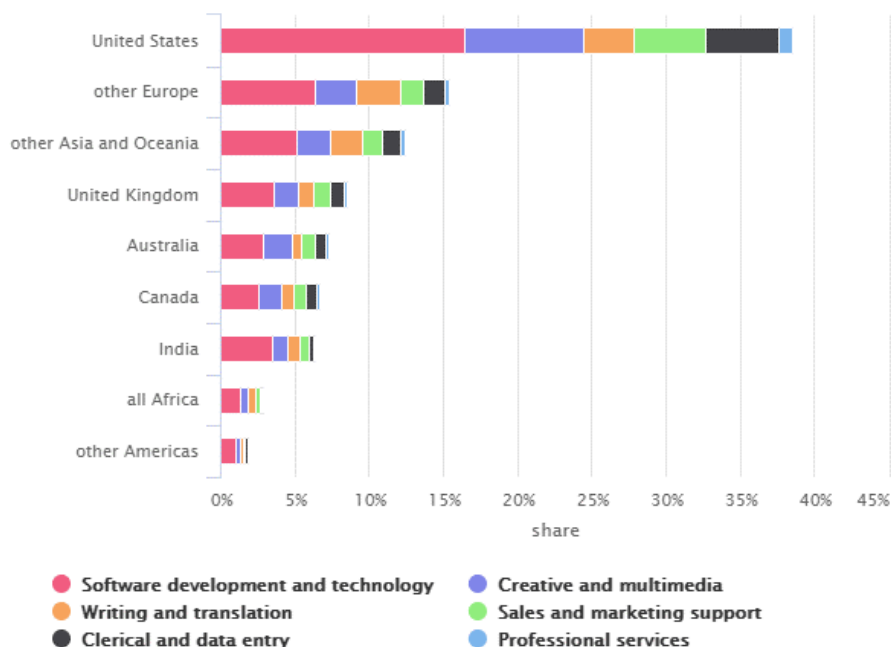
Source: ILO, Otto Kässi, Vili Lehdonvirta, [Online labour index: Measuring the online Gig Economy for policy and research](#), *Technological Forecasting and Social Change*, Volume 137, 2018, 241-248.

- Out of 100, global online job demand in a given period, about 24% find an answer in the Indian continent, more than 15% in Bangladesh, about 12% in the United States, about 9% in Pakistan and about 6% in the Philippines (Chart 6). In this ranking, the first European country to appear is the United Kingdom (with about 6%), followed by Ukraine, Romania, Germany, Italy and Spain with marginal shares;
- Asia represents, in the executive phase, 60% of the total European online job demand, including non-EU countries, a share between 15-20%;
- in general, the most requested activities concern software development, multimedia and creative industry, sales and marketing, writing and translation, data entry and professional services. If the demand for online writing and translation work has remained constant over time, the greatest variability is concentrated in software development, graphic activity, data entry and office work. But with one distinction. While the former expand as demand for labour grows, data entry and white-collar work signal an anti-cyclical trend;

if instead of the worker's point of view, the "employer's" point of view is adopted, i.e. the one who starts the digital labour demand, the geographical map is reversed. Almost 40% of labour demand comes from the United States, about 8-10% in the United Kingdom and 5-7% in India. When comparing labour supply and demand, the most obvious imbalances are

in the United States, where labour demand is higher than supply, and India, where labour supply is significantly higher than labour demand. Europe, as a continent, seems to maintain a more balanced position.

Chart 7 - Online Labour Index by employer country of origin (% of labour demand) , 2017



Source: ILO, Otto Kässi, Vili Lehdonvirta, [Online labour index: Measuring the online Gig Economy for policy and research](#), *Technological Forecasting and Social Change*, Volume 137, 2018, 241-248.

### 3. Working conditions of GIG workers.

After approaching a quantitative measurement of gig workers, the report intends to move to a more qualitative mapping. In this case, as well as on the numerical dimension, there are different perspectives, surveys and results. There are different national and comparative studies. For descriptive ease, we prefer, here, to use, once again, the research conducted by the Dublin Foundation (Eurofound) both for the scope of the analysis and for the level of updating of the surveys. Furthermore, Eurofound's qualitative survey considers three types of platforms consistent with the sectoral guidelines that this report intends to cover together with e-commerce: food delivery, domestic work and tourism<sup>25</sup>.

In fact, three types of platforms were analysed:

- *on location platform-determined routine work*, or a job with low professional requirements carried out in person (on-location) whose assignment (to the gig worker) is determined by the platform. This category is approximate to food delivery and the definition already shows a sense of precariousness attributable to dependence on a platform;

<sup>25</sup> As tourism platforms are more consistent with the concept of sharing economy or peer to peer platforms and not labour platforms, the report here describes the working conditions of the first two types of platform workers only.

- *on location worker-initiated moderately skilled work*, or a job with medium-low professional requirements carried out by a person whose assignment is determined by the gig worker himself. This category is approximated to the domestic work which is associated with greater discretion in the choice of jobs (or small jobs);
- *online contestant specialist work*, works with high professional requirements carried out online in which the gig workers are selected by the customer on the basis of a tender. Cloudworkers suffer more from international competition and economic uncertainty. This third category is useful to offer a comparison between the cloudworkers, and therefore the online workers, and the on-demand workers via app whose performance takes place offline, and of which the first two categories of platform workers are the expression.

In terms of demographics, gig workers, as it also results from a previous survey,<sup>26</sup> are predominantly males, with a medium-high level of study, between 30 and 40 years of age and predominantly resident in urban areas. The composition of the household is affected by the type of platform: if on-demand workers and cloudworkers selected by the platform on average do not have children, for on-demand workers via app whose task is chosen by the worker (e.g. domestic work), hypothetically for an older age, it is more likely to have children.

The employment status of gig workers is a determining factor in the sphere of labour law. If for cloudworks and app-based workers' determination the perception of being either "casual" or self-employed workers prevails, for those who work via app-based platform-determination (e.g. riders) studies seem to confirm a trend: the majority of workers are perceived as employed (on average 60%) and, for a secondary share, self-employed. The literature of recent years indicates two reasons for this inconsistency between perception and reality. First, by combining gig workers with different jobs at the same time, subordinate employment hypothetically refers to a prevailing activity different from platform work. Secondly, those who work mainly with the platform as the prevailing form are perceived to be subject to a constraint of occupational subordination despite the fact that contractually it is configured, instead, with forms of self-employment or para-subordination. Finally, in some countries, such as Sweden, the tendency to prefer forms of formal subordination is not to be ignored, even for those gig workers with platform determination. Finally, although they are not residual also for the other types of platform workers, for the cloudworkers the interviews reveal a greater frequency of forms of irregular work.

Autonomy is a dimension of work at the centre of the debate on platform jobs because, in addition to determining the link of formal subordination, it is a factor impacting job satisfaction and, at the same time, represents the other side of digital standardization that technological innovations produce<sup>27</sup>. But not only that. The topic of autonomy also recalls the relationship between work and platform, and therefore the control of the algorithm, and the forms of digital control exercised by the app and in particular the client rating, and therefore the evaluation of the customer, as a primary form of control.

Literature indicates that platform pay is usually additional to a student's status (especially in platform-driven work) or other prevailing occupation. In most cases, pay is considered

<sup>26</sup> Pesole A., Urzì Brancati M.C., Fernández-Macías E., Biagi F., González Vázquez I., (20).

<sup>27</sup> Gosetti G., *La digitalizzazione del lavoro. Questioni aperte e domande di ricerca sulla transazione*, in *Economia e Società Regionale*, I, 2019, 91-120.

insufficient to lead a decent life and is very often conditioned by the tax system (for casual workers, as in Italy or Germany, annual tax constraints produce "quantitative" maximum labour thresholds), the form of employment (in Austria employees in food delivery receive 7.6 euros/hour plus 60 cents per delivery while self-employed workers 4 euros/hour plus 2 euros/hour per delivery), the country and the type of work. Usually it is the cloudworkers, precisely because of the nature of the work, who perceive the greatest uncertainty with respect to the continuity of remuneration.

Regarding health and safety, some studies by the European Agency for Safety and Health at work<sup>28</sup> in 2017 identify some specific risk areas in relation to platform workers. In particular, a higher accident rate for gig workers can be compared to that found for the more fragile working areas, such as precarious and discontinuous workers. The greater exposure to occupational risk, whether physical or psycho-social, is linked to the younger age trend of gig workers, the absence of specific training in health and safety and, generally, the difficulty of determining a specific regulatory system. Working on online digital platforms involves risks such as permanent exposure to electromagnetic fields, eye fatigue and musculoskeletal problems. Psycho-social risks include isolation, stress, techno-stress, technology addiction, information overload, exhaustion, postural disorders and cyberbullying. All work on online platforms can increase the risk of stress due to the systems of continuous review and evaluation of performance, competitive mechanisms for the assignment of work, the uncertainty of payment and the increasingly blurred separation between personal and professional life.

Commitment to platform training is modest. Gig workers, especially "on location" workers, complain that they are overqualified for their job. On the other hand, cloudworkers, allowing a glimpse of a greater expressive<sup>29</sup> vision of the work, use the most advanced skills and often use platform races to enrich their skills. Interviews with gig workers show how the paths of professional growth and skills mainly pass through self-training and tutorials or resources made available by the network.

| Working conditions     | Work via app determined by platform (riders)                                          | Work via app determined by the worker (domestic worker)                | Cloudwork                                                                                                          |
|------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Motivational dimension | Low entry barriers<br>Additional earning possibilities and organisational flexibility | Additional profit and possibility to expand the customer base          | Organisational flexibility, consistency with interests and passions and the possibility of extending customer base |
| Autonomy and control   | Limited flexibility in the choice of tasks with negative consequences in              | More flexibility in the choice of jobs, but especially in the cleaning | Full discretion (the only constraint is respect for the rules of                                                   |

<sup>28</sup> EU-OSHA, *Protecting workers in the online platform economy: An overview of regulatory and policy developments in the EU*, Publications Office of the European Union, Luxembourg, 2017 <https://osha.europa.eu/en/tools-and-publications/publications/regulating-occupational-safety-and-health-impact-online-platform/view>

<sup>29</sup> Dazzi D., Minghini C., *Ripartiamo dal lavoro. Autonomia, riconoscimento e partecipazione*, Editrice Socialmente, 2014.

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                          |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             | <p>case of refusal of an assigned task (hidden or explicit penalties). The responsibility for "replacement" often falls on the individual gig worker.</p> <p>Regardless of the contractual form, there is a high level of traceability and control of work performance, with the risk that an excessively digital control system will not be able to manage real "unforeseen events".</p> <p>Little room for recourse in the event of accusations of insubordination</p>                                                                                                                                                                                                                                           | <p>services platforms exert more control (if some standards are not met several times your account is suspended). The evaluation is mainly determined by the customer and on a reliability index (important for domestic work).</p> <p>Usually the client rating is appreciated because it allows to discriminate on the basis of the quality of the worker and there are spaces for complaint.</p> | <p>the platforms, such as plagiarism).</p> <p>Work mainly for objectives without control by the platform or the customer.</p> <p>The rating is based on the client rating which is usually judged an element of professional growth and not control.</p> |
| Intensity and working hours | <p>The time schedule varies from country to country and according to the contractual form: for employees it varies from a weekly shift (Austria) to a "calculated" shift based on the availability of workers (Sweden).</p> <p>The shift can be changed in progress but with predefined timing and in case of non-compliance you receive a negative vote that can lead to disconnection.</p> <p>Usually there are no interruptions planned (except in Sweden where there is a break of 5 minutes per hour of work) and the time taken by the platform to assign jobs often creates a continuous work intensity, opening up health and safety issues.</p> <p>Non-stressful delivery times, but do not take into</p> | <p>The working time varies according to the task and in any case depends on the choice of the worker. Work intensity depends on the ability to make the client understand the complexity of the work</p> <p>Cleaning services tend to work for the same clients, repeating the same pattern of working time</p>                                                                                     | <p>Working time depends very much on the project assigned. Specific (unpaid) time is dedicated to the preparation and research of the different competitions. The intensity of work can be stressful, depending on the type of activity.</p>             |

|                                  | account unforeseen circumstances                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Physical environment             | <p>Often the workplace coincides with the street exposing gig workers to the risk of accident, pollution, bad weather, high and low temperatures. Often the platform does not provide the means of transportation (bike) nor smartphones but only some personal protective equipment (e.g. helmets) No information or training on health and safety is provided by the platforms. There is no accident insurance coverage extended to all workers but it depends on the individual cases (platform, country and form of work).</p> | <p>The workplace is often the customer's home. The home-work route often represents a substantial part of the working time. Domestic work, as well as lonely or homeworkers, are more at risk at work and often there is no form of control. There is also a chemical risk for cleaning services. Equipment is not made available by the platform but is part of the "professional capital" of individual workers. Lack of information, training and awareness of health and safety risks Third-party insurance is often provided for in the event of damage but not insurance for accidents at work</p> | <p>The workplace is any place where you can perform the assigned task. The equipment (PC, camera, software) is made available by the worker as part of the "professional capital". Complaints about musculoskeletal pains and eye fatigue were reported. Lack of attention to health and safety issues</p>                                       |
| Social environment and relations | <p>Relationships with customers is limited. Relationship with the platform in case of direct "inconvenience" or through other apps (whatsapp). Complaints have been received, however, that response times are at odds with the rapid nature of operations. High sense of identity of belonging to a working community (the riders) and collaborative relationships between workers using the web. Platforms tend to limit contacts between gig</p>                                                                                | <p>Relations with the platform are limited to communications and information and assistance. The relationship with the customer has a priority role for both evaluation and business continuity. In order to avoid the repetition of work at the same client leading to the acceptance of jobs outside the platform, the same platforms introduce clauses or constraints in the rules of engagement and extending insurance coverage.</p>                                                                                                                                                                | <p>Relations with the platform are marginal. Relationships with customers are marginal and sporadic and are limited to feedback on the work done. Given the private and isolated nature of the work, the collaborative dimension with other workers is limited with risk of alienation. Minor risk of discrimination and harassment at work.</p> |

|  |                                                                                                                                                 |                                                                                                                                                                                                                                                          |  |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | workers and the spaces of aggregation.<br>Higher risk of discrimination (for greater dependence on "platform algorithm") and harassment at work | Given the private and isolated nature of the work, the collaborative dimension with other workers is limited with the risk of alienation and reducing their bargaining power with the platform.<br>Limited risk of discrimination and harassment at work |  |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

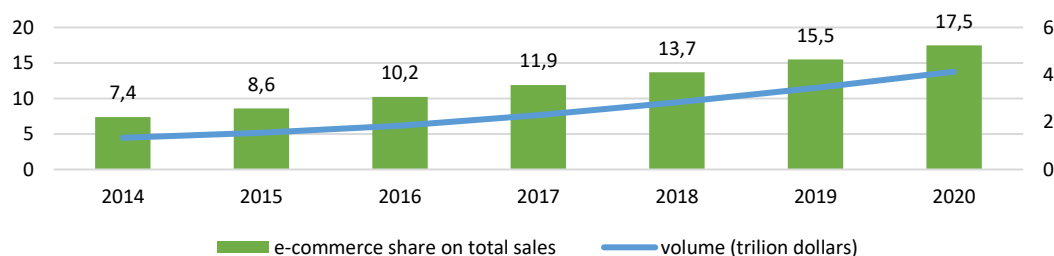
#### 4. E-commerce in Europe. An Overview of the Extension and Expansion of E-commerce.

There are several online platforms or online shop windows created in the wake of the expansion of online sales (and commerce). E-commerce is a business model in which commercial activity is conducted either through a digital electronic network or mainly through the Internet. Like platforms, e-commerce models can also be classified into different categories<sup>30</sup>:

- depending on the parties involved in the commercial exchange, therefore B2B (business to business), B2C (business to consumer), C2C (consumer to consumer), B2A (business to administration)
- depending on the exclusivity of the online mode: the so-called pure players, i.e. platforms designed primarily for online sales, and omnichannel players, which combine physical sales points with online platform

In this case as well the measurement of the volume of e-commerce along a time axis does not appear to be a simple operation since, as we have seen, the types and models of business are different. Drawing on a consolidated source on e-commerce (statista.com), we can risk some estimates and growth forecasts. For 2019, the total value of online sales is estimated at \$3.45 trillion (or \$1000 billion), an annual growth of 21%. Globally, the share of online sales is 15% but the figure is partly "drugged" by the China effect that exceeds 23% (on 2019).

Chart 8 – Global trend of e-commerce sales

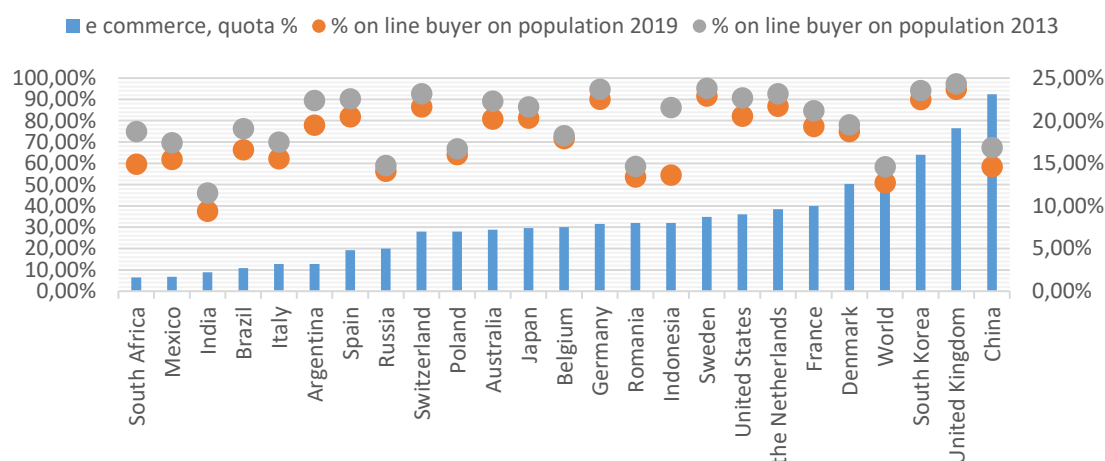


Source: <https://www.statista.com/>

<sup>30</sup> Spatari M., *E-Commerce: recent trends and impact on labour*, in *Working paper for Uni Commerce Global Union*, June 2019.

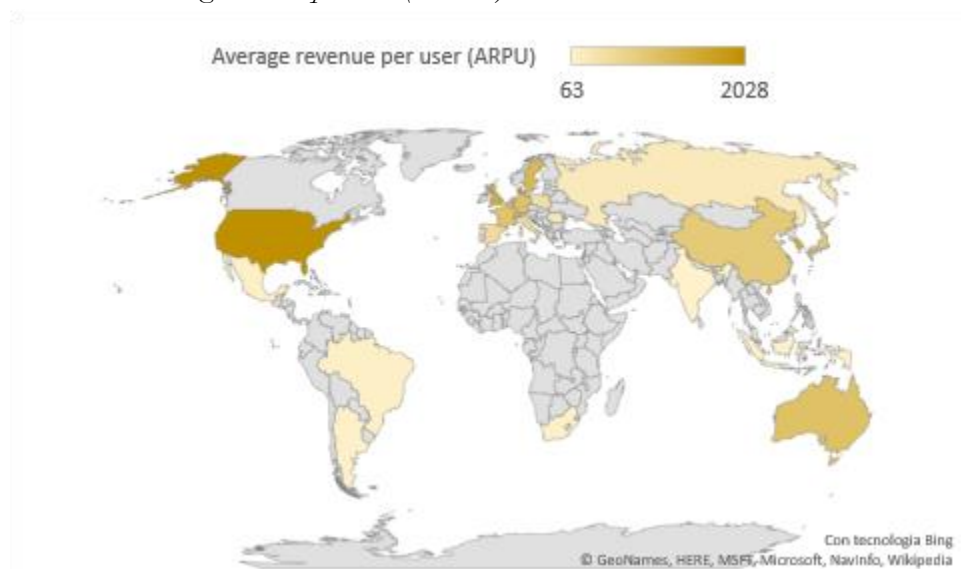
In a global comparison, it is in fact possible to observe how only 5 countries exceed the 10% threshold of the incidence of e-commerce on total sales, of which 3 in Europe: the United Kingdom (19.1%), Denmark (12.6%) and France (10%). But it is interesting to note that in China the so-called user penetration, that is the share of the population that has made at least one online purchase - is still relatively low (58.4% in 2019) compared to European competitors, thus suggesting a possible further expansion in terms of consumers. Where, on the other hand, the use of the Internet is already widespread, e-commerce expansion strategies will not pass through paths of growth of users but through their persuasion and the reduction of resistance to online purchasing. In Europe, Italy falls among the last positions in a ranking for the share of e-commerce in the total with only 3.1%, compared to an average of 8.9% among the most e-commerce oriented European countries. The online market shows a continuous growth trend with global average rates close to 9% and with particular acceleration in the period 2019-2023 in China (+11%), Indonesia, Romania, Poland, Spain, Italy, Argentina and especially in India (+17%).

*Chart 9 – Share of e-commerce on total sales, internet usage rate 2013 and 2019, worldwide comparison*



Source: <https://www.statista.com/>

If, on the other hand, the annual share spent on online purchases (ARPU, Average revenue per user) is considered, the ranking also changes significantly according to the different purchasing power, going from \$2,028 in the United States to \$63 in India. In the European Union the average annual expenditure is equal to \$903 but with a lot of internal variability: from \$1,660 in Denmark to \$268 in Romania.

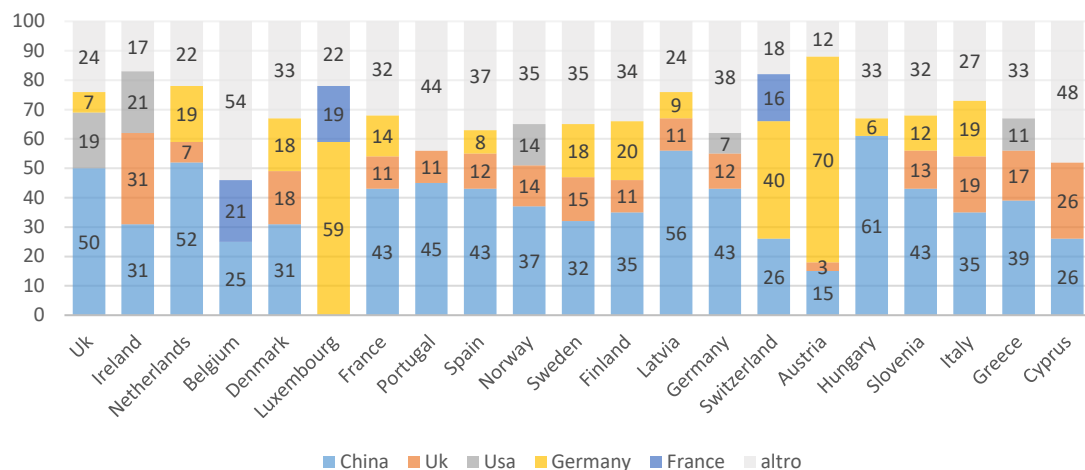
*Chart 10 - Average revenue per user (ARPU)*

Source: <https://www.statista.com/>

By its very nature, e-commerce does not respond to national borders and, on the contrary, favours international trade. Studies show<sup>31</sup> that 38% of online packages purchased come from China (2018 data) and that online purchases are mainly made through multinational e-commerce companies such as Amazon (23%), Alibaba (16%), eBay (14%) and Wish (10%). If we focus the analysis on Europe<sup>32</sup>, 74% of online consumers buy from abroad, of which 54.6% from China (in 2017 the percentage was 38.7%), 28.1% from the United Kingdom, 26.6% from the United States and 22.9% from Germany. In about 60% of cases it is the "generally lower price" that pushes the consumer to buy online from abroad. Purchasing from China is always majority except in cases where a proximity market also prevails for online purchasing, as in the case of Luxembourg (where online purchasing from the Netherlands is decisive) and Switzerland and Austria (where online purchasing from Germany prevails).

<sup>31</sup> International Post Corporation, *Cross-border E-commerce shopper Survey 2018*, January 2019 <file:///C:/Users/ddazzi/Downloads/ipc-cross-border-e-commerce-shopper-survey2018.pdf>

<sup>32</sup> Postnord, *E-commerce in Europe 2018*, 2018. Further information at the following link: [https://www.postnord.com/globalassets/global/english/document/publications/2018/e-commerce-in-europe-2018\\_en\\_low.pdf](https://www.postnord.com/globalassets/global/english/document/publications/2018/e-commerce-in-europe-2018_en_low.pdf)

*Chart 11 – Distribution by country of origin for online purchases from abroad 2018*

Survey on a sample of 33,589 people who were asked to specify the country of origin of recent transnational online purchases

Source: International Post Corporation, Cross-border E-commerce shopper Survey 2018, Key findings: January 2019.

#### 4.1. E-commerce Strategies.

E-commerce expansion strategies, however, not only bring new players to the market but also generate drivers of change for the entire world of commerce, whether traditional or digital. All traditional commerce companies have reacted to the competitive pressure imposed by online sales by undertaking low price strategies, preparing digital solutions for purchase or delivery, opening up to platforms of commercial display windows and then opening up to the world of e-commerce. The expansion strategies of e-commerce are therefore distinct in the case of pure players or traditional operators.

##### 4.1.2. Pure Players.

For pure players, i.e. where the exchange takes place mainly online, the main expansive strategy is based essentially on aggressive sales growth through low price policies in order to increase market share even at the cost of financial losses and negative cash flows. Expansionary policies are often accompanied by negative profit dynamics. The corollary of this strategic approach is wage containment, production flexibility, automation and robotization driven by anti-union processes and policies: the Amazon case is emblematic of this strategic paradigm. Unlike Alibaba, which is proposed as an intermediation platform, Amazon acts as a traditional commercial operator covering the entire supply chain and not only the sales intermediation: from this derives the difference between the operating margin of Amazon (2.9%, 2017) and that of Alibaba (61.6%). Amazon's operating result, a measure of the company's profitability expressed as a % of sales, is equal to 5.3% in 2018, where,

however, e-commerce has a partial result of 2.5% and Amazon Web Service, the component with the highest profitability, has an operating result equal to 28.4% of sales, or more than 10 times that recorded for e-commerce. In addition, with regard to e-commerce, there was a negative operating result on the international market (-3.3%) compared to a positive result in North America (5.1%). In other words, against more than 207 billion sales in e-commerce in 2018, profitability indicators continue to show either modest or negative values (for the international part). This trend shows that Amazon's strategy gives priority to an aggressive policy of revenue growth at the expense of net profits<sup>33</sup>.

*Table 1 – Amazon profit distribution*

|                  | <i>e commerce</i> |               | Total             |        |         |
|------------------|-------------------|---------------|-------------------|--------|---------|
|                  | North America     | International | <i>e commerce</i> | AWS    | Total   |
| Net sales        | 141.366           | 65.866        | 207.232           | 25.655 | 232.887 |
| Operating profit | 7.267             | -2.142        | 5.125             | 7.296  | 12.421  |
| % on sales       | 5,10%             | -3,30%        | 2,50%             | 28,40% | 5,30%   |

Source: Syndex processing Bvd data

Although extreme, Amazon's strategic orientation does not appear to be an isolated trait among pure e-commerce players: high sales volumes are offset by low profit margins. The Chinese company JD.com, with sales equal to Amazon for international e-commerce, continues to record net losses in the last 4 years for a total of \$4.5 billion in the period (2014-2018). The same can be said for the Argentine MercadoLibre (with a loss of 37 million dollars in 2018), the Romanian [emag.ro](http://emag.ro) with a net loss of about \$20 million and the Polish [allegro.pl](http://allegro.pl) with a net loss of 32 billion in 2017.

*Table 2 - Comparison of balance sheet data between digital and traditional traders*

|            |    | AMAZON.C<br>OM, INC.<br>US | JD.C<br>OM<br>KY | RAKUTE<br>N INC<br>JP | ZALAN<br>DO SE<br>DE | CARREFO<br>UR SA<br>FR | WALMAR<br>T INC.<br>US |
|------------|----|----------------------------|------------------|-----------------------|----------------------|------------------------|------------------------|
| EBITDA     | 20 |                            |                  |                       |                      |                        |                        |
| margin (%) | 18 | 10,75                      | 0,64             | 13,27                 | 3,81                 | 3,23                   | 6,35                   |
|            | 20 |                            |                  |                       |                      |                        |                        |
|            | 17 | 8,76                       | 0,93             | 17,08                 | 5,47                 | 4,54                   | 6,19                   |
|            | 20 |                            |                  |                       |                      |                        |                        |
|            | 16 | 9,05                       | 0,57             | 19                    | 6,98                 | 4,59                   | 6,76                   |
|            | 20 |                            |                  |                       |                      |                        |                        |
|            | 15 | 7,96                       | -1,76            | 37,31                 | 4,17                 | 4,93                   | 6,96                   |
| Turnover   | 20 |                            | 67.418           |                       |                      |                        | 514.405.00             |
| (.000)     | 18 | 232.887.000                | .616             | 9.938.465             | 6.190.560            | 89.213.865             | 0                      |
|            | 20 |                            | 55.644           |                       |                      |                        | 500.343.00             |
|            | 17 | 177.866.000                | .042             | 8.365.580             | 5.397.808            | 96.414.091             | 0                      |

<sup>33</sup> In this regard, it is not irrelevant to think that the wealth of Jeff Bezos does not come so much from profits as from the share value of the company. <https://www.opencorporation.org/en/ranking/amazon-com-inc/2019>

|           |    |             |        |           |           |            |            |
|-----------|----|-------------|--------|-----------|-----------|------------|------------|
|           | 20 |             | 37.428 |           |           |            | 485.873.00 |
|           | 16 | 135.987.000 | .654   | 6.694.486 | 3.853.472 | 83.035.639 | 0          |
|           | 20 |             | 27.926 |           |           |            | 482.130.00 |
|           | 15 | 107.006.000 | .819   | 5.921.619 | 3.231.697 | 85.886.449 | 0          |
| Employees | 20 |             | 178.92 |           |           |            |            |
|           | 18 | 647.500     | 7      | 17.214    | 15.619    | 363.862    | 2.200.000  |
|           | 20 |             | 157.83 |           |           |            |            |
|           | 17 | 566.000     | 1      | 14.845    | 15.091    | 378.923    | 2.300.000  |
|           | 20 |             | 120.62 |           |           |            |            |
|           | 16 | 341.400     | 2      | 14.134    | 11.998    | 384.151    | 2.300.000  |
|           | 20 |             | 105.96 |           |           |            |            |
|           | 15 | 230.800     | 3      | 12.981    | 9.987     | 380.920    | 2.300.000  |

Source: OpenCorporation processing Orbis BVD data

If we compare profitability indicators (EBIDTA<sup>34</sup>) between *pure players* and traditional commercial operators (in this case Walmart and Carrefour) we note that, with the sole exception of the Japanese company Rakuten, the strong growth in turnover did not translate into an increase in profitability, but rather a contraction of it. In the case of Amazon, as already mentioned, profitability is attributable more to its web service component than to e-commerce.

Other emerging evidence is the divergence in growth of turnover and employees: while for traditional traders there are modest growth rates on turnover (6.7% Wal-Mart and 3.8% Carrefour between 2015-2018) and negative employment (over 4% less between 2015-2018), Amazon shows a turnover grown in 4 years of +117% and employment of +180%, JD.COM of +141% and +69% respectively and Zalando with +91% and +56%. The Japanese pure player shows a trend that is growing but more contained (+67% of turnover and +32% of employees), showing how less aggressive expansions are associated with higher performance profitability paths. The ratio between turnover and number of employees is increasing in all the commercial operators considered (average +30% among digital operators and +10% among traditional operators) with the sole exception of Amazon, where the number of workers is growing at a faster rate than turnover.

#### 4.1.2. Traditional Retailers

The expansion of e-commerce has also led to a reorganization of traditional commercial channels. Among the top 250 commercial operators in the world, only 31, and therefore a small part, had not yet adopted omni-channel solutions, i.e. conjugation of sales in physical and virtual places, by 2015. There's much intertwining between traditional channels and e-commerce solutions and different synergistic bidirectional strategies, i.e. alliances from e-commerce to traditional operators or from traditional operators to e-commerce. An example of the first case is the acquisition by Amazon of the American Whole Foods for a value of 13.7 billion dollars. The merger between the e-commerce giant (Amazon) and the

<sup>34</sup> Earnings Before Interest Taxes Depreciation and Amortization. EBIDTA margin indicates the ratio of % to turnover.

supermarket chain (physical) aims both to expand its market share and to offer Amazon a ground for the diffusion of its line of business of online grocery (B2B) and private label offers. At the same time Amazon has opened a chain of highly automated "convenience stores", Amazon Go, in which all activities (entry, choice, payment) are recorded and digitally processed without any intervention of "human" workers."<sup>35</sup> The push towards increasing automation also seems to be taken on by the German multinational retailer [ALDI](#) (acronym of ALbrecht-Discount)<sup>36</sup> which has opened in the Chinese market<sup>37</sup> its first two markets in Shanghai with a SCAN&GO system (without checkouts, the customer scans the barcode and pay with WeChat) and offers a delivery service.

Examples of the second case, i.e. of omni-channel strategies of traditional operators, are very diverse. In particular, Wal-Mart, after the acquisition of pure e-commerce players such as Jet.com, ShoeBuy, Moosejaw, ModCloth and Bonobos, is now investing in the online grocery store (<https://grocery.walmart.com/>). Wal-Mart's strategic focus on e-commerce is also visible in its alliances with major global e-commerce players in fast-growing consumer markets: in 2016, it acquired 10% of the shares of the Chinese e-commerce giant JD.com and in 2017, it completed the purchase of the majority stake in the Indian e-commerce leader FlipKart. Similarly, Auchan has formed an alliance with the Chinese Alibaba in the food sector in order to explore the potential of the Chinese market through the enhancement of Sun Art Retail Group, of which Auchan is already a major shareholder. The other French retail leader, Carrefour, continues its expansion into e-commerce through the acquisition of the French retail leader in online sales of Rue du Commerce and Greenweez (European e-commerce for eco-friendly and organic products), the development of innovative delivery services that allow home delivery within one hour and the strengthening of the network of the Carrefour Drive system to 569 sites throughout France.

In general, the Drive Supermarket system (online shopping, digital purchase and collection within a set time from supermarkets or distribution centres) has found a field of strong experimentation and expansion in France. According to some surveys<sup>38</sup> it is estimated that in 2015 in France about 205 Drive Supermarkets were created with a total turnover of 5 billion euros of which 45% represented by the E.Leclerc group alone.

The solutions for approaching e-commerce do not therefore appear to be unequivocal. There are many ways to go about it. However, a comparative analysis of the behaviour of 22 traditional retailers allows us to trace some evidence:

- with the sole exception of the Casino Guichard Perrachon Sa group (France) for which the company of the Cdiscount group dedicated to e-commerce accounts for 18% of sales and Koninklijke Ahold Delhaize NV (Netherlands) sales through the bol.com platform account for 10%, the omni-channel and e-commerce solutions usually do not exceed 5% of the value of total sales. However, it is interesting to note

<sup>35</sup> According to Bloomberg estimates in 2018, more than 3 thousand Amazon Go will be opened in the United States by 2021.

<sup>36</sup> Multinational company based in Essen (Aldi Nord) and Mülheim an der Ruhr (Aldi Süd), founded in 1946 by the Albrecht brothers, with a total turnover of about 67 billion euros in 2015 for a total of 40,100 employees in Germany, 124,000 worldwide (Aldi Süd - 2016) 58,179 (Aldi Nord - 2015)(2016).

<sup>37</sup> [https://www.retaildetail.be/fr/news/food/longues-files-d%E2%80%99attente-lors-de-l%E2%80%99ouverture-des-premiers-magasins-chinois-d%E2%80%99aldi?fbclid=IwAR0DyQDaSPfLu8yl\\_EJvdRXJ7bk1J2xvm0Vt0tE-luZvsczfF2QKUGUaDEU](https://www.retaildetail.be/fr/news/food/longues-files-d%E2%80%99attente-lors-de-l%E2%80%99ouverture-des-premiers-magasins-chinois-d%E2%80%99aldi?fbclid=IwAR0DyQDaSPfLu8yl_EJvdRXJ7bk1J2xvm0Vt0tE-luZvsczfF2QKUGUaDEU)

<sup>38</sup> <https://www.interroll.com/it/blog/automated-drive-supermarkets-in-france/>

that the two exceptions (Cdiscount and bol.com) were initially developed as well as players and subsequently acquired;

- for some companies, the development of e-commerce solutions has led to modest profit margins or even net losses due to software and organisational investments not offset by an increase in sales volumes, as in the case of the Japanese Seven & I Holdings Co Ltd, which recorded a loss of \$219.5 million;

- the main path towards e-commerce, as we have seen, is the creation of alliances or partnerships with so-called pure players. In this scenario, in addition to the cases already reported, the case of Distribuidora Internacional de Alimentacion SA (DIA SA) is of interest, having reached an agreement with Amazon according to which Amazon Prime users can order and purchase DIA SA products online with favourable delivery times. At the same time, DIA SA has opened a Digital Transformation School for the training of its employees, offering a response, the training, to one of the most important challenges of digitization: rapid obsolescence of skills;

- e-commerce policies do not always go hand in hand with low price policies: in the case of Etablissement Franz Colryut, studies show that products ordered online (collect@go) cost more than shelf products.

## II. A Gallery of Platforms: Trends.

### 5. Food Delivery: an Overview.

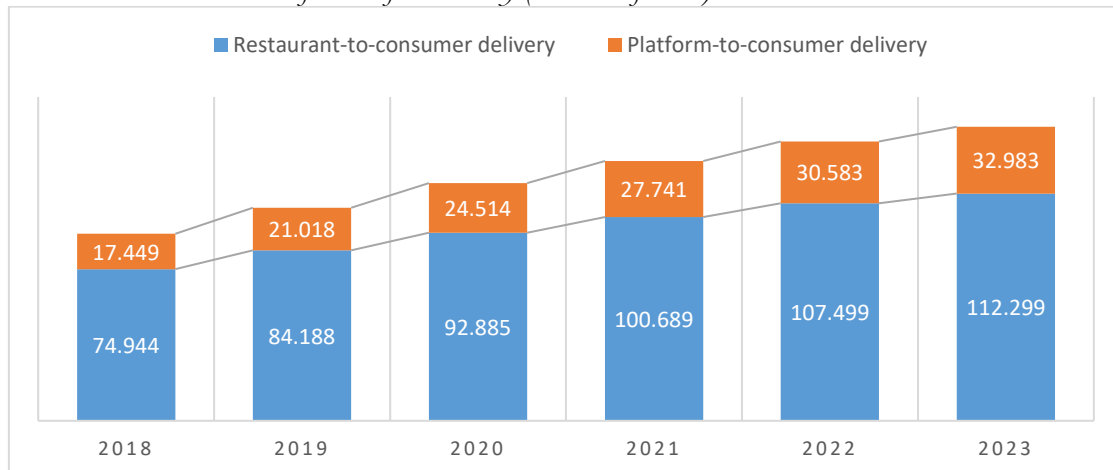
Online food-delivery services can be divided in two groups:

- *Restaurant-to-Consumer delivery*, where meals ordered online are delivered directly from the restaurant, whether it is a platform order (e.g. Just Eat, Delivery Hero) or from the restaurant website itself (e.g. Domino's) and all online orders collected from the restaurant;
- *Platform-to-Consumer Delivery*, where the online order and delivery are made through a platform (e.g., Deliveroo).

Based on estimates by Statista.com<sup>39</sup> in 2018, the volume of online food-delivery amounted to approximately \$92 billion, of which approximately \$17.5 billion related to online distribution through platforms (approximately 18.8% of the total volume). The sector is expected to grow strongly in the coming years (+57% between 2018-2023) with an acceleration in online distribution via platform (+89% between 2018-2023) compared to online distribution via restaurants (+50%). By 2023, the weight of platform distribution is estimated to grow by about 4 percentage points to 22.7% of the total annual value of online food-delivery. Delivery via restaurant, regardless of how the order is collected, is the main method, but all this leaves exponential margins for growth in the world of platforms. Scenarios of progressive migration towards online distribution via platform are not unrealistic.

<sup>39</sup> Statista, *eServices Report 2018 – Online Food delivery*, September 2018  
[https://statistacloudfront.s3.amazonaws.com/download/pdf/OnlineFoodDelivery\\_Preview.pdf](https://statistacloudfront.s3.amazonaws.com/download/pdf/OnlineFoodDelivery_Preview.pdf)

Chart 12 – Overall value of online food delivery (millions of euros)



Data refer only to observer countries included in the outlook.

Source: Ires Emilia-Romagna elaborations on Statista Digital Market Outlook 2018 data.

Based on a study by the McKinsey Institute in 2016<sup>40</sup> it is confirmed that traditional methods of delivery continue to be predominant, about 90% overall, of which about ¾ still by telephone at a global level. Digitalisation processes, however, are transforming the market in terms of both demand (consumption) and supply (delivery). On the supply side, two types of platforms have imposed themselves on the market: the "aggregating" platforms, created about 20 years ago as an intermediary between the consumer and the restaurant, and the so-called "new delivery" platforms which, in addition to intermediation, also provide the logistics network for delivery to restaurants that do not have them.

The "aggregating" platforms are based on a traditional delivery model offering access to a plurality of restaurants through a single online portal. The platform keeps a fixed margin on the order and the restaurant takes care of the delivery without an additional cost for the consumer. This business model guarantees very high profit margins (with an EBITDA of 40-50% of turnover).

New delivery players open up to a new segment of the home delivery market by incorporating a downstream part of the supply chain. These platforms receive a double contribution, from restaurants and consumers and despite operating costs maintain a high profitability (EBITDA equal to 30% of turnover).

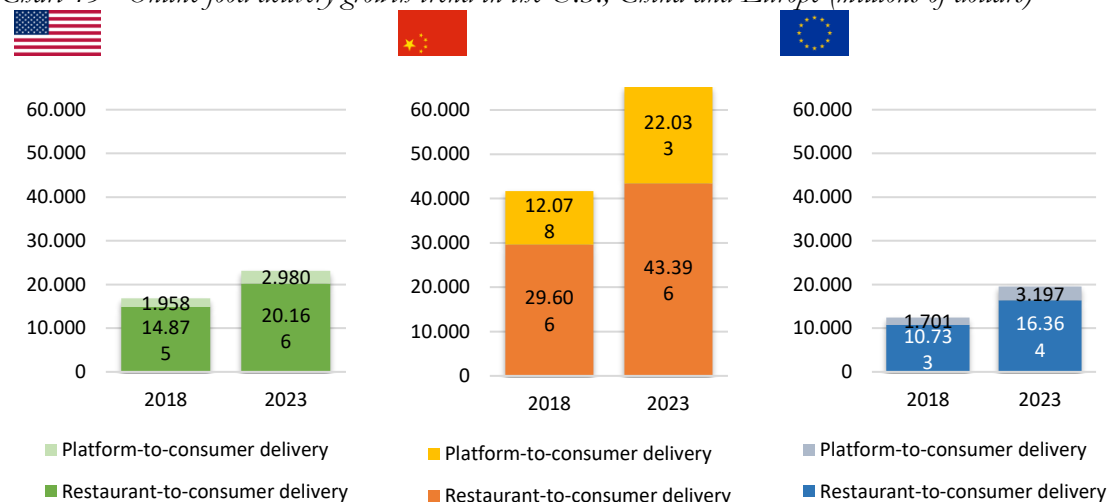
The McKinsey Institute study hypothesizes how the development of new online delivery, as an expression of a strategy aimed at incorporating growing pieces of the catering supply chain, produces a significant acceleration in the online mode of food-delivery: if in 2016 online has exceeded the threshold of 30% of the total food delivery, in 2020 the threshold of 50% should be exceeded, progressively increasing to 65%, following a growth trend approximating to that recorded in the online booking of air flights.

In a global comparison, China is the driving force behind the market both in terms of online delivery methods with a current value of 41 billion and growth at an average annual rate of 9.4% to exceed 65 billion dollars in value in 2023. In China's growth, the weight of online platform deliveries is estimated to grow by more than 1 percentage point, rising from 11.6% to 12.9% of the total value of online food delivery. China alone represents 70% of the

<sup>40</sup> The McKinsey Institute, *The changing market for food delivery*, 2016.

value of platform-to-consumer delivery by 2018, the United States 11.2% and Europe 9.7%. In terms of growth trend, Europe has the highest average rate of 9.5% between 2008 and 2023, with a significant acceleration (+88% overall growth between 2008 and 2023).

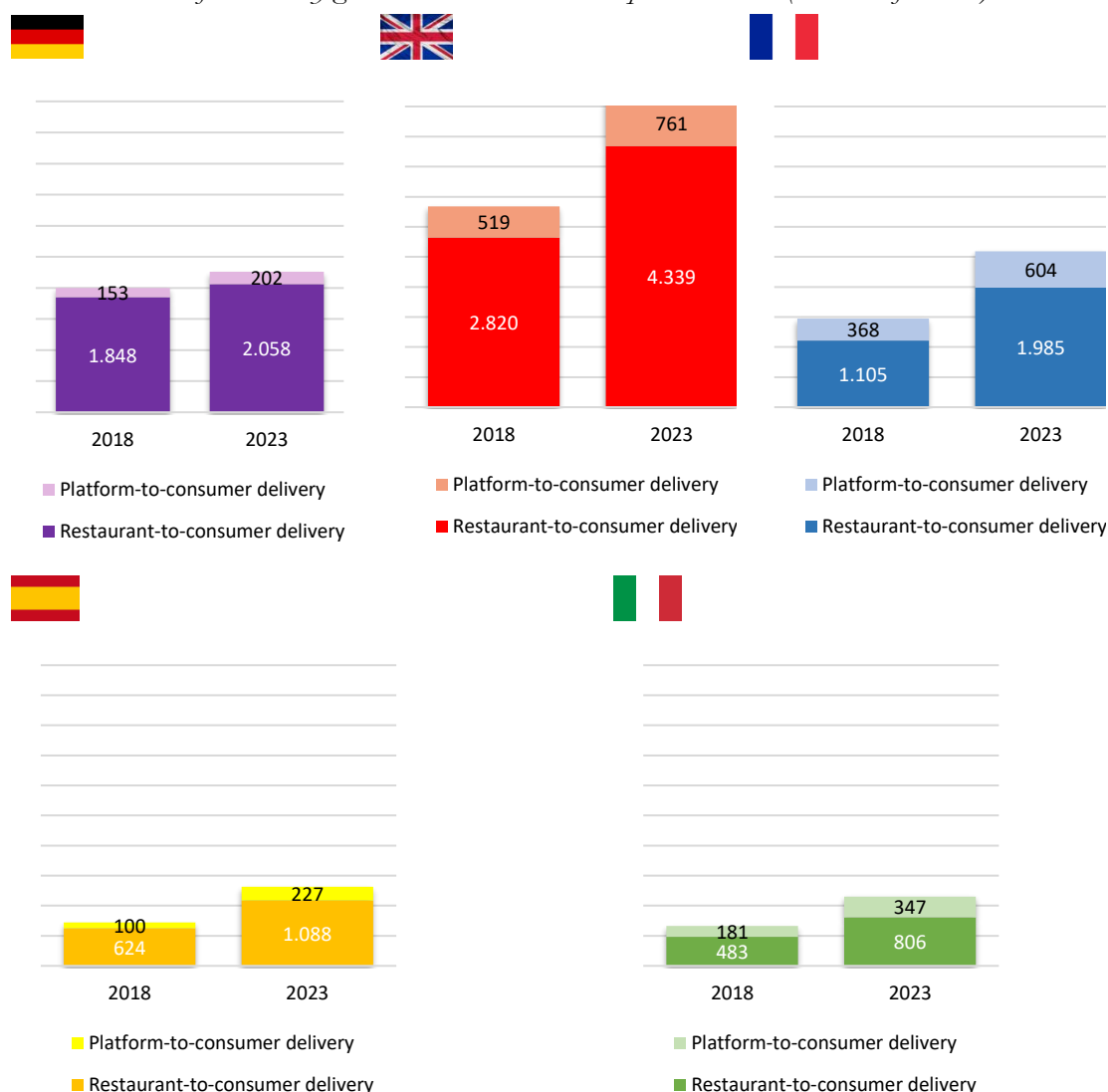
*Chart 13 - Online food delivery growth trend in the U.S., China and Europe (millions of dollars)*



Source: Ires Emilia-Romagna processing of Statista Digital Market Outlook 2018 data.

In Europe, the market segment is led by the United Kingdom, which alone represents about 26% (2018) of online food-delivery in Europe, followed by Germany (with 16.1%) and France (11.8%). The United Kingdom also represents 30% of the online market via platform, followed by France (21.6%) and Italy (10.6%). In this ranking it is interesting to note that Italy has a share of online deliveries via platform (27% in 2018) of the total online food-delivery market comparable to the Chinese one (29%) and misaligned with the European average (13.7%). In terms of dynamics, Spain is the market in which the fastest growth of online deliveries via platform is estimated (+127% in the period 2018-2023) compared to an important but more contained European average (87.9%) and with different speeds: in the United Kingdom growth is estimated at +46%, in Germany at +32%, in Italy at +91.7% and in France (+64.1%).

Chart 13 – Online food delivery growth trends in main European countries (millions of dollars)

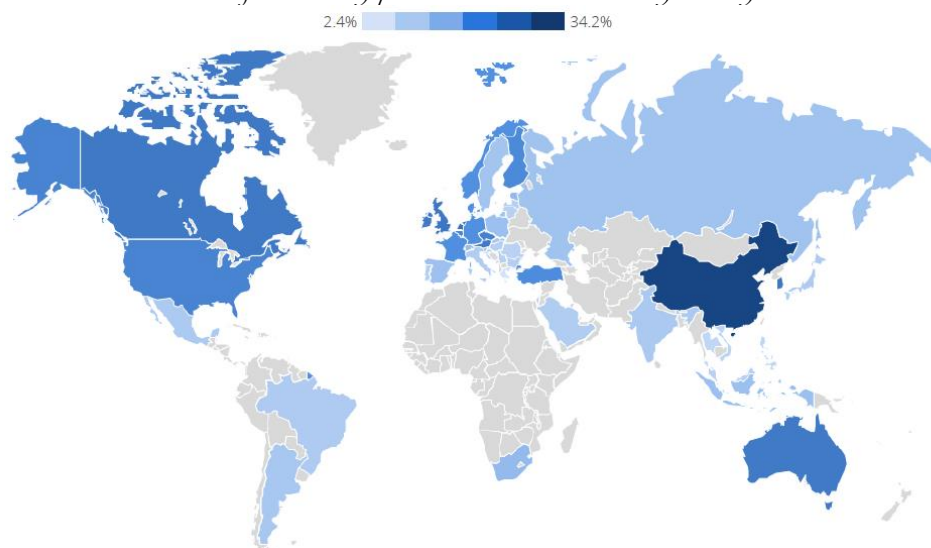


Source: Ires Emilia-Romagna processing of Statista Digital Market Outlook 2018 data.

Overall data shows that online food delivery via platform is not yet a mature market, accounting for about 19% of the total value of online food-delivery worldwide. However, there are significant territorial asymmetries (if we only think of the weight of *platform-to-consumer* delivery in China and Italy), partly explained by a different rate of penetration of the online market (rate of active online customers on the total population), partly by rapidly changing consumption patterns and partly by aggressive policies of expansion of the platforms themselves. Because of the higher operating costs, compared to the *restaurant-to-consumer* delivery mode, the growth strategies of the platforms are focused, in fact, on an extension of the delivery coverage and an entry in the large urban agglomerations. The studies show that the main strategic guidelines are focused on the development of user profiling, data collection and their integration in an IoT (Internet of Things) environment to

enhance the potential (voice-ordering) and on a more automated and robotized delivery thanks to digital technologies<sup>41</sup>.

*Chart 14 – The online food-delivery penetration rate in 2018 by country*



Source Statista Digital Market Outlook 2018.

### 5.1. Food Delivery Platforms and Business Models.

The business models of the food on demand market, as already mentioned, have a disruptive impact on the traditional market and proceed by incorporating pieces of the supply chain into an incremental logic. In theory, three different phases of the food on demand chain can be identified:

- Ordering, or customer orders collected via app, portal or telephone
- Cooking, or the preparation of food according to the orders received
- Delivering, the delivery of food at home

| EXAMPLES                                     | ORDERING                         | COOKING                           | DELIVERY                                                                 |
|----------------------------------------------|----------------------------------|-----------------------------------|--------------------------------------------------------------------------|
| Just Eat, Grub Hub, FoodPanda, Delivery Hero | Managed directly by the platform | In collaboration with restaurants | Restaurants have their own delivery channels or entrust to third parties |
| Munchery, SpoonRocket, Sprig, Maple          | Managed directly by the platform | Managed directly by the platform  | Managed directly by the platform                                         |
| Postmates, Doordash, Caviar, Deliveroo       | Managed directly by the platform | In collaboration with restaurants | Managed directly by the platform                                         |

<sup>41</sup> In the United States, many companies in the sector are experimenting with delivery via driverless vehicles. Domino's, the world's leading pizza delivery company, has developed a self-driving robot and delivery via drone, as well as Ele.me (Alibaba) in some areas of China.

|                           |                                     |                                                        |                                     |
|---------------------------|-------------------------------------|--------------------------------------------------------|-------------------------------------|
| RocketFood,<br>ExtraPlate | Managed directly by<br>the platform | In collaboration with<br>Home Chefs<br>(crowdsourcing) | Managed directly by<br>the platform |
|---------------------------|-------------------------------------|--------------------------------------------------------|-------------------------------------|

Different business models incorporate different stages of the supply chain:

- The model focused on the management of orders mainly recalls to the so-called "aggregating" platforms such as JustEat, Grubhub, Delivery Hero where the preparation of the food and its delivery remains in the hands of the restaurant directly or indirectly. In this model, the factors of quality and competition depend very much on the relationship with the network of restaurants;
- The business model that integrates the management of orders and delivery and refers to the so-called new delivery players. Unlike the simple management of orders, this business model implies higher management costs but can enjoy greater barriers to entry for any competitors and can act on the price. The preparation of food is entrusted to a network of restaurants or, as in some cases, to a network of cooks hired through *crowdsourcing*;
- The full cycle model, where the platform manages not only orders and delivery but also the cooking phase: delivery can be instantaneous or immediate depending on the customer's needs. Obviously, the configuration of the supply chain imposes higher management costs but also the possibility of reducing transaction costs in the various steps.

The integrated cycle model has been tried by some platforms and in particular Munchery, SpoonRocket, Sprig, Maple. The model, probably, is the most fragile from a financial point of view. Munchery, a chef's platform set up in 2010 in San Francisco, was closed for bankruptcy in March 2019 after firing 30% of its employees (about 672 registered in 2018)<sup>42</sup>. Similar fate for the Brazilian SpoonRocket (bankrupt in 2016), the American Sprig (bankrupt in 2017, leaving more than 200 workers at home) and the New Yorker Maple (closed in 2017), which was unable to withstand the competition and was acquired by the multinational Deliveroo.

Even for the other business models the competition is always very high, so much as to kick out of the market Amazon Restaurant, meaning the food part of the giant of e-commerce Amazon, in June 2019. Opened in 2015, Amazon Restaurant has not been able to impose itself on the food-delivery market on the global market due to competition from the main world players Grubhub, Uber Eats, DoorDash and Deliveroo. After the closure of the London delivery business in November 2018, Amazon Restaurant is forced to close also the American office in 2019.<sup>43</sup>

The online food-delivery market sees an oligopoly of major world players:

- Delivery Hero was founded in 2011 in Berlin (Germany) and has become the world leader in online food ordering platforms. Today the platform operates in more than

<sup>42</sup> It is interesting to note, however, that in the face of bankruptcy the CEO of the startup wanted to reward himself with 250 thousand euros as a "success fee" for the sale of mobile assets and real estate of the company. <https://sf.eater.com/2019/5/9/18563459/munchery-sells-south-sf-headquarters-ceo-payment>

<sup>43</sup> It is interesting to note that the exit of Amazon Restaurant from the market was welcomed by a 5% increase in the share value of Grubhub. <https://markets.businessinsider.com/news/stocks/amazon-exits-restaurant-delivery-grubhub-stock-pops-2019-6-1028269857>

40 countries in Europe, Asia, Latin America and the Middle East with more than 250,000 catering centres as partners processing more than 369 million orders in 2018. The strong push towards internationalization has developed mainly through acquisitions and mergers of the various national and transnational competitors with an aggressive strategy of expanding its coverage and adopting a multi-brand approach (approximately it moves on the market with 30 different global brands). Since its merger, under the impetus of its founders, the platform has entered the market in Australia and the United Kingdom and then expanded into Germany, Sweden, Finland, Austria and Poland and landed in 2012 in South Korea and China through YoGiYo and Amifan and increased investment in TastyKhana. In 2014 Deliver Hero enters Latin America acquiring control of PedidosYa and strengthens its position in Germany (with the acquisition of pizza.de and Foodora, in 2015, from the Rocket Internet incubator), South Korea (with the acquisition of Baedaltong) and Turkey (with the acquisition of Yemeksepeti for €530 million). In 2016, for a value of approximately 3 billion euros, Delivery Hero acquires Foodpanda and sells the English Hungryhouse to Just Eat. The rapid rise resulted in the listing on the Frankfurt Stock Exchange on 30 June 2017 with a value of more than one billion euros. During 2018, Takeaway.com, the Dutch platform that entered the stock exchange in 2016, acquired the German Delivery Hero business to stop its expansion in the German market for a value of one billion euros<sup>44</sup>. Before the listing on the Stock Exchange, the equity investments of the group have changed significantly seeing the participation of the Rocket internet incubator from a peak of 39% to a threshold well below 10% in 2019, while the shareholding of Nasper, South African giant of e-commerce with a threshold of shares with voting rights equal to 22%, and therefore majority shareholder of Delivery Hero, has risen. At the end of 2017, Delivery Hero became the majority shareholder of the largest food-delivery platform in Latin America (Rappi), it also invested in the Spanish Glovo platform and in 2019 it also acquired Zomato, a restaurant search service founded in 2018 and active globally;

- Glovo, a Spanish platform founded in Barcelona in 2015 and rapidly developing globally: by 2019 it was already operational in 20 countries, penetrating all continental markets. Food-delivery remains the core-business of the platform and the central business model, but services are also extended in a multi-product logic (detergents, clothes, letters, pharmaceuticals) and integrated business models are tested (cloudkitchen) with catering and cooking spaces for restaurateurs and chefs who want to expand their customer base. The opening to e-commerce involves the development of dark stores, or warehouses closed to the public, whose products can be ordered through the platform app. It is interesting to note that the statements of the company do not exclude the entry of private label products, which would ensure higher margins<sup>45</sup>, thus seeing the platforms also enter the food chain directly as producers. It is interesting to observe how, on an experimental basis, in Italy

<sup>44</sup> <https://www.ilsole24ore.com/art/la-borsa-sceglie-takeaway-olandesi-triplicano-prezzo-dall-ipo-ABhMgkrB>

<sup>45</sup> <https://www.ilsole24ore.com/art/gig-economy-glovo-non-solo-pizze-ma-anche-detersivi-e-lettere-domicilio---ABCvsLJB>

collaborations are being opened with actors of the large-scale retail trade for home delivery. In 2018, Glovo started the acquisition of Foodora, the delivery company of the German holding company Delivery Hero, to establish itself in the Italian market in which it had already entered with the acquisition of the Foodinho platform (the founder of which became CEO of Glovo Italia in 2018), thus pursuing an expansive strategy for aggregation;

- Uber Eats, the food delivery platform of UBER Technology (2009), created in 2015 after UberFRESH's experimental entry into the online delivery market in California. The platform, independent from the platform of the parent company Uber, enters in 2016 in London and in 2018 the same company announces plans to triple the workforce in the European market. The growth of Uber Eats is difficult to track as the food-delivery business is not always separable from the parent company's balance sheet. In preparation for the listing of Uber on the Wall Street for a value of over 100 billion, the document prepared for the IPO (Initial Public Offering) includes some separate information for food-delivery: 15 million meals delivered, a network of 220,000 restaurants and present in over 500 cities internationally expected to rise to 700, according to the company's plans for expansion. The food delivery service reached in 2018 a Gross Booking (i.e. revenues from races and deliveries) of 7.9 billion dollars and represents one of the main growth vehicles of the Uber Group since 50% of new accesses arrive at the Uber platform through UberEats. As an expansive strategy, Uber Eats announced its intention to open "virtual restaurants" in the UK (cloud restaurants);
- Deliveroo (or Roofoods Ltd), the online food-delivery platform founded in London in 2013 by American founders (Will Shu and Greg Orlowski) and active in over 200 cities worldwide through partnerships with large restaurant chains or manufacturers (such as the 2016 agreement with Heineken International for the exclusive delivery of their products). In 2017 Deliveroo was one of the first to open up to the so-called dark kitchens (the project is called Deliveroo Editions), i.e. kitchens without restaurants, where food is produced exclusively for online orders: through the analysis of customer data, the platform is able to analyze the order market and establish the optimal distribution of dark kitchens in the territory. To date, the project has landed in the United States, France, the United Kingdom, Singapore, Hong Kong and Australia. In London alone, there are more than 12 Deliveroo Editions, often obtained from prefabricated buildings and warehouses. In Italy it is active in Milan, Turin and Rome. Also in 2017, Deliveroo entered into a collaboration agreement with TripAdvisor following the example of what was concluded with the American platform GrubHub: a process of integration between restaurant research and the ordering service. In May 2019, Amazon, world leader in e-commerce, consolidated its position in the capital of Deliveroo with an investment of 575 million dollars, bringing the total capital invested from 2013 to 1.3 billion;
- DoorDash, a platform created in 2013 in San Francisco with predominantly American coverage, recorded rapid growth in 2019. Its market share in the United States is growing very rapidly (from about 15% to almost 30% from March 2018 to

February 2019)<sup>46</sup> eroding important positions at GrubHub and becoming the American market leader. After the last capital increase in 2018, the value of the platform is estimated to be \$1.4 billion. During 2018, DoorDash entered into a partnership with Walmart, a global retail giant, proposing itself as a player also in the distribution of food products from the retail sector;

- GrubHub, born in 2013 from the merger with Seamless (founded in 1999) and Grubhub (founded in 2004), the new online and mobile food ordering and delivery platform registers 19.9 million users, 115 thousand associates in 2200 cities in the United States. The growth strategy has been developed along a happy expansion by acquisition or merger of local delivery platforms (Delivered Dish in 2015, LAbite in 2016, Eat24 in 2017, LevelUP and the Israeli Tapingo in 2018). In 2014, after the merger, it will be listed on the New York Stock Exchange. In 2017, it entered into a distribution agreement with TripAdvisor<sup>47</sup>, so that consumers can also place orders directly from the page of a restaurant on the review portal. In March 2018, however, he bought Uber in Southeast Asia, incorporating Uber Eats<sup>48</sup>. Currently, GrabHub services in the United States, including the GrabHub app, Seamless, Eat24, MenuPages, Allmenus and DiningIn, account for about half of total food delivery;
- Just Eat, founded in 2000 in Denmark and then moved to the UK in 2005, currently has around 21.5 million customers and over 82,300 takeaway restaurants. The platform with a clear internalisation orientation expands first in the Netherlands (2007) and then in Ireland (2008) and since 2011 has been developing strategic partnerships for global market positioning ([www.eat.ch](http://www.eat.ch) in Switzerland, ClickEat in Italy, RestauranteWeb in Brazil and Alloresto in France) and acquisitions to strengthen the presence in the United Kingdom (Urbanbite), Canada (YummyWeb and GrubCanada). Confirming a strategy oriented towards aggregation, in 2012 it proceeds with the acquisition of the Spanish competitor SinDelantal, which ended in 2015 to ensure access to Latin America, in 2014 it strengthens its position in the French and Brazilian markets by promoting a merger with iFood and its subsidiary RestauranteWeb and in 2015 it sells to FoodPanda the shares of the Indian JV. In 2014 it will be listed on the London Stock Exchange. In 2016, Just Eat sells its Benelux operations for 22.5 million euros to the fast-growing European platform Takeaway.com in the Netherlands and buys HangryHouse from Delivery Hero. Also in 2016, Just Eat reached an agreement with Rocket Internet, the European industry giant based in Berlin, to acquire four businesses, and with Foodpanda, another Berlin startup active in the sector (supported by Rocket Internet), for an amount of 125 million euros. The acquisition concerns the online delivery of food at home in Italy (HelloFood Italia and PizzaBo), Spain (La Nevera Roja), Brazil (HelloFood Brazil) and Mexico (HelloFood Mexico). In 2019 the company buys Flyt, a software house for food and beverage services. During 2019, the Ceo resigned under pressure from investment funds - even though they hold non-majority shares of the group - oriented towards an option to merge with another partner - hypothetically the Dutch

<sup>46</sup> <https://fortune.com/2019/03/11/door-dash-tops-grubhub-on-demand-food/>

<sup>47</sup> <https://fortune.com/2017/05/09/grubhub-tripadvisor-partner/>

<sup>48</sup> <https://mothership.sg/2018/03/grub-acquires-uber-explained/>

Takeaway - to be able to heal the losses recorded in recent years: Just Eat has gone from a market value of 5.5 billion pounds in 2017 to the current 4.87 billion, and its shares have lost about 13% in one year.

Moving from a more qualitative research to an analysis of the balance sheet data, confirmations and interpretative lines of some interest emerge. The following is a discussion of four<sup>49</sup> Global platforms with complementary business models.

First of all, there is the rapid growth in terms of turnover with growth rates of up to 1000% (for Delivery Hero) and with a significant acceleration recorded in 2017. The number of employees does not indicate the complexity of the workforce involved - as many of those who work for the platforms are either self-employed or para-subordinate workers or occasional workers and therefore not contractually dependent on the company - but it is proposed as an indicator of comparison with the dynamics of turnover. If we compare the volume of turnover to the number of employees, we can see that for Delivery Hero the ratio over the years has fallen (from 89 thousand euros/employees to 53 thousand euros/employee) while for Grubhub (from 191 thousand euros/employee to 323 thousand euros/employee) it has grown and for Just Eat it remains more stable (about 250 thousand euros/employee). Where it grows, it implies that the turnover increases at a faster rate than the employment increases, with a constraint of subordination, while where it decreases, it implies that the employment dimension increases more rapidly than the turnover volume. Where it grows rapidly or where the ratio is higher, an outsourced use of the labour force through forms of autonomous or para-subordinate work is conceivable.

Despite the most impressive revenue growth for Delivery Hero, the largest gross profits are structurally higher for Grubhub. Profitability indicators (EBITDA) show both in absolute terms and as a percentage (of turnover) consistently negative values for Delivery Hero and, to the extent of data availability, also for Deliveroo a symptom of a negative cash flow and greater financial fragility. The profitability indicators also show structurally more modest values and growth trends compared to the dynamics of turnover. It is interesting to observe how the sales data, and therefore the revenues directly attributable to the sales of the products and services of the observed company, almost always explain the totality of the total revenues with a single exception recorded for Delivery Hero in 2018 when, instead, the sales revenues explain 72% of the total revenues.

*Table 3 – Financial Statements data of some food delivery players (thousands of euro)*

|           |      | DELIVERY HERO SE<br>DE | GRUBHUB INC.<br>US | JUST EAT PLC<br>GB | DELIVEROO<br>GB |
|-----------|------|------------------------|--------------------|--------------------|-----------------|
| Turnover  | 2018 | 1.069.500              | 879.700            | 864.624            | n.a.            |
|           | 2017 | 609.700                | 569.555            | 615.471            | 314.665         |
|           | 2016 | 299.138                | 468.012            | 438.465            | 150.115         |
|           | 2015 | 200.734                | 332.346            | 337.297            | n.a.            |
|           | 2014 | 90.734                 | 209.104            | 250.941            | n.a.            |
| Employees | 2018 | 19.834                 | 2.722              | 3.290              | n.a.            |
|           | 2017 | 12.882                 | 2.125              | 2.116              | 1.664           |
|           | 2016 | 6.848                  | 1.518              | 1.621              | 1.049           |
|           | 2015 | 2.843                  | 1.105              | 1.443              | n.a.            |

<sup>49</sup> The companies were selected based on the availability of information about the group consolidated financial statements on the Bureau Van Dijk's database.

|              | 2014 | 1.018    | 1.090   | 1.018   | n.a.     |
|--------------|------|----------|---------|---------|----------|
| Gross profit | 2018 | 756.800  | 879.700 | 678.682 | n.a.     |
|              | 2017 | 414.500  | 569.555 | 550.577 | 74.883   |
|              | 2016 | 254.037  | 468.012 | 397.385 | 1.342    |
|              | 2015 | 166.525  | 332.911 | 324.093 | n.a.     |
|              | 2014 | 73.981   | 212.032 | 237.957 | n.a.     |
| EBITDA       | 2018 | 34.700   | 155.286 | 168.312 | n.a.     |
|              | 2017 | -199.700 | 122.737 | 163.472 | -183.546 |
|              | 2016 | -105.982 | 114.141 | 113.789 | -157.274 |
|              | 2015 | -165.474 | 83.743  | 68.330  | n.a.     |
|              | 2014 | -71.500  | 62.537  | 81.247  | n.a.     |
| Sales        | 2018 | 765.300  | 879.700 | 864.291 | n.a.     |
|              | 2017 | 584.200  | 569.555 | 615.471 | n.a.     |
|              | 2016 | 297.026  | 468.012 | 438.465 | n.a.     |
|              | 2015 | 199.507  | 332.346 | 337.024 | n.a.     |
|              | 2014 | 88.008   | 209.104 | 201.833 | n.a.     |
| EBITDA %     | 2018 | 3,3      | 17,7    | 19,5    | n.a.     |
|              | 2017 | -32,8    | 21,6    | 26,6    | -58,3    |
|              | 2016 | -35,4    | 24,4    | 26,0    | n.s.     |
|              | 2015 | -82,4    | 25,2    | 20,3    | n.a.     |
|              | 2014 | -78,8    | 29,9    | 32,4    | n.a.     |

Source: our elaborations on Orbis Bvd data.

## 5.2. Final Remarks.

The market for online food delivery platforms is an oligopoly with high barriers to entry for possible competitors and where growth strategies are mainly oriented towards the aggregation of national and international competitors by merger or acquisition, especially in the first phase of expansion, and consolidation in different markets - or abrupt retreat in case of difficulties in penetration - through a progressive strengthening and investment in the capital of local players.

Acquisitions and disposals between large oligopolist groups are very frequent in a perpetual pursuit for maximum coverage, constantly recomposing the corporate structure: an example is the operations on Foodora, FoodPanda, HangryHouse. On the international scene, the Dutch Takeaway platform is emerging, whose turnover has tripled in a very short time and on which various attempts at alliances are concentrated within a logic of progressive centralisation to guarantee, paradoxically, the maximum decentralisation in the territory.

The growth strategies do not only move in an intersectoral environment, and therefore between players in the same sector, but we are looking for alliances with players in e-commerce, such as Amazon - interested in entering the food-delivery after the closure of Amazon restaurant -, the large-scale retail trade, such as Walmart, or even looking for pathways to integrate the tourism sector such as the collaboration with Tripadvisor.

Compared to business models, the prevailing strategies see more and more continuous experimentation towards an integrated cycle model, including the cooking phase (dark kitchen), a multi-product distribution (not only food) and an opening to direct e-commerce

(dark store). It is interesting to observe the entry of on-demand delivery platforms also in private labels as they would testify to their positioning in the food supply chain even as producers.

The shareholding structures change very rapidly over time with the entry and exit of banks, investment funds and incubators from the corporate structure, testifying to the dynamism of the platforms in terms of investment, on the one hand, but also the financial exposure of the same, on the other, especially if listed on the stock exchange.

## 6. Household Services: Online Housework.

The Gig Economy has developed into a plurality of activities. Not only food-delivery, transport services or cloudwork, but a so-called "uberisation" process has also been produced for domestic work. In a recent report<sup>50</sup> which brings together the results of 14 surveys carried out in 13 European countries between January 2016 and May 2019 are proposed different measures of the online community in a European comparison. Compared to a size of the online community that takes into account a wider use of online platforms for some form of income, Europe is essentially divided into two areas: high levels of online income in Central and Eastern Europe (specifically the Czech Republic, Slovenia and Estonia) and Southern Europe (Italy and Spain), on the one hand, and a low-income online generation in Northern and Western Europe (France, Germany, Sweden, the Netherlands and the United Kingdom). The report not only proposes a geographical mapping of online communities but also questions which variables significantly explain their distribution. It is absolute poverty that pushes a larger proportion of people to look for different forms of online income, not only labour platforms but also, and above all, platforms for the sale or rental of mobile and real estate: in fact, there is a correlation between the highest prevalence of forms of online income (from work or capital) and the incidence of absolute poverty.

In addition to outlining the incidence of platforms as a revenue lever in Europe, the report limits the field of observation only to work through platforms, identifying 4 categories of activity: transport and delivery, domestic work, online work - which collects a wide spectrum of high and low-content professional work - and commissions via platform (errands). The first evidence that emerges is that those who work through an online platform usually do not only one type of work but do on average 2.25 per week (2.34 for males and 2.13 for females). This figure suggests that workers on online platforms mainly seek additional forms of income by accepting any type of work.

In a counter-intuitive form, domestic services appear to be more widespread than platform work and delivery. The centrality of food-delivery (Foodora, Deliveroo, Glovo) and transport (Uber) in public debate and academic discussion therefore seems to depend more on the public visibility of the phenomenon than on its real diffusion. The comparison between national statistics, in fact, shows how domestic work via platform, certainly a

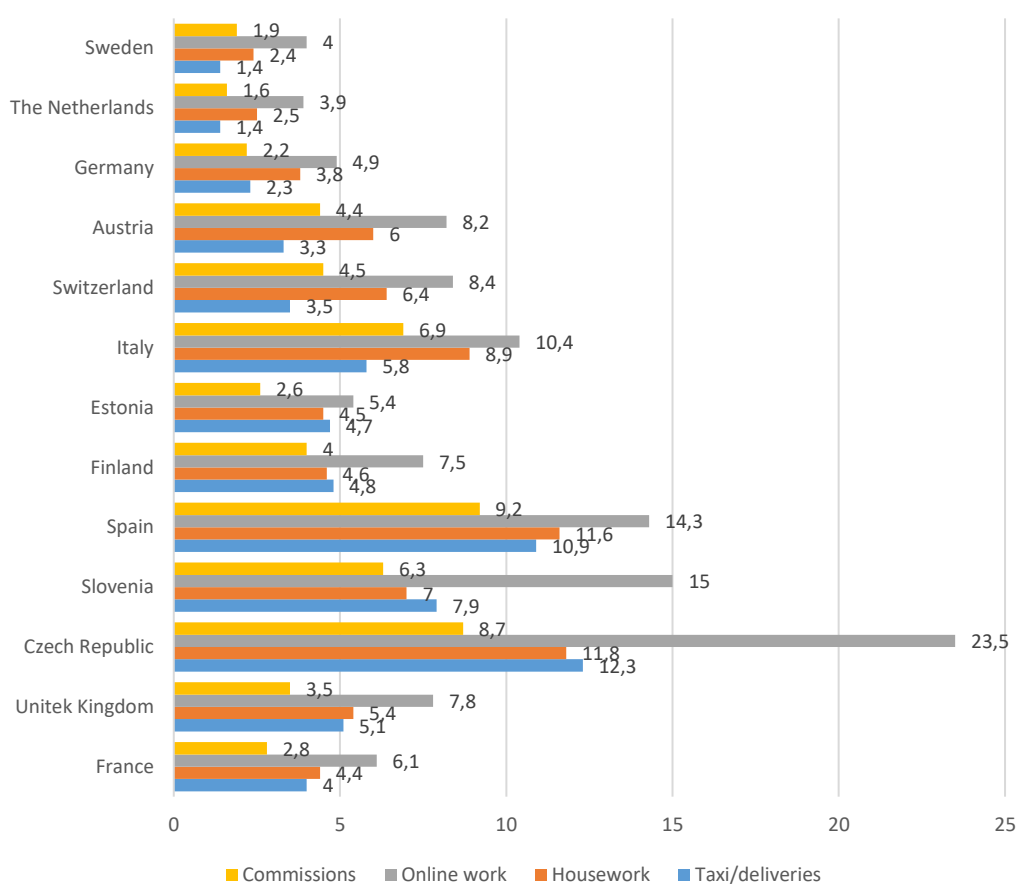
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<sup>50</sup> Huws U., Spencer N., Syrdal D., Holts K., *The Platformisation of Work in Europe, Results from research in 13 European countries*, FEPS, UniGlobal and University of Hertfordshire, 2019 <https://www.feps-europe.eu/attachments/publications/the%20platformisation%20of%20work%20in%20europe%20-%20final%20corrected.pdf>.

segment of the market not much debated in political and trade union forums, is actually more widespread. It is therefore possible to induce that the most intimate dimension of domestic work, precisely because it takes place inside the walls of the house, does not manage to receive the same attention even though it has a greater presence.

Those who carry out domestic services via platform have a higher percentage weight than the most medially visible category, i.e. "taxis and deliveries", in France, the United Kingdom, Spain, Italy, Switzerland, Austria, Germany, the Netherlands and Sweden. This confirms that it is more widespread. Following the geographical pattern of the spread of the online community, domestic work reached its highest levels in the Czech Republic (11.8%), Spain (11.6%) and Italy (8.9%).

*Chart 15 – Share of the active population carrying out different types of platform work at least weekly*



Base: 2155 respondents in France, 2226 in the UK 2019 survey, 1991 in Czechia, 1990 in Slovenia, 2173 in Spain, 1996 in Finland, 1978 in Estonia, 2185 in Italy, 1995 in Switzerland, 1955 in Austria, 2171 in Germany, 2118 in the Netherlands, 2139 in Sweden and 2234 in the UK 2016 survey (weighed).

Source: Huws, U., Spencer, N., Syrdal, D., Holts, K. (2017), *The Platformisation of Work in Europe*, Results from research in 13 European countries, FEPS, UniGlobal and University of Hertfordshire (2019).

The processing of online commissions via platform remains a generally minor form of income, but achieves significant shares higher than the one of those who work in transport and online deliveries in Italy, Austria and Switzerland. In general, the most widespread form

of working via platform is, generally, cloudwork (online work), or a form of online work open to global competition. Although it is possible for an online worker via platform to perform several activities at the same time, clouworkers represent the majority type of work in all countries, with peaks in the Czech Republic, Slovenia, Spain, Italy and Switzerland.

The reports also allow a gender reading for the types of work via online platform. This perspective allows us to make three main points:

- For male workers, the percentage of those who carry out transport and delivery activities is always higher, with the sole exception of Italy, where the percentage of women exceeds (6.3%) the percentage of men (5.4%);
- cloudwork always remains the most frequent type for both genders but for the female component there are significantly lower percentages;
- Contrary to what a superficial reading might suggest, domestic work shows always higher incidences for male workers, with the sole exception, also in this case, of Italy where domestic work among women reaches 9.8% compared to 8% for the male gender. The figure in itself is not surprising because within domestic work are classified both jobs with a higher propensity for women (such as cleaning or babysitting) but also jobs with a higher propensity for men (such as electrician, carpenter, plumber, etc.).

### 6.1. Household Services Platforms.

There are several online platforms for domestic work. And as with all platforms, market volatility remains very high due to margins of profitability that are always very squeezed and aggressive market competition. This is the case, for example, of the U.S. platform Homejoy, founded in 2010, which had 100 employees and thousands of self-employed in the cleaning sector. Despite rapid growth thanks to funding from incubators, such as Y Combinator, and venture capital funds, such as Google Ventures, Homejoy ceased operations in 2015 due to a difficulty in maintaining a constant profitability and managing labor lawsuits focused on the recognition of the subordination of employees (after the ruling of the California State Labor Commission in the Uber case, 2015) and part of the technical staff of the platform was hired by Google LLC. Other platforms, on the other hand, are being honoured by trade union successes, such as the Danish platform Hilfr as the first example of collective bargaining in an online platform. The Hilfr startup, oriented to the intermediation of cleaning and caregiving services, signed in 2018 an agreement with the Danish trade union 3F introducing minimum wage standards (a minimum wage of about 19 euros per hour), social security contributions, paid holidays and coverage in case of illness for the so-called superHilfr, or those who have exceeded a certain seniority of work on the platform (100 hours of work)<sup>51</sup>. Others, on the other hand, for behaviour that respects the quality of work, such as the Italian Le Cicogne ([www.lecicogne.net](http://www.lecicogne.net)) for the babysitting service, whose rates

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<sup>51</sup> A cleaner may request coverage under the collective agreement if it has not exceeded the threshold of 100 hours, but after this threshold, coverage is automatically triggered, unless the worker himself explicitly rejects it.

are in accordance with the National Collective Agreement (CCNL) for domestic work, respect the minimum union rates and are updated every year.

There are many intermediation platforms for domestic work and the best known are:

- Task Rabbit, American platform founded in 2008. Born from the experience of RunMyErrand, another platform for the management of daily commissions, Task Rabbit expands rapidly throughout the U.S. supported by several venture capital companies (Sasha ventures, First Round Capital, Baseline Ventures, Floodgate). In 2013, the company introduces "TaskRabbit Business" that allows companies to hire temporary workers from the database of the platform itself. In 2013, the company will enter the European market, experimenting with a new matching system in London, no longer based on the idea of a tender but on the willingness of the "taskers" to accept before the other jobs consistent with the professional profile uploaded on the platform. Thanks to this new selection metric, applications to be "taskers" have increased from 4,000 in 2014 to 15,000 in 2015<sup>52</sup>. In 2017, the Ikea group acquired the Rabbit task platform and launched a specific service dedicated to furniture assembly. It is estimated that the "taskers" currently active are about 60 thousand covering a wide range of professional profiles and in about 45 cities in the United States and United Kingdom<sup>53</sup>;
- Handy (Hanybook the name until 2014), founded in 2012 in the United States with current headquarters in New York is a platform primarily dedicated to cleaning jobs and other domestic activities. It is active in 28 cities in the United States and Canada and, by 2015, has a staff of about 160 full-time employees and about 10 thousand employees for a total of about 1 million online bookings of which about 80% from regular customers. The platform was launched thanks to financial support from the Harvard Innovation Lab incubator and supported over time by venture capital funds (General Catalys Partners and Highland Capital Partners) and investment funds (Revolution Growth). In 2014, Hany buys Mopp, a similar platform on the London market, and enters the European market. In 2018, Handy was acquired by [ANGI Homservices](#) former owner of HomeAdvisor and Angie's List. In 2016, Handy builds alliances with Amazon, for "voice" booking through Amazon Alexa, in 2017 with Wayfair, for an integrated service when purchasing through the e-commerce leader, and in 2018 with Walmart, the global leader in retail;
- Helpling, founded in 2014 in Germany, is Europe's leading marketplace for domestic service management. Among its main founders (for a total estimated funding of 57 million euros) are Mangrove Capital, Lakestar, Rocket Internet, Unilever Ventures and Accel partners, already investors in Facebook, Spotify and Dropbox. Helpling is active in 10 countries and three continents: Australia, France, Germany, Ireland, Italy, Netherlands, Singapore, Switzerland, United Arab Emirates and United Kingdom. In 2015 Helpling acquires Hassle.com - the UK market leader in the sector - and in 2018 the Swiss Book a Tiger through the investments of Tamedia AG, Switzerland's leading media group;

<sup>52</sup> <https://www.telegraph.co.uk/technology/technology-companies/12026750/TaskRabbit-How-an-app-can-relieve-you-of-all-your-chores.html>

<sup>53</sup> [https://en.wikipedia.org/wiki/TaskRabbit#cite\\_note-0-40](https://en.wikipedia.org/wiki/TaskRabbit#cite_note-0-40)

- Care.com, American platform launched in 2007 mainly specializing in home babysitting and care and other home activities. The site gathers almost 33 million customers in about 20 countries, has reached 111 million euros of investment and was listed on the stock exchange in 2014. The initial investment for the launch of the platform comes from private Matrix Partners, private equity funds. To date, the company says that 13.9 million caregivers have entered the platform to find work, more than 9.1 million families have sought care, and more than 1.6 million workers of their customers have benefited from their services. Care.com services are often used by digital leaders as benefits (e.g., Google and Facebook). In 2012 it opened up to the European market, entering the UK and Germany, and Canada. Also, in 2012, it introduced a new model of private social networks via mobile (Karoo) through which to connect *caregivers* and families and launched Care.com recruiting Solution to facilitate the intermediation of labor in care work. In 2013, it is collaborating with Knowledge Universe, a non-profit company specializing in *childcare* services and training.;
- Housekeep, platform for work interactions in cleaning services and other domestic work activities (laundry, ironing) founded in 2014 in the UK. Again, embracing more quantitative methods of analysis on two of the most important online platforms for domestic work intermediation (Angi Homeservices Inc and Care.com) shows rapid growth over time. Since their inception, growth in terms of revenues has increased exponentially, with +280% for Angi Homeservices Inc and +84% for Care.com, but with very different trends: while Care.com shows a more continuous and structured trend, Angi Homeservice shows a strong acceleration, especially in the last 2 years, that is, after the listing on the stock exchange in 2017 following the merger between HomeAdvisor and Angie's List in a mutibrand strategy (11 total on specific areas of services)<sup>54</sup>. However, the rapid growth does not correspond to the same performance of the company's profitability (EBITDA as a % of turnover) and for Angi Homeservices the year of the listing shows a negative Ebitda rate.

Table 4 – Consolidated financial statements of two international platforms (in thousands of euros)

| Year      |      | ANGI HOMESERVICES INC.<br>US | CARE.COM, INC.<br>US |
|-----------|------|------------------------------|----------------------|
| Turnover  | 2018 | 988.856                      | 167.913              |
|           | 2017 | 614.013                      | 145.160              |
|           | 2016 | 306.735                      | 153.452              |
|           | 2015 | 316.088                      | 127.382              |
|           | 2014 | 259.460                      | 91.188               |
| Employees | 2018 | 4.500                        | 678                  |
|           | 2017 | 3.900                        | 749                  |
|           | 2016 | 1.567                        | 628                  |
|           | 2015 | 1.730                        | 673                  |
|           | 2014 | 1.852                        | 853                  |
| Ebitda    | 2018 | 13,6                         | 5,57                 |
|           | 2017 | -14,95                       | 6,54                 |

<sup>54</sup> <https://www.angihomeservices.com/brands/>

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|      |       |        |
|------|-------|--------|
| 2016 | 3,11  | 3,75   |
| 2015 | 5,71  | -7,36  |
| 2014 | -1,52 | -26,49 |

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Source: our elaborations on Orbis Bvd data

Obviously, workers do not grow with the same dynamics as turnover, as they grow in relation to management (or production) costs, but not in relation to turnover, which is more strictly dependent on the volume of intermediaries managed through the "external" workforce (self-employed, semi-subordinate, casual workers). However, the trends between the two platforms observed are distinct, in that Angi Homeservices INC, which has almost 1 billion turnover in 2018, records an increase in the number of workers of +140% while Care.com, in the same period and against a more limited turnover trend, shows a decrease of -20%. The ratio of turnover to employee inevitably falls from 150 thousand euro/employee (2014) to 136 thousand euro/employee (2018) for Angi Homeservices while it rises from 135 thousand euro/employee (2014) to 214 thousand euro/employee (2018) for Care.com.

## 7. Digital Tourism.

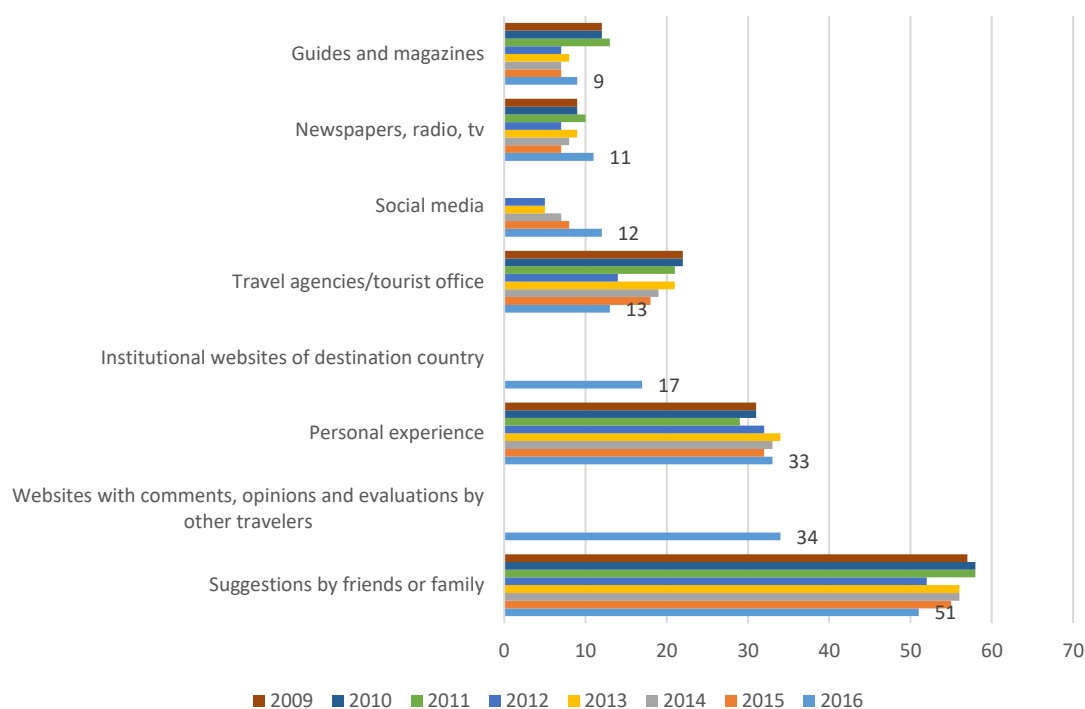
In digital tourism, the world of platforms does not present itself as a labour platform, but very often as online booking platforms or peer-to-peer platforms that more closely reflect the original concept of sharing economy. The collaborative economy is developing in a context of rapid growth of international tourist arrivals worldwide and also in the European Union (EU). Compared to 331 million arrivals in 2000, the 28 EU Member States hosted 478 million international tourists in 2015.<sup>55</sup> In the same period, the number of international tourist arrivals worldwide increased from 674 million to almost 1.2 billion. In the long run, these figures are expected to grow both in the EU and worldwide, leading to increased demand for tourist services.

Tourism in the EU and in many other regions of the world is also evolving in response to the changing behaviour of tourists. As the OECD pointed out in a 2016 report, tourists are, in general, more open to self-guided holidays and seek more information from other tourists (friends and relatives or anonymous tourists posting reviews on the Internet) than in the past. According to the Flash Eurobarometer Report on tourism preferences and choices of European citizens in 2016<sup>56</sup>, consumer choices regarding tourist destinations continue to be increasingly influenced by personal experiences (about 1/3 of respondents) and by the advice of friends and relatives (always more than 50% of respondents).

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<sup>55</sup> <https://www.e-unwto.org/doi/pdf/10.18111/9789284418145>

<sup>56</sup> [https://data.europa.eu/euodp/it/data/dataset/S2065\\_432\\_ENG](https://data.europa.eu/euodp/it/data/dataset/S2065_432_ENG)

*Chart 16 - Sources of information before choosing a tourist trip (2009-2016)*

Source: Eurobarometer 2016.

In particular, there is an inverse relationship between the growth of websites and social media and a reduction in the importance of travel agencies and tour guides, suggesting a substitution effect between the two trends (Chart 17) - although only data as of 2016 is available for websites and social media. It should also be noted that travel experience sharing sites in particular (about 1/3 of respondents in 2016) are the preferred information channel. Many tourists use digital technology and social media to plan, buy or review travel experiences. Again, digital consumption is affected by different personal inclinations and national trends towards digital accessibility and usability: the use of traveler rating platforms and sites exceeds 40% of respondents in France, the Netherlands, Ireland, the United Kingdom and the Czech Republic, while it remains around 20% in Portugal, Romania, Hungary and Slovenia.

Digital consumption becomes even more disruptive if you look at how you book your holidays. Online booking is the main mode, whether through tour operator search engines or private accommodation platforms (Figure 18).

Chart 17 – Booking procedures for travellers in 2015 (% share)

|      |                                                                                     | Other online commercial services such as tour operators, airline companies, etc. | Online commercial services listing private housing offers from individuals | Through someone you know | Over the counter at a travel agency | Over the phone | On-site (place of holidays) | Over the counter of a transportation company (airline company, railway company, etc.) | I did not need to book anything (SPONTANEOUS) | Other (SPONTANEOUS) | Don't know |
|------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------|-------------------------------------|----------------|-----------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------|---------------------|------------|
| EU28 |    | 32                                                                               | 24                                                                         | 16                       | 16                                  | 15             | 9                           | 6                                                                                     | 11                                            | 6                   | 2          |
| BE   |    | 38                                                                               | 28                                                                         | 28                       | 17                                  | 16             | 12                          | 10                                                                                    | 6                                             | 7                   | 3          |
| BG   |    | 15                                                                               | 16                                                                         | 16                       | 9                                   | 15             | 13                          | 2                                                                                     | 19                                            | 4                   | 6          |
| CZ   |    | 24                                                                               | 24                                                                         | 26                       | 11                                  | 12             | 10                          | 2                                                                                     | 13                                            | 7                   | 1          |
| DK   |    | 60                                                                               | 15                                                                         | 16                       | 4                                   | 9              | 5                           | 2                                                                                     | 7                                             | 7                   | 1          |
| DE   |    | 28                                                                               | 23                                                                         | 11                       | 27                                  | 13             | 10                          | 3                                                                                     | 10                                            | 4                   | 2          |
| EE   |    | 30                                                                               | 17                                                                         | 6                        | 7                                   | 8              | 2                           | 3                                                                                     | 33                                            | 7                   | 0          |
| IE   |    | 55                                                                               | 17                                                                         | 9                        | 11                                  | 17             | 5                           | 4                                                                                     | 3                                             | 4                   | 2          |
| EL   |    | 26                                                                               | 15                                                                         | 13                       | 8                                   | 18             | 12                          | 5                                                                                     | 19                                            | 8                   | 2          |
| ES   |    | 31                                                                               | 24                                                                         | 10                       | 23                                  | 9              | 4                           | 2                                                                                     | 13                                            | 5                   | 2          |
| FR   |    | 33                                                                               | 25                                                                         | 19                       | 10                                  | 16             | 10                          | 7                                                                                     | 11                                            | 11                  | 2          |
| HR   |   | 7                                                                                | 16                                                                         | 18                       | 14                                  | 9              | 5                           | 6                                                                                     | 26                                            | 5                   | 2          |
| IT   |  | 22                                                                               | 33                                                                         | 13                       | 15                                  | 10             | 6                           | 5                                                                                     | 10                                            | 4                   | 1          |
| CY   |  | 46                                                                               | 24                                                                         | 8                        | 19                                  | 11             | 1                           | 3                                                                                     | 5                                             | 2                   | 0          |
| LV   |  | 25                                                                               | 15                                                                         | 26                       | 10                                  | 13             | 22                          | 13                                                                                    | 18                                            | 7                   | 2          |
| LT   |  | 11                                                                               | 24                                                                         | 16                       | 8                                   | 15             | 13                          | 5                                                                                     | 17                                            | 8                   | 3          |
| LU   |  | 44                                                                               | 25                                                                         | 20                       | 33                                  | 15             | 10                          | 19                                                                                    | 6                                             | 4                   | 1          |
| HU   |  | 15                                                                               | 28                                                                         | 21                       | 8                                   | 9              | 2                           | 1                                                                                     | 21                                            | 6                   | 4          |
| MT   |  | 33                                                                               | 30                                                                         | 10                       | 25                                  | 6              | 13                          | 5                                                                                     | 6                                             | 2                   | 2          |
| NL   |  | 44                                                                               | 27                                                                         | 9                        | 9                                   | 9              | 8                           | 2                                                                                     | 9                                             | 11                  | 1          |
| AT   |  | 46                                                                               | 13                                                                         | 15                       | 26                                  | 17             | 14                          | 6                                                                                     | 6                                             | 5                   | 0          |
| PL   |  | 19                                                                               | 35                                                                         | 21                       | 10                                  | 24             | 13                          | 8                                                                                     | 17                                            | 3                   | 2          |
| PT   |  | 22                                                                               | 21                                                                         | 19                       | 14                                  | 12             | 8                           | 3                                                                                     | 13                                            | 7                   | 5          |
| RO   |  | 14                                                                               | 17                                                                         | 22                       | 10                                  | 15             | 20                          | 7                                                                                     | 10                                            | 6                   | 4          |
| SI   |  | 10                                                                               | 19                                                                         | 12                       | 20                                  | 18             | 9                           | 1                                                                                     | 15                                            | 3                   | 0          |
| SK   |  | 11                                                                               | 24                                                                         | 16                       | 16                                  | 14             | 4                           | 2                                                                                     | 19                                            | 5                   | 2          |
| FI   |  | 58                                                                               | 21                                                                         | 19                       | 7                                   | 23             | 13                          | 14                                                                                    | 10                                            | 2                   | 3          |
| SE   |  | 47                                                                               | 16                                                                         | 8                        | 11                                  | 10             | 3                           | 6                                                                                     | 14                                            | 4                   | 3          |
| UK   |  | 52                                                                               | 19                                                                         | 20                       | 15                                  | 26             | 11                          | 12                                                                                    | 5                                             | 4                   | 1          |
| MK   |  | 8                                                                                | 8                                                                          | 26                       | 30                                  | 15             | 25                          | 6                                                                                     | 22                                            | 1                   | 2          |
| ME   |  | 2                                                                                | 11                                                                         | 14                       | 17                                  | 9              | 8                           | 2                                                                                     | 32                                            | 5                   | 7          |
| TR   |  | 22                                                                               | 6                                                                          | 17                       | 9                                   | 11             | 11                          | 4                                                                                     | 30                                            | 5                   | 3          |
| IS   |  | 47                                                                               | 14                                                                         | 19                       | 7                                   | 10             | 12                          | 10                                                                                    | 8                                             | 11                  | 5          |
| MD   |  | 6                                                                                | 8                                                                          | 28                       | 8                                   | 6              | 7                           | 3                                                                                     | 23                                            | 6                   | 9          |

Source: Eurobarometer 2016.

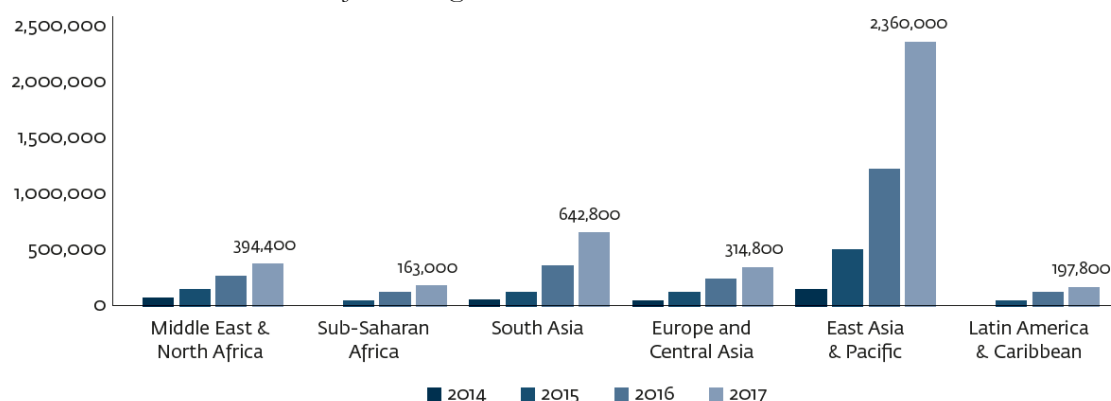
Tourism has always been a sector with a high technological impact, if you consider the transformations induced by the so-called OTA online travel agencies, i.e. online travel agencies such as Expedia or TripAdvisor, Booking, and more recently by the so-called peer-to-peer accommodation<sup>57</sup>.

<sup>57</sup> People who provide accommodation directly to clients through online platforms.

## 7.1. P2P Accommodations.

Based on a report by the World Bank<sup>58</sup>, P2P accommodation reaches approximately 8 million beds worldwide, or 7% of the global offer, with an estimated growth rate of 31% from 2013 to 2025, or 6 times the growth rate of the traditional offer (B&B and Hotels). Some studies estimate the growth of the P2P economy (independent studies of Mastercard) in about 75 billion dollars in 2017 with growth to 139 billion dollars in 2020. Growth, however, will be more concentrated in emerging markets while the trend will remain stable in mature markets. Processed data provided directly by Airbnb shows that the number of guests in low-income countries has grown by 1.160% from about 323,000 in 2014 to over 4 million in 2017 (Indonesia, Philippines).

Chart 18 – Growth in arrivals of Airbnb guests in low and middle income countries, 2014-2017



Source: World Bank Group using Airbnb data

The trend shown here confirms what has already been observed with respect to the increase in domestic work, i.e. how the expansion of the platform economy also depends, and above all, on the opportunity connected with it of incremental or substitute forms of income/wage to the traditional ones. In a recent report by Uniglobal on the platforming of the economy, it is shown that the share of the workforce that uses the various online platforms as a source of income is growing rapidly. It is interesting to note that it is not so much labour platforms that are used as a source of income as asset platforms for selling products (such as Amazon, on average about 40% of the workforce or E Bay, with about 50%) or renting housing (such as Airbnb, with an average of 20% of the workforce, with peaks of over 30% in Spain and the Czech Republic and a rapidly growing trend - in the United Kingdom it goes from 8.2% to 18.7% from 2016 to 2019)<sup>59</sup>.

Moreover, the P2P economy has not only changed relations with commercial operators but also and above all the relationship with other digital tourism players such as the OTAs themselves. The offers of P2P platforms and the offers of online travel agencies (such as Expedia and Booking) are becoming increasingly similar. The initial difference, offered by private individuals and offered by commercial operators, is gradually disappearing. For

<sup>58</sup> For further information see: World Bank Group, *Tourism and the Sharing Economy*, 2018 <http://documents.worldbank.org/curated/en/161471537537641836/pdf/130054-REVISED-Tourism-and-the-Sharing-Economy-PDF.pdf>

<sup>59</sup> Huws U., Spencer N., Syrdal D., Holts K., (50).

example, Airbnb itself also lists hotel rooms, second homes and B&Bs as possible options, allowing commercial operators to constantly monitor the availability of rooms in their hotel structure. Likewise, the OTAs, like TripAdvisor itself, also offer apartments and accommodation. In 2018, Booking.com announces that among the 27 million ads, about 5 million are related to homes, apartments, housing. In this direction should therefore be considered the purchase by Airbnb in 2019 of HotelTonight, a website for booking last-minute hotel rooms, for over \$ 400 million.

| Platform                           | Established in | Ads            | Geographic coverage | Guests/visits             |
|------------------------------------|----------------|----------------|---------------------|---------------------------|
| <b>P2P accommodation</b>           |                |                |                     |                           |
| Booking.com                        | 1996           | 5 millions*    | 226 countries       |                           |
| Airbnb                             | 2008           | 4,85 million   | 191 countries       | 200 million guests        |
| HomeAway (Expedia)                 | 2005           | 2 million      | 190 countries       |                           |
| TripAdvisor Rentals                | 2009           | 830.000        | 200 countries       |                           |
| Tuja                               | 2011           | 300.000        | China               |                           |
| 9flats.com                         | 2011           | 250.000        | 140 countries       |                           |
| Homestay.com                       | 2013           | 50.000         | 160 countries       | 750 thousand beds         |
| OYO Rooms                          | 2013           | 8.500          | India               | 40 million beds           |
| Omefinestay (AccorHotels)          | 2009           | 2.500          | USA, EU and AUS     |                           |
| Xiaozhu                            | 2012           | 250.000        | China               |                           |
| <b>Reciprocal accommodation</b>    |                |                |                     |                           |
| GuestToGuest                       | 2011           | 280.000        | 197 countries       |                           |
| Love Home Swap (Wyndham)           | 2009           | 100.000        | 140 countries       |                           |
| HomeExchange (di GuestToGuest)     | 1992           | 67.000         | 150 countries       | 135 thousand exchanges    |
| <b>Free accommodation Exchange</b> |                |                |                     |                           |
| Couchsurfing                       | 2004           | 400.000 hosts  | 200.000 cities      | 4 million guests per year |
| Trustroots                         | 2014           | 6.000 hosts    |                     |                           |
| WarmShowers                        | 1993           | 61.000 hosts   | 161 countries       |                           |
| BeWelcome                          | 2007           | 35.000 members |                     |                           |

Sources: Platform websites, December 2017

\* Booking.com has 27 million ads, of which 5 million classified as alternative or non-hotel accommodation.

\*\* The HomeAway portfolio include HomeAway.com, VRBO.com e VacationRentals.com

\*\*\* The TripAdvisor Rentals portfolio include FlipKey, HolidayLettings, HouseTrip, Niumba e Vacation Home Rentals.

The digital platforms for housing can thus be divided into three categories:

- P2P accommodation, where the provider, who rents the accommodation, asks for a payment and the guest pays the provider directly (as for the Homestay.com platform) or through the platform (as in Airbnb). In addition, the platform retains a transaction fee from the provider, guest or both. New platforms are also emerging in emerging economies such as the Indian OYO network which also entered the Chinese and Indonesian markets, the Xiaozhu and Tuja platform in China and other smaller platforms operating at regional and national level. Of this category of course the best known is Airbnb with 4.85 million ads in 65 thousand cities and 191 countries along with HomeAway, which also includes VRBO, which offers 2 million ads and TripAdvisor Rental with 830 thousand ads. In comparative terms, consider that the largest hotel chain in the world, the Marriott International group, has a potential offer of 1.2 million rooms;
- Reciprocal accommodation platform: The platform facilitates the exchange of temporary accommodation between two or more people and holds a commission for transaction costs. For example, HomeExchange charges \$150 for 12 months while the largest platform in this category, GuestGuest, retains 3.5% of the deposit, which is the amount that the owners pay and the platform retains until the end of the exchange of homes. Overall, it is estimated that the reciprocal platforms have a total tourist offer of 500,000 beds globally;
- Free accommodation platform: where the exchange of accommodation is without commissions and currently has about 500 thousand beds. The best-known platforms in this category are Couchsurfing and WarmShowers.

In general, hoteliers claim to have suffered loss of revenue due to the rise of housing sharing platforms. A 2015 University of Boston study<sup>60</sup> estimated that Airbnb reduced its hotel revenues on the examined market (Austin, USA) by 8-10 % between 2008 and 2014. The biggest impact was on lower priced hotels and hotels without conference facilities. But the effect is not only competitive but also urbanistic-organizational and economic-redistributive. Several studies have been conducted to understand the effects and externalities generated by the uncontrolled rise of Airbnb, and of the platforms for sharing private accommodation for a fee. The explanation of the different effects, however, requires a context premise aimed at highlighting how all the transformations of urban organizations were, in reality, already underway even before as a result of a sprawl started after the Second World War and continued until the 90s through various waves of building speculation, but also by mass tourism, low-cost flights, habits that change<sup>61</sup>. The phenomenon of short-term rents, however, has boosted and accelerated these distorting effects on the environment:

- the re-conversion of the use of housing from long-term to short-term renting and the progressive process of "hotelisation", i.e. uploading cheaper housing than hotel rooms online, not only creates unfair competition with respect to traditional accommodation structures but removes the real estate market from residents and leads to higher property prices themselves;

<sup>60</sup> Georgios Zervas et al., *The Rise of the Sharing Economy: Estimating the Impact of Airbnb on the Hotel Industry*, in *Journal of Marketing Research*, 1, 2017, 249-275.

<sup>61</sup> D'Eramo M., *Il selfie del mondo, Indagine sull'era del turismo*, Feltrinelli, 2017.

- the phenomenon of short-term rents also generates a process of gentrification or segregation<sup>62</sup> encouraging residents, especially those on low incomes, to live in areas of the city not affected by tourist flows and in any case outside the city centres and to "disneyfy" the historic centres<sup>63</sup>, the transformation of historical city centres from places of art and culture to "consumption citadels" with the aim of keeping tourist consumption close to the accommodation and thus encouraging the distance between the centre and the periphery, the desertification of historical centres<sup>64</sup> and the change of identity of the city itself<sup>65</sup>;
- the governance of city services becomes particularly difficult to plan as the identity of city centres has changed from areas of residents or long-term rents to areas of consumption for short-term rents, making it urgent for local authorities to have access to online platform databases;
- from an economic point of view, the expansion of the phenomenon of short-term rents increases inequality and the processes of concentration of wealth. As shown by some research<sup>66</sup> the initial nature of the sharing economy that seems to inspire some online platforms (e.g. Airbnb) seems to be threatened by the entry into the market of large players (brokers, real estate agencies, international economic agents) who manage increasing shares of housing on platforms for third parties. The costs of rents also show an inverse relationship with the distance from the city centre, highlighting, therefore, how the greatest profits are concentrated in the central areas, that is, where the real estate wealth is already concentrated, exacerbating, and not reducing, inequality.

Faced with the effects triggered by the growth of the phenomenon of short rents, many local governments have reacted in an attempt to put up barriers or build legislative and fiscal instruments capable of regulating the phenomenon. The different orientations mainly include the introduction of limits on the number of overnight stays (Amsterdam), the inclusion of hosts in special registers (Barcelona), limits on the conversion of accommodation from long-term to short-term rentals (Berlin), limits on the use of Airbnb in certain central areas of the city (Paris), subdivision of the urban area into areas with differentiated use of tourist licences (Barcelona), direct acquisition of buildings for rent regulation (Barcelona and Berlin) or specific forms of taxation on rents (Italy)<sup>67</sup> or by extending or raising the tourist tax (Barcelona). Faced with different requests, the Airbnb platform has proved very often collaborative, but not without tensions even bitter negotiations (think of the comparison

<sup>62</sup> Guttentag D., *Airbnb: disruptive innovation and the rise of an informal tourism accommodation sector*, in *Current Issue on Tourism*, 18, 12, 2013, 1192-1217.

<sup>63</sup> Semi G., *Tutte le città come Disneyland?*, Il Mulino, 2015.

<sup>64</sup> Mammone L., *Cultura: la desertificazione dei centri storici italiani e il fenomeno delle sponsorizzazioni dei beni culturali. A chi giova?*, in *LaRiscossa*, 2017, <http://www.lariscossa.com/2017/02/24/la-desertificazione-dei-centri-storici-italiani-ed-fenomeno-delle-sponsorizzazioni-dei-beni-culturali-cui-prodest/>

<sup>65</sup> Sans A.A., Quaglieri Domínguez A., 2016, *Unravelling Airbnb: Urban Perspectives from Barcelona*, in Russo A.P., Richards G. (eds.), *Reinventing the Local in Tourism: Producing, Consuming and Negotiating Place*, Channel View Publications, 2016, 209-228.

<sup>66</sup> Picascia S., Romano A., Teobaldi M., *The airification of cities: making sense of the impact of peer to peer short term letting on urban functions and economy*, Proceedings of the Annual Congress of the Association of European Schools of Planning, Lisbon 11-14 July 2017.

<sup>67</sup> It should be noted, however, that non-progressive taxes, such as the 21% fixed tax present in Italy, lead to a worsening of inequality by favoring the central areas and penalizing the peripheral areas.

between Airbnb and the City of Barcelona<sup>68</sup>), offering local administrations their own databases to promote the programmability of services and the control of tourist flows (as in Barcelona), collecting tourist tax (as in several Italian cities including Bologna) or automating the limits of rent per host in accordance with local regulations (London). The attention to the requests of local administrations shown by the platform is a symptom of a policy that is attentive to reputation, also in view of the forthcoming listing on the stock exchange. In 2018, some of the main European cities<sup>69</sup> have joined forces to create a network to request the European Union to go beyond the pressure already exerted by the European Commission on Airbnb for greater consumer protection<sup>70</sup> (price transparency and elimination of unfair terms) and to encourage the American multinational to share its data in order to facilitate the planning of cities. Along with pressure from cities, several digital initiatives to make the platform and its data on temporary rentals more accessible are flourishing on the net, among which Inside Airbnb stands out (<http://insideairbnb.com/>) created in 2014 by Australian photojournalist Murray Cox to map, monitor and critically review Airbnb ads.

## 7.2. Platforms and Digitalisation in the Tourism Supply Chain: Some Experiences.

However, the tourism supply chain is not limited to accommodation but includes a range of diversified services and activities that are also under pressure from the processes of digitalisation and transformation of the platform economy:

- TripAdvisor was founded by Stephen Kaufer in February 2000 and was purchased by Sebastian Mendoza in 2004. The original financing was obtained from Flagship Ventures, Paletto Group and private investors. The site collects the evaluations written by the users of the structures; each review is evaluated by the staff that judges if it is consistent with the guidelines of the site; otherwise it is not published. Today its community reaches 455 million users for an amount of about 570 million contributions per minute, according to what reported by the site itself. The App intervenes in the supplier-customer relationship. For the supplier it represents an important showcase and at the same time it is an indicator of the "brand reputation" of the structure/service. For the customer, travel advice. Reviews, however, can be extremely subjective and personal, and can confuse the future consumer or even mislead him. Finally, the "review" tool also lends itself to being a sort of "marketing lever", which legitimizes the customer to demand special treatment under penalty of bad review. If on the one hand TripAdvisor is an alternative to travel agencies, as we have seen above, with regard to advice on destinations and services and accommodation facilities, on the other hand has also fed a market aimed at enhancing the reputation of tourist facilities and services with the creation of dedicated agencies;

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<sup>68</sup><http://temi.repubblica.it/micromega-online/la-citta-come-bene-comune-cosi-barcellona-contrasta-il-regno-di-airbnb/>

<sup>69</sup> Among which Amsterdam, Barcellona, Vienna, Bruxelles, Berlino, Parigi, Bordeaux, Valencia, Monaco and recently also Bologna.

<sup>70</sup> [https://europa.eu/rapid/press-release\\_IP-18-4453\\_it.htm](https://europa.eu/rapid/press-release_IP-18-4453_it.htm)

- Expedia is an online travel agency of Expedia Group for booking trips, hotels, and holiday packages. Launched in 1996 as a Microsoft Division and formally launched in 2011 following the acquisition by Usa Network Inc. Expedia is one of the world's leading online travel agencies and offers access to more than 435,000 bookable hotels worldwide (including luxury hotels and major chains and over 218,000 in China through eLong), more than 400 airlines and a wide range of car rentals and on-site activities;
- E dreams is an online travel agency based in Madrid, founded in 2000 it allows you to identify and choose flights, hotels, cars, package holidays and insurance working with over 450 airlines, 855 thousand hotels in over 40 thousand different destinations worldwide. In 2011, edreams is the first online travel agency in Europe with over 14 million customers and a value of 3.9 billion euros in booking volume. In 2014, edreams was listed on the Spanish stock exchange in Madrid and in 2015 performance grew to 4.5 billion euros in booking volume for a total of 10.7 million online purchases, growing in 2017 to 11.7 million (+3%). E dreams is part of a competitive logic for offline travel agencies and in 2011 it was fined in Italy, together with Expedia, for unfair business practices;
- Several apps and websites are dedicated to tourist guides such as Freetour.com and Paesionline.it, where you can find tourist information, multimedia travel guides and diaries, events and useful tips for travel (destinations, hotels, flights). In Paesionline.it you can browse through the pages dedicated to about 10 thousand destinations in the world: guides, stories, maps and videos are available. Established in 2001, the site is also available in English, French, Spanish, German and Portuguese, and available in apps for Android and iOS; it has about 2 million visits per month, 650 thousand registered users, over 864 thousand fans on Facebook and the page is followed by 851 thousand people. Directly from their website you can assess the strength of the brand in the social world and online in general, with particular attention to the target: almost 60% of users are over 45 years. Travel portals, from promotional to booking ones, have replaced the physical location of the travel agency. And with it also the staff. They have replaced the paper guides, some of which are still in use, but have collected the information in a few large containers that can handle it. They have intercepted the needs of customers: always little time to choose, desire for quick and simple bookings, certainty of the result among thousands of options. To satisfy many tourists, this is one of the solutions available. For tailor-made travel, on the other hand, the direct relationship with the trusted travel agent continues to be preferred;
- Born in 2016 in Florence, Keesy is an app that allows you to check in and check out online without spatial and temporal constraints. It is a flexible, easy and automatic way to check in and check out in extra-hotel facilities, from B&Bs to room rentals, to home sharing rooms. It's a depersonalized service, especially convenient for the owners of the accommodation, who entrust the Keesy Point with the keys to their apartment. The Keesy Point is in fact a physical place, where tourists come and go from and to every place, supported 24 hours a day and 7 days a week by an online operator. The result is an automated reception for a type of accommodation that does not have reception, concentrating in a limited place access to thousands of beds,

wherever scattered. At the moment the app is confined to some Italian cities and for non-hotel facilities. Future scenarios would allow us to glimpse the application also for traditional accommodation facilities replacing, in synergy with Pepper robots, the role of the reception;

- Tested in 2017 and then applied in all the Best Western Chain Hotels in Italy (160 hotels), Best Friend, the Best Western chatbot is a service that connects the user to his hotel and a tool for support and automatic response to customer questions, also able to sell additional services and perform check-in directly. A booked customer can then check in, request information on activities and events in the area, thanks to the partnership with Musement - another tourist app - have a personalized support from the bot, which is able to manage, as reported by the same hotel chain, 80% of requests in total autonomy. It is integrated with the Messenger Facebook platform: the service is therefore available and immediate 24 hours a day, thanks to the fact that Messenger has an interface for the direct exchange of data between the web user and the online service;
- Classpass Inc. founded in New York in 2013 provides access to gyms, yoga centers, fitness, boxing and health centers with a single subscription that promotes the ability to continue physical activity even during tourist trips. In 2017, the start-up was valued at €470 million with a total of online bookings of more than €45 million per year;
- Packing Pro is a more widely used app for those who want to prepare their suitcase in a "scientific" way: from a simple system for compiling the list of items to take on the trip, Packing Pro has become a very precise tool that allows, for example, to calculate the weight of baggage to avoid paying extra costs at the time of boarding. Other functions of Packing Pro include: management of baggage lists, object databases, compilation of automatic lists based on the type of participants and the destination, sharing via iTunes and email and the possibility of customizing the design;
- Monument Tracker, application that sets the itinerary, choosing the monuments and attractions to visit. Monument Tracker proposes quizzes to learn more about the city you are visiting and, when the user is near an interesting monument, sends push notifications that provide stories, anecdotes and curiosities;
- Musement, an Italian app born in 2013 and acquired in 2018 by Tui Group, European leader in tourism and leisure. Musement selects the best activities for every type of tourist proposing to view and book panoramic tours, trekking, diving, balloon trips, food and wine activities in more than 30 countries around the world. The company is based in Milan and its main competitors are Viator (acquired by TripAdvisor), GetYourGuide, in Berlin, Klook, based in Hong Kong, and Peek.com, based in the United States.

### III. Conclusions.

#### 8. Gig Economy and Industrial Relations.

The relationship between Gig Economy and industrial relations is strictly dependent on the very nature of the theoretical assumption that underlies the definition of digital platform, namely the theory of transaction costs (Coase, Williamson) in which the conceptual duality of hierarchy (system of rules and mechanisms of operation of an economic entity such as the company) and market (freedom of initiative of individuals) is constantly oriented to the progressive decrease of transaction costs, or all those costs not strictly productive but related to the organization of an activity and caused mainly by information asymmetries, limited rationality and opportunism (moral hazard). Digital platforms, as mentioned above, are placed, in the framework of this theoretical approach, in a hybrid space of "hierarchy" and "market" when they offer intermediation services through which the transaction takes shape. The theoretical justification that limits a principle of hierarchical subordination between platform and platform workers appears "theoretically founded" but does not seem to strike at the heart of the problem<sup>71</sup>: "*How does a platform manage to bring supply and demand together efficiently?*" If in asset platforms the network effect is the main guarantee of transaction efficiency, in platform works, generally understood, the transaction is efficient if the availability of the workforce is guaranteed. It follows that the "platform" company, understood as a hierarchical unit, recovers the organizational and control tools of a hetero-direction and hetero-organization Tayloristic approach, enhancing them through the digital tool: "the "hierarchy" elegantly leaves by the "front door" of the contract, returns from the window with the hetero-algorithmic and remote determination". And the "market" generated by the platform is asymmetrical because it is hierarchized in terms of the relationship between the platform and gig workers".

If, therefore, one leaves the formality of the legal status and enters the dimension of work organization, digital works are not so far from workers in "hierarchical" enterprises, since both are subject to the pressure of making more flexible and optimizing labour costs. Industrial relations, therefore, meet the main challenges in facing a new phase of capitalism, with new invisible formal subjects (algorithms) and with new strategies of alliances. But, at the same time, they encounter a field of confrontation that is certainly insidious but not foreign to the contractual life of a trade union organization. Topics of a trade-union nature, such as autonomy, control and organisation, are re-proposed in new ways, but for the management of which there is no lack of experience and contractual instruments to draw on.

Moreover, the development of industrial relations in the platform economy is becoming increasingly urgent as a means of countering an increasingly aggressive and growing form of capitalism in which, unlike past forms, the process of accumulation is continuous through the extraction of constant value in real time from the very life of human beings. It is the capitalism of surveillance<sup>72</sup>. Its purpose is to transform human experience into behavioural surplus by promoting its commodification as well as work, land and currency according to

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<sup>71</sup> Cattero B., (8), 23-32.

<sup>72</sup> Zuboff S., *The Age of Surveillance Capitalism. The fight for a human future at the new frontier of power*, Profile Books Ltd, 2019.

Polany's theory of the Great Transformation. Digital platforms are an extraordinary tool for the transformation of the individual into human capital without, however, an awareness of the value assumed by that capital on the market and of the process of continuous expropriation of the individual. Like a parasite, this economy occupies every behavioural space of the individual and transforms its nature. It is not only an exploitation practised by an external power, but it is the unconscious adhesion of the exploited to the exploiter. Industrial relations would therefore serve to restore an identity and a negotiating role to the parties and an instrument for balancing powers and for a re-appropriation of the individual's conscience with respect to the processes of capitalist accumulation.

The literature and the various interviews conducted on the profiles of the gig workers confirm that the figures most easily organized in terms of representation are those who perform online work in person to determine the platform (on-location platform-determined work)<sup>73</sup>. As we have already seen, among them the sense of identity of belonging to a community, the collaborative relationship and the sense of sharing a condition of precariousness are more evident. Other types of gig workers (such as domestic services or cloudworkers) do not show a high propensity for representation, whether union or self-organized, precisely because of the very characteristics of their work: peer-to-peer competition, job isolation and professional individualism.

Compared to the economy of platforms, trade unions have reacted at different speeds, with different new and traditional tools and with different timeliness depending, among other things, on the propensity to trade union innovation and the degree of interaction between the sphere of industrial relations, judicial action, legislation and, more generally, with the ability to build relationships and alliances with new actors (self-organized workers' representatives and associations) at a territorial or national level.

In general, a number of trends can be observed:

in the face of the lack of organic legislation on the platform system, collective bargaining has moved towards proposing reference standards and protecting the working conditions of platform workers. Although they are not yet widely disseminated, there are contractual experiments dedicated to platform workers in several countries (Italy, Spain, Sweden, Denmark, Switzerland), emerging from the legal blockade on employment status (autonomy or subordination) in which legislation very often gets stuck;

- new actors enter the arena of industrial relations, establishing a conflicting or collaborative relationship with traditional trade union organisations. In particular, autonomous and self-organising forms of worker representation are developing, a phenomenon with which traditional trade unions will necessarily have to deal in a collaborative and not antagonistic logic;

- all trade unions show a certain dynamism in trying to intercept the workers of the platforms, but also the trade unions have a general public debate unbalanced on the forms of online work "on location" with public visibility: the theme of food delivery is mainly at the heart of the trade union commitment, when, in reality, cloud work and domestic work are the most widespread forms of online work;

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<sup>73</sup> Kilhoffer Z., Lenaerts K., Beblavy M., *The platform economy and industrial relations*, in *CEPS Research Report n. 2017-02*, 2017.

- if trade unions, generally, are still not able to make a common stand because of internal frictions between sectoral categories (as in the case of the Netherlands) or external harshness with new forms of worker representation (as often happens in Spain or Italy), online platforms try to build a compact front by meeting in associations (as in Italy) or by lobbying against public actors.

#### Austria

Despite the fact that, from a legal point of view, the regulation of the structures of employee representation provides for a constraint of subordination, Foodora has recognized as a representative subject the works council set up spontaneously by its freelance collaborators. Some research studies show the willingness of the Chamber of Commerce, an institutional body whose bargaining has an *erga-omnes* sectoral extension, to begin a path to a sectoral collective bargaining for work in platforms, and specifically in food-delivery.

In November 2018, the Austrian confederal trade union (ÖGB) placed at the centre of the contractual debate the possibility of introducing also in Austria the mechanism provided for in the Danish contract in the Hilfr platform, i.e. the transition from self-employment to employee, with the consequent application of the national collective agreement, once more than 100 hours of work for a platform.

#### Belgium

In January 2019, the CNE trade union, a member of the national trade union confederation CSC, set up experimental pathways of organizing self-employed workers of the platforms. Apart from this and a few other isolated initiatives, trade union organisations do not seem to have developed clear strategies for organising and representing platform workers. This difficulty is undoubtedly linked to the presence of the cooperative in the digital world. [SMART](#) which offers services and social protection to freelance and platform workers and whose role is often interpreted, even in the Italian debate, as a "third way" in the combination of employment law and self-employment.

#### France

First country to have a labour law in online platforms (2016). The law (the so-called El Khmori Act) also regulates and recognises the three fundamental collective rights of platform workers: the right to strike, the right to association and the right to collective bargaining.

There are already experiences of platform workers' unions such as those of the Bordeaux riders, a local union affiliated with the CGT transport union. Although the law provides a point of reference for rebuilding relations between the trade union and platform workers, it does not always guarantee the desired result. The unionized workers tried to open a bargaining table with Uber, but he refused the confrontation on the pretext that the negotiating delegation from the world of drivers was not representative.

Trade unions were generally oriented towards providing services to platform workers. In this regard, one of the most important initiatives concerns the trade union platform developed by the CGDT in 2016 for services and advice to self-employed workers (against a payment of 1% of turnover).

#### Italia

Although several proposals have been presented in Parliament at least in the last three governments (Renzi, Gentiloni, Conte), only in 2019 the new Government (the so called Conti II) introduced law provisions for platform delivery workers establishing a presumption of 'quasi-subordinate' work and introducing a set of labour and social security rights for self-employed platform delivery workers whose core aspects are not in force yet (Act 128/2019), with a view of regulating a wide and varied contractual phenomenology: Deliveroo prefers to hire through casual or self-employment, Foodora through para-subordination, and Just Eat through service contract to a third company. In the absence of initial and systematic national legislation, the Lazio Region (and initially also the Piedmont Region) have produced regional laws regulating digital workers, although they do not have specific expertise.

In terms of industrial relations, 5 are the elements of interest:

- the budding of self-organized worker representatives among riders (Riders Unions) with local bodies strongly interconnected through the digital network. Several public protests were self-organized by the riders' workers between 2016 and 2018 (Turin, Milan and Bologna, the main cities of mobilizations) turning the media spotlight on their condition;
- the Charter of Fundamental Rights of Digital Workers of Bologna (2018), signed by the self-organized unions, the Municipality of Bologna, some food-delivery platforms and the local unions (Cgil-Cisl-Uil). Territorial agreement that introduces minimum wage standards, linking them to the sectoral, information and insurance CCNL
- In 2018, also as a reaction to the protagonism of self-organized movements, the CCNL for transport and logistics signed by CGIL, CISL and UIL introduces and regulates the figure of the "rider";
- In 2019, LaConsegna (a food-delivery company) of Florence signed a company agreement with CGIL, CISL and UIL in which the subordination of the riders is recognized and the consequent application of the national contract (Transport and Logistics). The agreement aims to be a contractual reference point for the entire regional territory (Tuscany).
- In July 2018, the main digital platforms (Deliveroo, Glovo, JustEat, Uber Eats, Social Food) formed Assodelivery, the Federation of Platforms, and presented a Charter of the values of food-delivery in which they reaffirm the formal autonomy of the riders and generally commit themselves to ensuring an adequate and fair wage.

#### The Netherlands

Despite the lack of a tradition of collective actions - according to a restrictive jurisprudence of the Dutch Supreme Court - one day of collective action was organized against Deliveroo, however isolated initiative. In this regard, it should be noted that the company has in any case proceeded to the transformation of the form of work from subordinate and autonomous and has created a "Riders Forum" to inform and consult the riders, thus placing an alternative tool, but outside the sphere of industrial relations, to the works council.

Among the riders, representatives of the self-organized workers "Riders Union" have been developed, in particular in Deliveroo, but supported by the FNV union.

In the catering service, the FNV catering federation has entered into collective bargaining with Temper, a freelancer platform, which has led to the elimination of the commission paid to the platform, thus increasing the income of workers. The contractual path has opened up an internal conflict within the trade union, as the FNV Flex, which represents temporary and administered workers, considers Temper not as a platform but as a labour administration agency to which the dedicated national contract should be applied.

#### Spain

The main experiences of industrial relations in the economy of the platforms are:

- The development of forms of worker representation self-organized as in the case of RidersXDerechos, or a platform for riders born as contractual partner of Deliveroo, in Uber or Cabify. In the case of Deliveroo, however, it should be noted that the same company has not recognized the platform as a contractual subject and has, indeed, disconnected the main promoters.
- The relationship with the traditional trade union is contradictory: in the case of Deliveroo no support was sought from the more structured trade union organisations while in smaller cases alliances were sought.
- There is a strong capacity to network self-organised representations at European level.
- The more traditional trade unions have adopted digital information tools for digital workers - such as the portal launched by UGT in 2017 as an information and participation tool - and have co-supported lawsuits and activated labour inspectors using the so-called "colectivo conflict process" (a sort of collective lawsuit that determines future jurisprudence) against Glovo in 2018.
- The most significant contractual experience is that of the Intersectoral Agreement of Catalonia (AIC) 2018-2020, signed by the social partners most representative of the territory. The agreement

includes a section dedicated to the workers of the platforms, which establishes that in terms of work the applicable law is that of the country in which the service is provided and recognizes a commitment to study ways to promote the collective rights of gig workers.

- In 2018 Deliveroo and the Spanish Association of Riders (ASO) signed a first "professional interest agreement", a defensive agreement in which two key concepts are re-proposed - platforms are not employers and riders are not employees - to exclude platforms from the perimeter of collective bargaining

#### Switzerland

In February 2019, an agreement was signed between Syndicon, the Swiss ICT trade union, and its employer counterpart (SML, Swissmessengerlogistic) for city riders and couriers recognising minimum wages, night and Sunday allowances, working hours, sickness and other social protection schemes (including paternity leave). The agreement covers 600 workers but is not implemented by Uber Eat and Notime, leading delivery platforms.

#### Germany

The discussion that began in 2015 with the publication of the Green Paper on Work 4.0 has also affected gig workers, or rather cloudworkers, has not found in the White Paper, published in 2016 after the process of consultation with all stakeholders, a continuation as it is not considered the phenomenon of primary urgency.

On the other hand, trade unions and primarily Ver.di and IG Metall have developed strategies for inclusive bargaining, dialogue and dedicated services for gig workers. In particular, together with other European trade unions, the "faircrowdwork" platform was developed in which, in addition to information and advice for cloud workers, a platform evaluation system based on the assessment of registered workers was built.

Of particular interest was the case of Delivery Hero, which, with more than 2000 employees, fell within the scope of the German Codetermination Act. First Delivery Hero rejects its application but is then forced to introduce it after a legal action. It is then transformed into Societaes Europea (SE) by introducing a European supervisory committee of six members, three of whom are members of the works council, one of whom is a rider.

Another element of interest is the establishment of a works council in Deliveroo as the final trait of a claim process that saw the initial use of Whatsapp as a tool for collective communication, the support of the NGG food union and a Facebook campaign entitled "Delivering at the limits". Deliveroo, however, has transformed workers from employees to self-employed, who do not have the right to set up a works council.

#### Denmark

There are two collective agreements of major interest in the area of platforms:

- The Hilfr cleaning platform and trade union 3F concluded an agreement in 2018 which introduced a minimum wage (€19 per hour), pension contributions, paid holidays and sickness and above all a mechanism for switching from self-employed to employed after exceeding 100 hours of work for a platform;

- A Danish interpreter platform Voocali and the trade union HK have concluded a collective agreement which regulates not only pay and working conditions for employees but also certain organisational aspects of the self-employed. The agreement introduces a minimum hourly wage, guaranteed payment for cancelled assignments, transport allowances, and an obligation for the platform to provide objective justifications for the possible exclusion of a worker from the platform.

The trade union attitude towards the e-commerce phenomenon is still uncertain<sup>74</sup>. On the one hand, management often uses the spectre of e-commerce competition to reduce working

<sup>74</sup> Spatari M., (30).

conditions and, on the other hand, some studies show that the retail crisis stems from factors other than the competitive push of e-commerce and in particular from:

- expansionary pressures beyond the threshold of economic sustainability
- Private Equity, which imposes an excessive level of debt from companies
- Cultural resistance to change and investment in innovation

Despite the downward challenges that *e-commerce* giants are launching, online sales still remain a marginal mode of sales that does not exceed 10% of total sales volumes in EU countries, with a few exceptions including the UK and Denmark. The particular contractual difficulty encountered by European trade unions in comparing contracts with individual e-commerce platforms or in the omni-channel processes of commercial operators consists of:

- the ability to rebuild, under the contractual sphere, a supply chain that is very dispersed in terms of workers and value generation. The attempt by the Belgian trade union ACV Plus to map the value chain of large commercial operators and propose sector-specific standards to be met with resistance from management and the efforts of the Dutch trade union FNV to organise the bol.com e-commerce platform clashes with strategies to outsource warehousing activities (to Ingram Micro) and customer service (to Teleperformance);
- in contrasting the growing cultural drift oriented towards the loyalty of workers by pure players, such as Amazon, whose expansive strategies naturally imply the contraction of working conditions. The cooperative dimension is used to create a sense of identity of belonging (in Amazon workers are "associates") to maximize flexibility and gather maximum availability.

Again, the Swedish trade union (in this case Handels and Unionen) stands out because it takes a non-biased negative view of the phenomenon of e-commerce. Many of the small e-commerce companies in Sweden are organised or open to trade union membership: the Handels trade union has recently concluded an organising campaign by unionising 3500 people and signing 250 collective agreements. In addition, given the environmental impact of e-commerce, the Swedish commerce trade union together with its employers (Svenk Handel) have allocated an annual budget of €1.9 million to support research projects on the relationship between commerce, distribution and e-commerce.

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