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# **The digital transformation of work: the rise of the Human Cloud in the Sharing Economy framework**

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## **ABSTRACT**

The introduction of Information and Communication Technologies along with the spread of the Internet has led to a digital transformation of the world, offering people a whole new set of opportunities, among them the Sharing Economy: a phenomenon allowing people to trade assets through platforms enabling a better coordination with strangers. The work environment has also experienced a great change, going from the old, classic agency-based model to the innovative Human-Cloud model, a system of online platforms facilitating the match between workers and hirers with no physical or time limitations. However, precisely the novelty of the phenomenon has resulted in regulatory issues and concerns never treated before whose solution is yet to be found.



# INTRODUCTION

The objective of the thesis is to demonstrate how the nature of employment has been changing supported by the development of new innovative technologies setting individuals free from any physical, geographical or time limitations. Nowadays employers and workers have achieved a level of freedom and flexibility never seen before but this comes with many drawbacks that might make one think of whether the new work panorama is in practice truly beneficial when considering the masterplan.

The course of the elaboration develops in four chapters that will conduct the reader on a path of profound exploration, each chapter will go deeper into the analysis as a zoom focusing further and further. The first chapter presents the situation from the most general perspective, it will analyze how the working environment has been changing, highlighting a shift of the workforce from the industry to the service sector where knowledge-based activities are empowered by the internet and the novel Information and Communication Technologies. The second chapter confronts the topic of the sharing economy, which is the point of contact between the offline and the online world, its strength lies upon the interconnection enabled by the novel, innovative technologies. Sharing economy's drivers, characteristics, features, sectors, regulatory issues will be analyzed in order to offer a perspective the most comprehensive possible. The lens will move deeper into the virtual work panorama in chapter three, the latter will examine one of the principle sector of the sharing economy, moving from the simplistic concept of online staffing to the more complex of Human Cloud. The subject of the chapter will be online platforms offering their own infrastructures to facilitate the matching between virtual workers looking for a job and clients who need to have work done; different models of platforms will be deconstructed in their key elements in order to understand under which circumstances they can be exploited to have a beneficial outcome for the interested parties. Ultimately the forth chapter will focus on how the conditions of workers have been affected by the proliferation of non-traditional work arrangements,

leading to new regulatory, legal and public policies concerns. The attractiveness factors of virtual work are confronted with relative drawbacks, providing the opportunity for the development of possible solutions aiming to create a fairer and dignified framework.

The thesis will use a theoretical approach sustained by the elaboration of practical data inferred by multiple surveys and the study of a brand-new index designed to capture the human cloud distinguishing impact. Pragmatic examples are gathered by true, operative human cloud platforms, in particular the case study of the Italian platform AddLance is used as a model to see the mode of operation.

# CHAPTER 1 - THE NATURE OF EMPLOYMENT

The first chapter of this elaborate is going to analyze how the working environment has been changing since the 1980s, emphasizing the general shift of the workforce from physical-output sectors such the industry sector towards knowledge-based ones where inputs and outputs are mainly information, whose transmission and codification are sustained by the birth and development of the internet and Information and Communication Technologies (ICTs).

## 1.1. Transformation of the nature of employment

For a brief history about how the nature of employment has been transforming, the starting point is Katherine Van Wezel Stone's book "*From Widget to Digits*" (2004) in which the author examines the American working environment taking into consideration a time interval of almost thirty years, starting from the 1970s until the twenty-first century.

The 1970s are considered as the period when employment practices began to change, one of the first signals had been the rapid growth in the rate of temporary employments, with the consequent increase of activities provided by temporary employment agencies. Earlier the above-mentioned were of a limited scope, their area of action were generally short-term secretarial helps, day laborers and nursing services, then something changed: corporations started to prefer outside contractors over in-house performances also for core firm positions such as legal services, computer programming, inventory control and human resources.

By 1989 the number of people working for temporary agencies was about one million, the double compared to data from the 1980, the trend had been continuing all over the nineties reaching in 2001 the figure of 2 million workers<sup>1</sup>.

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<sup>1</sup> U.S. DEPARTMENT OF LABOR; Bureau of Labor Statistics; *Contingent and Alternative Employment Arrangements February 2001*, at [http://www.bls.gov/news.release/history/conemp\\_05242001.txt](http://www.bls.gov/news.release/history/conemp_05242001.txt), May 2001;

Later the situation seemed to be stabilized, in fact contingent workers in 2001 accounted for 1,7 to 4<sup>2</sup> percent of total employment (depending on which of the alternative measures is considered), while in 2005<sup>3</sup> they accounted either for the 1,9% or the 4,3%, corresponding to 5,7 million people in the case of the highest measure<sup>4</sup>.

## **1.2. Contingent work: a definition from the Bureau of Labor Statistics**

The expression “**contingent work**” has a relevant role, hence it is important provide a proper definition, contingent workers are defined by the Bureau of Labor Statistics as “*those who do not have an implicit or explicit contract for ongoing employment. Persons who do not expect to continue in their jobs for personal reasons such as retirement or returning to school are not considered contingent workers, provided that they would have the option of continuing in the job were it not for these reasons*”.

As seen in the previous paragraph, the estimated percentage of contingent workers in a given year can vary significantly accordingly to which of the three alternative measures are considered, the first one comprehends “*Wage and salary workers who expect their jobs will last for an additional year or less and who had worked at their jobs for 1 year or less*”, in this case contingency is related to the expected duration and tenure of the employment with the temporary agency or contract firm and not with the specific client to whom employees were actually assigned, that is one of the differences to be found with the second possible definition which includes “*the self-employed and independent contractors who expect their employment to last for an additional year or less and who had worked at their jobs (or been self-employed) for 1 year or less*” contingency in this case is related to the expected duration and tenure with the particular client to whom they have been

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<sup>2</sup> **CARLSON R, SCOTT M.**, *Employment Law, Aspen Casebook Series*, Third edition, Wolters Kluwer Law & Business in New York, 2013;

<sup>3</sup> **U.S. DEPARTMENT OF LABOR**, “*Contingent and Alternative Employment Arrangements, February 2005*”, at [www.bls.gov/news.release/pdf/conemp.pdf](http://www.bls.gov/news.release/pdf/conemp.pdf), July 2005;

<sup>4</sup> Definition and alternative estimates of contingent workers will be explained in the following paragraph;

assigned. The last alternative is the most comprehensive one, involving all the “*workers who do not expect their jobs to last*”.

### **1.3. Contingent work from the employees’ perspective**

From the employees’ perspective a contingent job presents many disadvantages because they suffer from a limited access to benefits simultaneously bearing all the risks, however the intrinsic flexibility may be an advantage both from the worker’s point of view and the organizational one. Employers benefit from the ability to choose both the type and the amount of resources required on time, they will have an immediate access to abilities not preset in-house at the same time saving costs in benefits, taxes and in long-term compensation costs. However from the other side, the usage of contingent work may be of obstacle for the corporate overall morale and culture, preventing the construction of loyalty towards the employer and the overall company.

Since the 1970s there has been an increase not only in people working for temporary agencies, but in what is generally called “*atypical employment relationship*”<sup>5</sup> including part-time work, contract work, independent contracting and on-call work, the gaining of a significant position in the labor market by the named category shows that a real transformation in the world of employment is happening, the basis for a revolution were laid. Previously the main characteristics of the work environment were the stability and the longevity of the job, the system was characterized by vertically structured promotions to be achieved throughout a long-term career leading to rising wages and predicable, almost certain, advancement opportunities and loyalty and continued employment were rewarded with proportional benefits. A typical example is Ford Motor Company, which taking inspiration from the Tayloristic concept of assembly lines and social welfare policies, wanted to have a stable and loyal workforce promising increasing higher salaries. The aim for workers was to achieve a job security all life-long.

However in particular since the mid ‘80s because of downsizing or restructuring

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<sup>5</sup> STONE K. V. W., *From Widgets to Digits: Employment Regulation for the Changing Workplace*, p.69;

employers begun not to be willing anymore to ensure long-term employment commitment, leading to a more precarious system, lacking job security.

#### **1.4. A computer revolution**

In the First and in the Second Industrial Revolution the focus was on the production of physical goods leading in the end to the creation of the assembly line model and mass production, one of the main goals was in fact the standardization of production in order to increase the outputs dramatically, as Henry Ford said: “*Any customer can have a car painted any color that he wants so long as it is black*”<sup>6</sup>.

Eventually the key-players, directly concerned with the transformations in the working environment, were the “**blue-collars**” workers which can be identified as people working in the manufacturing sector and engaged in the production of physical products, not only the way they had to perform their job had changed but there were also consequences in their private life because a process of urbanization had started eventually leading to relevant improvements in living standards.

Then in the period going from the mid to the end of the twentieth century computers and the internet were born and immediately started to gain relevance both in the personal life of people and in the working environment, this is defined as “*Digital Era*”.

There is a shift from a manufacturing-based economy to a knowledge-based type, as a consequence even the idea of work is transformed, more emphasis is given to knowledge, training and skills. Stability and longevity are substituted by flexibility and versatility, jobs have a shorter-term tenure and advancements have a horizontal orientation rather than a vertical one therefore organizations became flatter.

The core element of the so-called “**Computer Revolution**” are Information and Communication Technologies (ICTs) a term that has been used by academic researchers

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<sup>6</sup> CROWTHER S., FORD, HENRY, *My Life and Work*, Garden City Publishing Company, Inc, Chapter IV, p. 71, 1922;

since the 1980s (Mansell, Melody, Richards, 1986) “it refers to technologies that provide access to information through telecommunications”, they include technologies such as internet, cellular phones, computers and other communication mediums. For what concern workers they are required to be more creative, in the hiring process the focus is on expertise and knowledge in fact employment is often revolved around a particular project.

Since 1980 there has been an acceleration on the demand for “**white-collars**” workers that are skilled or highly skilled, such as managers, engineers, designers and other types of administrative and professional jobs, all belonging to the service sector rather than the industrial one. Figure 1<sup>7</sup> in the following page, since the focus has been on the United States working environment, presents a comparison between data from the manufacturing and service sectors in the U.S.A. in the period 1970-2012, findings are endorsing the theory of the shift towards a service-oriented working environment, in fact the percentage of people employed in the manufacturing sector has been experiencing a drop since the ‘70s, if in 1970 the percentage was of the 26,4 by the year 1990 it had already decreased of the 10%, reaching the minimum value in 2010 with as little as a 10,1% representing about 6,5 millions people.

The data decrease is rather smooth when considering two subsequent years however it is quite dramatic with a long-term horizon, yet there are some sudden drops registered, in particular related to spans of time corresponding to recession periods which are underlined in black (1970-1971, 1974-1975, 1980, 1982-1983, 1990-1991, 2001-2002, 2008-2009)<sup>8</sup>.

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<sup>7</sup> Source **U.S. DEPARTMENT OF LABOR**, Bureau of Labor Statistics, *International Labor Comparison: International Comparisons of Annual Labor Force Statistics, 1970-2012*, at <https://www.bls.gov/fls/flscomparelf.htm>, July 2013 and **INTERNATIONAL LABOUR ORGANIZATION**, ILOSTAT database, *Employment in services (% of total employment) (modeled ILO estimate)*, at [https://data.worldbank.org/indicator/SL.SRV.EMPL.ZS?end=2017&start=1991&view=chart&year=2017&year\\_low\\_desc=false](https://data.worldbank.org/indicator/SL.SRV.EMPL.ZS?end=2017&start=1991&view=chart&year=2017&year_low_desc=false), 2017;

<sup>8</sup> **THE NATIONAL BUREAU OF ECONOMIC RESEARCH**, *US Business Cycle Expansions and Contractions*, at <http://www.nber.org/cycles/cyclesmain.html>, 2010;

The decrease in the number of employees in the manufacturing sector coincides with a rise of the percentage of people employed in services, in the time interval going from 1991 to 2017 the growth has been of the 10%, rising from the 71% to the 81%.

*Comparison between employment in the service and manufacturing sectors in the United States*

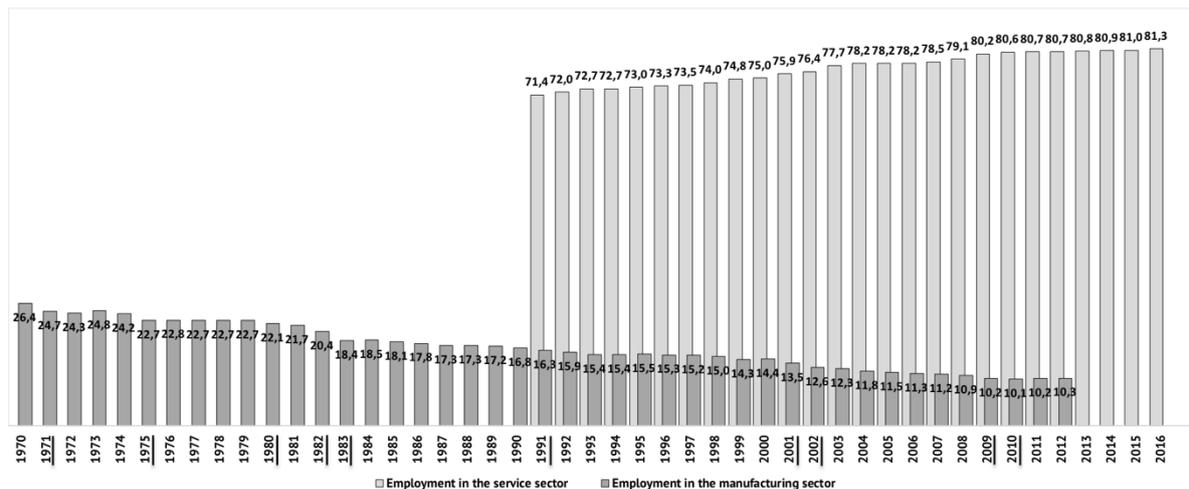


Figure 1: Comparison between employment in the service and manufacturing sectors in the United States as percentages of the total workforce

The image of the overall working environment in the United States is given by Figure 2<sup>9</sup> which covers a time-interval of about four decades, in the Y-axis there is time while the X-axis measures the percentage covered by each of the sectors, they are divided in three categories:

- **Agricultural sector** which includes agriculture, forestry, hunting and fishing;
- **Industrial sector** which includes manufacturing, mining and construction<sup>10</sup>;
- **Service sector** which includes transportation, communication, public utilities, trade, finance, public administration, private household services and others.

<sup>9</sup> Source: U.S. DEPARTMENT OF LABOR, Bureau of Labor Statistics, “*International Labor Comparison: International Comparisons of Annual Labor Force Statistics, 1970-2012*”, at <https://www.bls.gov/fls/flscomparelf.htm>, July 2013;

<sup>10</sup> Data of Figure 2 for the manufacturing sector should be comprised in the Industry sector but I decided to separate them in order to highlight the proportion the manufacturing sector compared to the overall Industrial system, in the following graphics it will not be present;

Percentage of employment by sector in the United States

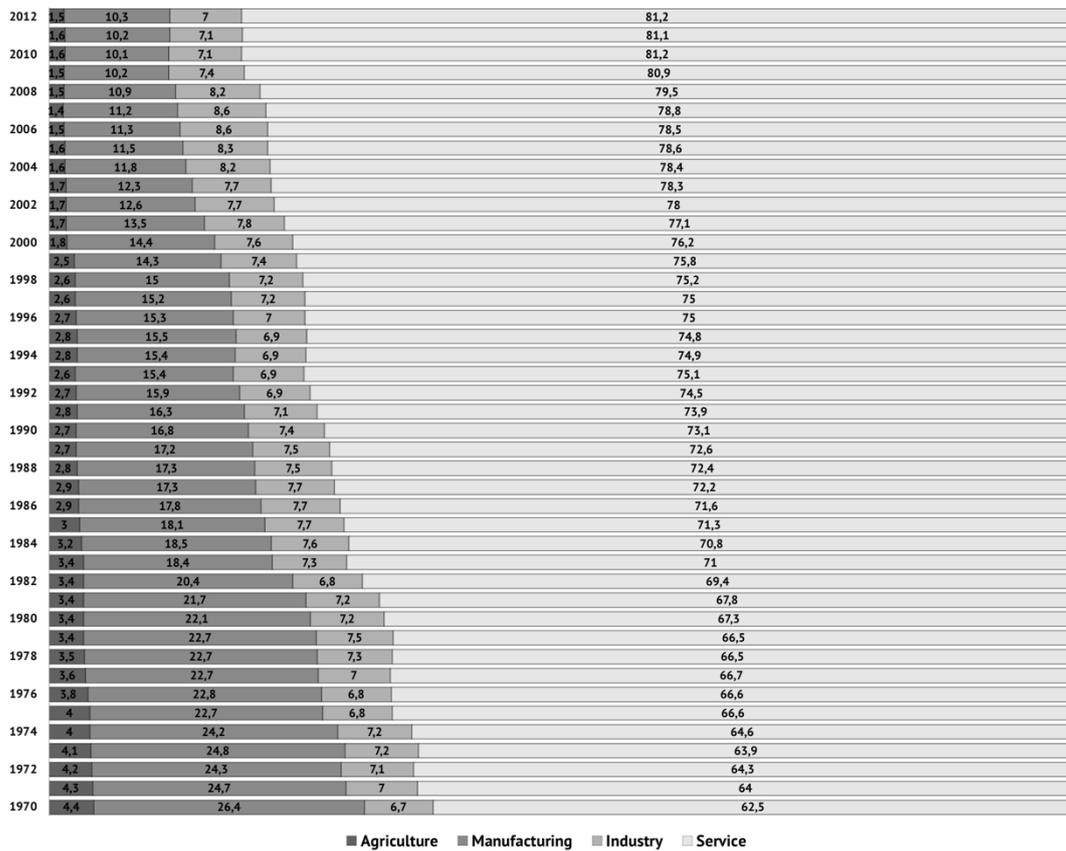


Figure 2: Employment by sectors in the United States as percentage of the total workforce

Prima facie there is a primacy of the service sector over all the others, dominance that augments with time at the detriment of the industry and agriculture sectors.

The conclusion is that people in the U.S. are more and more employed in the service-area confirming the orientation towards an increasing demand for “white-collars” rather than “blue-collars” workers and hence the decline of the agricultural and the industrial sectors particularly for what regards the manufacturing work.

### 1.5. A worldwide analysis of changes in the working panorama

In order to be able to generalize the before-discussed trend it is important to have a broader perspective on the global working environment, for these reasons data from the European Union, OECD and the global world are going to be taken into consideration. The source of the data for the EU is the International Labour Organization (ILO), a

specialized agency of the United Nations concerned with labor issues, the section involved is the ILOSTAT which is a world's leading source for labor statistics<sup>11</sup>.

The three major sectors considered will be the same as before, meaning that they are: agriculture, industry and service<sup>12</sup>.

As regards a comparison of employment percentages in the industrial and service sectors, Figure 3 shows a quite steady fall of the industry with a total drop of 10,9% from 1991 to 2017 with an average decrease of 0,42 percentage points per year, however in the first half of the 1990s differences between subsequent years are higher than the double of the average reaching the nadir in 2009, period of the big global financial crisis.

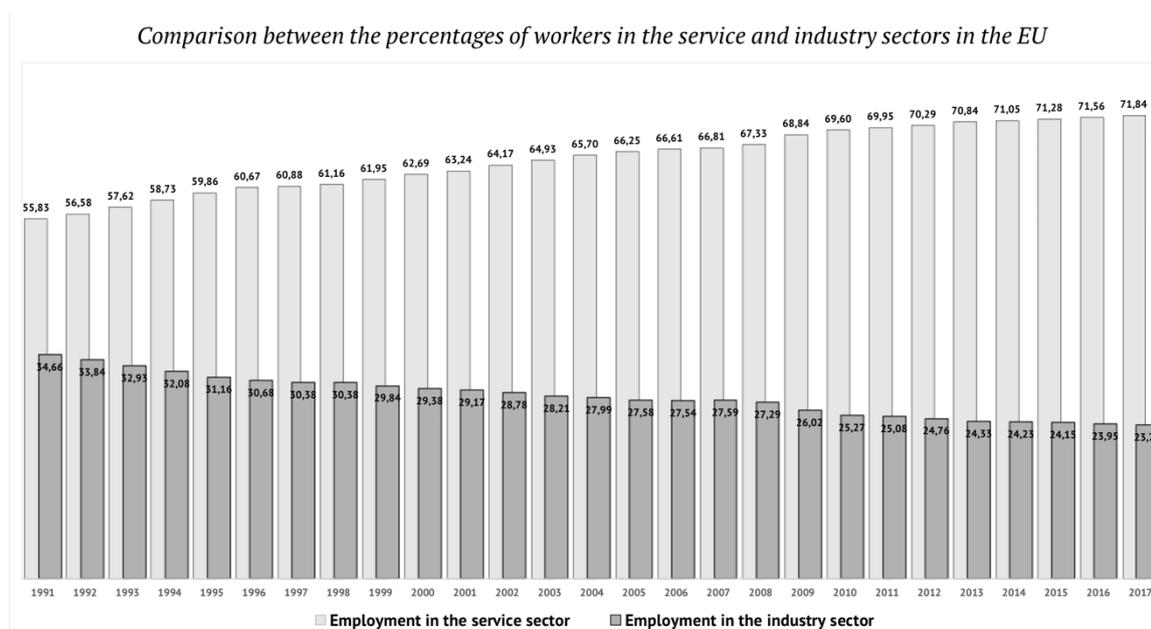


Figure 3: Comparison between the percentages of workers in the service and industry sectors in the EU

From the service perspective it shows that there is instead a positive trend, recording a total growth of the 16% that not only equate the loss of the industrial sector but even outdo it by 5,1 percentage points, the average increase if of the 0,75% per year with a symmetrical but reversed peak in 2009.

<sup>11</sup> For Figures from 3 to 5 the source is the same, **INTERNATIONAL LABOUR ORGANIZATION**, ILOSTAT database, 2017;

<sup>12</sup> For a detailed structure see **UNITED NATIONS STATISTICS DIVISION**, “Detailed structure and explanatory notes: ISIC Rev.4 (International Standard Industrial Classification of All Economic Activities, Rev.4)”, at <https://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=27>;

Comparing the results for the European Union with the findings from the United States in the same time interval (1991-2017) what comes up is that in both cases there is either a reduction in the percentage of employment in the industry sector and a raise in the service sector. Percentages are similar but slightly higher in the EU, in particular as respects to figures in the service area where a raise 6,1 percentage points higher than the United States' one is recorded.

An eclectic cross-analysis of the employment framework is given by the elaboration of exhibits from country-members of the Organization for Economic Co-operation and Development (OECD), this is very interesting because the OECD is an intergovernmental economic organization committed to democracy and market economy, the mission is to “*promote policies that will improve the economic and social well-being of people around the world*”. Member-states are mostly high-income economies with a very high Human Development Index (HDI) and are regarded as developed countries. Currently there are 35 member-states including 22 of the 28 European Union member countries<sup>13</sup>, Australia, New Zealand, Canada, United States, Japan and South Korea as well as some emerging countries such as Turkey, Chile and Mexico, offering a more diverse angle.

The examination starts with Figure 4 displaying a histogram comparing figures from the employment in the industry and in the service sectors. The first impression is the presence of a sizable imbalance between the two variables which becomes more and more intensified with time, in fact if in 1991 the gap is of the 30,24% reaching the 50,64% by year 2017, giving already the scale of the phenomenon.

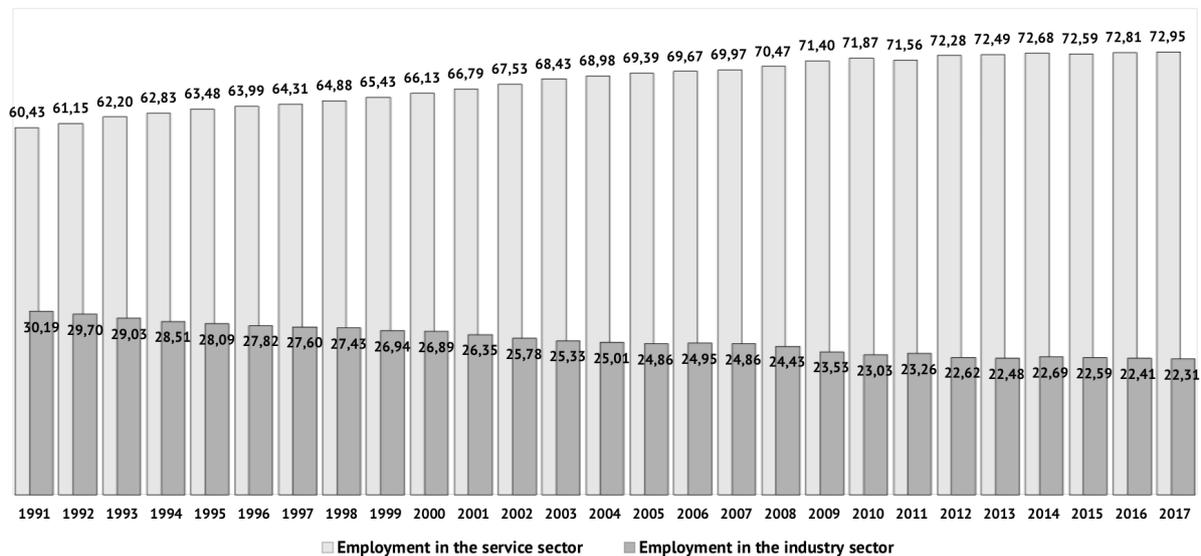
Scores from OECD's countries disclose the following of the general trend towards a service-oriented economy, in particular with a reduction of 7,88% in the industry sector that is classified between the United States and European Union measurements just like the service sector which records a 12,52-percentage points growth.

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<sup>13</sup> N.d.A. Members not included are Bulgaria, Croatia, Cyprus, Lithuania, Malta, and Romania;

The negative peak of minus 0,9 points for industry is observed in 2009 probably as a repercussion of the financial crisis, as regards the second variable there is a decrease of 0,31% points in 2011 however a positive average increase of 0,48 percentage points is recorded.

*Comparison between the percentages of workers in the service and industry sectors in OECD's members*



*Figure 4: Comparison between the percentages of workers in the service and industry sectors in OECD's members*

Eventually the question assumes a global perspective, is it valid to affirm that there is a global orientation towards a knowledge-based working environment?

The graphic above shows some relevant differences from the preceding statements, the agriculture sector, which value did not exceed the 10% in any of the previous context, is in effect notably superior on a global context, this happens because low-income, developing countries with generally higher level of employment in the agriculture and industrial sector are involved.

However, the general direction is nonetheless towards a decrease in the percentage of people employed in the agriculture sector which value dropped of 13,1% percentage points in time-interval heeded while the industry sector stayed almost stable with a range starting from a minimum measure of 19,49% in 1999 to the maximum of 21,77% in 2012

and finally the service sector with a sizable gain of 12,41 percentage points.

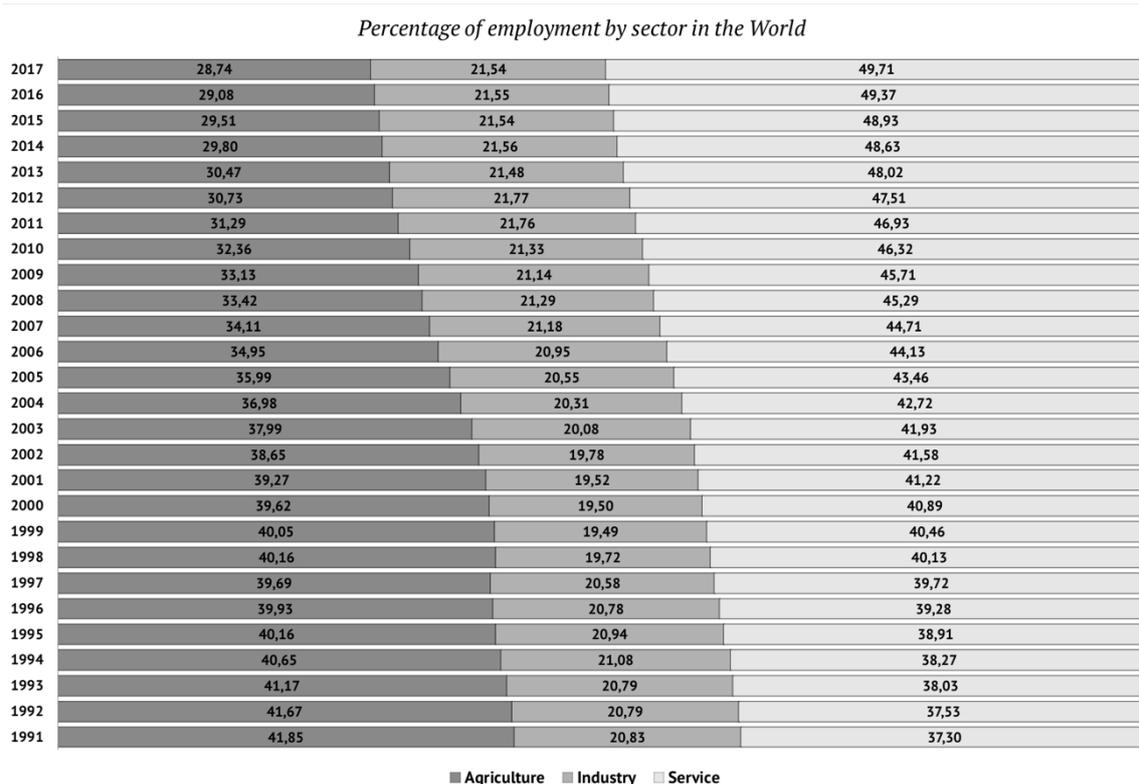


Figure 5: Employment by sector in the world as percentage of the total workforce

<b>Summary of the empirical data</b>			
<b>Territory</b>	<b>Sector</b>	<b>Total difference (1991-2017)</b>	<b>Average difference by year</b>
<b>UNITED STATES</b>	Service	+9,90%	+0,38%
	Industry	-8,50%	-0,10%
	Agriculture	-1,40%	-0,06%
<b>EUROPEAN UNION</b>	Service	+16,00%	+0,75%
	Industry	-10,90%	-0,42%
	Agriculture	-5,13%	0,20%
<b>OECD MEMBERS</b>	Service	+12,52%	+0,48%
	Industry	-7,88%	-0,49%
	Agriculture	-4,66%	-0,18%
<b>WORLD</b>	Service	+12,41%	+0,48%
	Industry	+0,71%	+0,03%
	Agriculture	-13,10%	-0,50%

Table 1: Summary of the empirical data, personal elaboration on data from paragraphs 1.4. and 1.5.

## 1.6. Information society

Given the fact that the analysis carried out in the previous part has confirmed a global trend towards a world that is more and more service-oriented, ensuing paragraphs will combine those findings with the phenomenon of the Computer Revolution.

One of the major consequences of the computerization of the society is in fact the ability of codifying an increasing number of information, knowledge can easily be codified and then transmitted through computers and communication networks so as physical, geographical distances do not represent anymore a limitation, transmission costs are also reduced and the free flows of information is incentivized.

“**Information society**” is born.

In the Information society the fulcrum of the economy is not anymore on the production of tangible goods, a general disengagement from the request for physical outputs is experienced while a growing percentage of the labor force is engaged on more theoretical jobs which require a continuous learning of a great deal of information, technical expertise and the proper competencies to correctly handle knowledge.<sup>14</sup>

One of the most ambiguous effects of the computerization process is that workers are actually being displaced because many tasks can be performed more efficiently by computers. Automation helps to obtain a better performance reducing the human problems of inaccuracy, inconsistency and lack of motivation (Merchant, Van Der Stede, 1996), however as Autor, Levy and Murnane (2003) proved in their essay “*The skill content of recent technological change: an empirical exploration*”, using data from the United States job demands, this is applicable only to routine tasks: in fact the human ability of judgement in non-programmable situations and in complex communication tasks is not replaceable, for instances it is not possible assigning to a computer the management of a team or the waiting on tables at a restaurant (Goos, 2013). Therefore the labor market

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<sup>14</sup> ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, “*The Knowledge-based Economy*”, at <https://www.oecd.org/sti/sci-tech/1913021.pdf>, Paris, 1996;

is facing a job polarization, the consequence is both an increase on the demand for highly skilled workers and unskilled one to the detriment of the medium workforce.

Being on an extremely dynamic field the Information Society has been subjected to a further evolution, the so-called “**Digital Economy**”, the term was coined by Don Tapscott in its book “*The Digital Economy: Promise and Peril in the Age of Networked Intelligence*” (1995) and it is based mainly on two technological pillars: digitization and interconnection.

**Digitization** is the codification of any kind of information such as sounds, images, texts into binary bits, allowing a universal representation of data which then can be stored and used by digital devices.

The biggest advantages derived from the usage of digitized data are:

- There are no limits on the number of time they can be used;
- There is no degradation problem;
- They can be accessed from anywhere and at a very high speed;
- Scarce marginal costs.

The **Interconnection** instead is the linking between many subjects, located in different geographical areas and it is possible thanks to the Internet and the growing computing power.

Economy and society are experiencing a digital transformation. The Digital Economy provides a global platform allowing people to freely communicate, collaborate and generally interact reducing the problem of physical constraints, it is a phenomenon of global scope, all the agents operating in the society are involved, it affects how businesses function and innovate but also how governments design and the implement policies.

It is important to stress that any actor willing to have a real benefit from the use of digital technologies must have some basic skills, such as:

- **Knowledge of Information and Communication Technologies (ICTs)** which can be more or less specific depending on the desired type of usage;
- **Knowledge in the fields of information processing, problem solving, and communication;**
- **Knowledge of specific risks** derived from the use of digital technologies, in particular related to digital security;
- **Knowledge in the field of privacy protection.**

It is necessary to highlight the position of governments because they have an essential responsibility for a profitable exploitation of the digital transformation, they must encourage the organizational change by providing investments in: (i) The human capital, so as to facilitate the access to a broad range of technical skills and expertise; (ii) Data and knowledge-based capital; (3) Necessary infrastructure. All of the elements together will contribute to the exploitation of the full potential of the digital transformation.

### **1.6.1. In practice: empirical data**

The aim is to verify which are the real effects in people's life, especially as regards habits in the business environment.

The subject of the paragraph is the examination of empirical data about the European Union member states from the Organization for Economic Co-operation and Development from "*The ICT Access and Usage by Businesses*"<sup>15</sup> database which provides a selection of 51 indicators, based on the 2nd revision of the OECD Model Survey on ICT Access and Usage by Businesses.

The subjects of the data are enterprises in the European Union, which are defined in "*The OECD Model Survey on ICT Usage by Businesses - 2<sup>nd</sup> Revision*" as "*According to the guidelines for the application of ISIC Rev. 4, an enterprise consists of an institutional unit in its capacity as a producer of goods and services (...). An enterprise*

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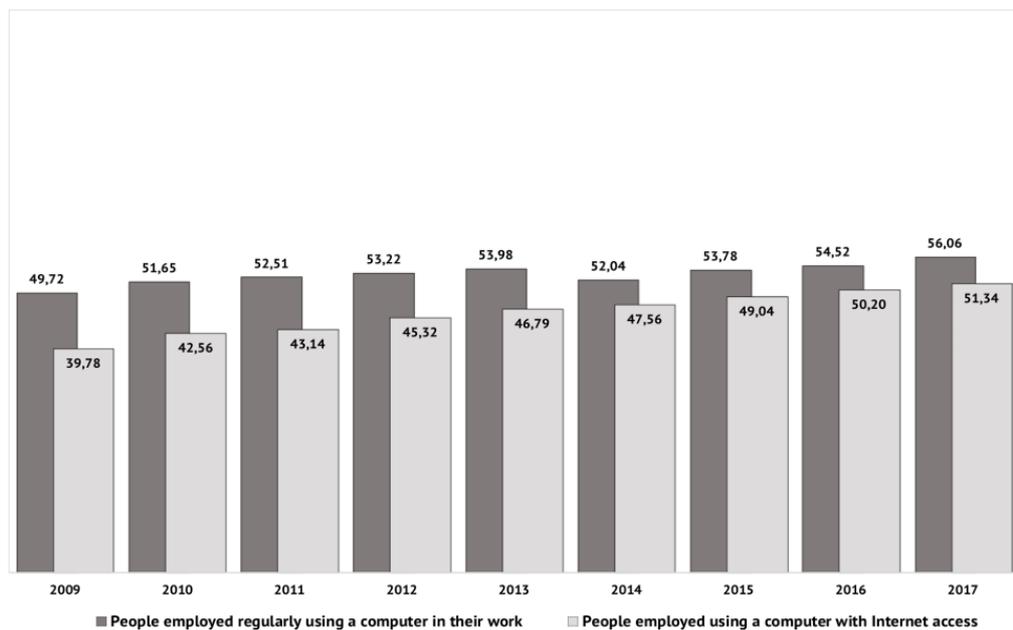
<sup>15</sup> ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, *Dataset: ICT Access and Usage by Businesses*, at [http://stats.oecd.org/Index.aspx?DataSetCode=ICT\\_BUS](http://stats.oecd.org/Index.aspx?DataSetCode=ICT_BUS), OECD.stat, for Figures from 6 to 9;

is an economic transactor with autonomy in respect of financial and investment decision-making, as well as authority and responsibility for allocating resources for the production of goods and services. It may be engaged in one or more productive activities”.<sup>16</sup>

The variables analyzed are:

- The percentage of people employed using a computer or using a computer with internet access.....Figure 6;
- The percentage of business with a website or homepage.....Figure 7;
- The percentage of businesses using social media.....Figure 8;
- The percentage of businesses with a website allowing for online ordering or reservation or booking.....Figure 9;

*People employed using a computer or a computer with Internet access*



*Figure 6: People employed using a computer or using a computer with internet access*

The first variable is the percentage of businesses with a broadband connection which is a sine qua non condition for the existence of all the other elements, the

<sup>16</sup> UNITED NATIONS, DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS: STATISTICS DIVISION, “International Standard Industrial Classification of All Economic Activities: Revision 4”, at [https://unstats.un.org/unsd/publication/seriesM/seriesm\\_4rev4e.pdf](https://unstats.un.org/unsd/publication/seriesM/seriesm_4rev4e.pdf), Statisticalpapers SeriesM No.4/Rev.4, 2008, p.16;

survey highlights that from 2010 to 2017 there is a 10 percentage growth, with a peak of 95%, signifying that almost every enterprise in the European Union has a broadband connection, this has many repercussions and among them can be identified the percentage of people employed regularly in businesses who use a computer in their job, figures have been increasing since 2009, achieving the percentage of 56,06 in 2017. This specific indicator portrays the intensity of computer usage in enterprises, from the data can be inferred that more than half of the total workforce must deal with a computer in their everyday working-life.

Furthermore Figure 6 stresses the existing discrepancy between people employed using a computer and people whose employment requires the usage of a computer which have also internet access, the latter has increased year by year thinning the difference between the two variables. The final result is that in the business setting, the proportion of computer with internet access as against computers without any internet access grew from the 80% to the 91,6% testifying the strict relationship existing between the usage of a device such as the computer and the internet connection.

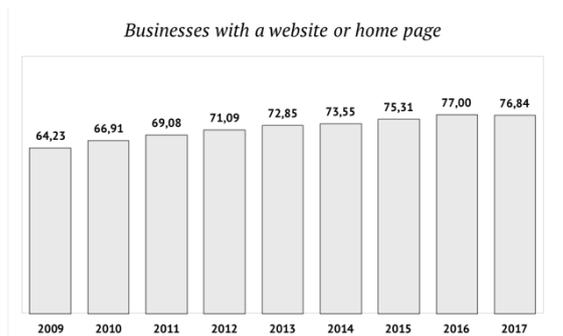


Figure 7: Percentage of businesses with a website or homepage.

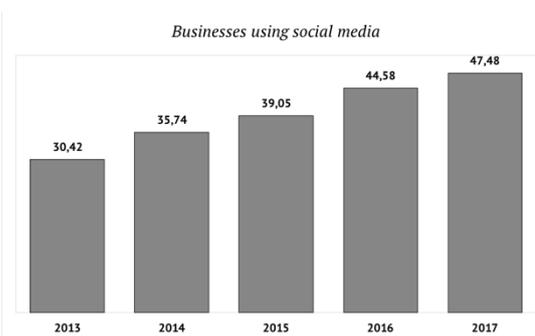


Figure 8: Percentage of businesses using social media.

Having an internet access and the usage of a computer are not only helpful from the administrative and technical side of the job, indeed they allow an increase smoothness in many routine and mechanical processes, but they also have many perks on the commercial and marketing wings. Figure 7 and Figure 8 respectively describes the percentage of businesses with a website or a homepage and the

percentage of businesses using social media, this is relevant because owning a corporate website or a homepage is really meaningful since they represent the face with which the firm presents itself to users possibly from all over the world, usually providing background information of the organization and the products or services sold.

As respects Figure 8 it is necessary to clarify what it is intended when talking about businesses using social media “*The OECD Model Survey on ICT Usage by Businesses - 2<sup>nd</sup> Revision*” gives the following definition: “*Use of social media refers to the enterprise’s use of applications based on Internet technology or communication platforms for connecting, creating and exchanging content online, with customers, suppliers, or partners, or within the enterprise. Enterprises using social media are considered those that have a user profile, an account or a user license depending on the requirements and the type of the social media. Enterprises that use social media only for posting paid adverts are out of the scope of the module*”.

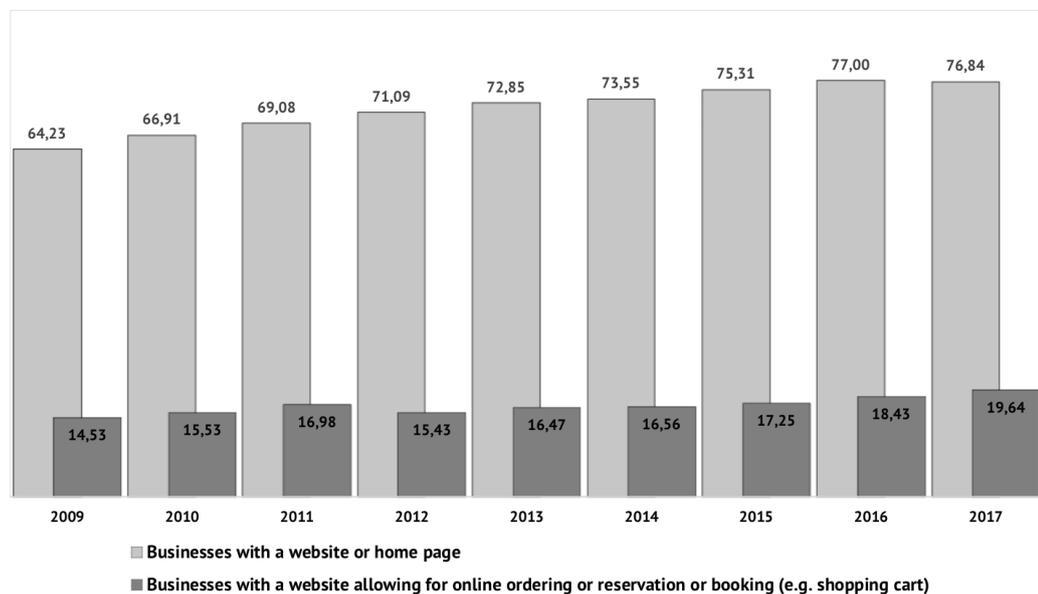
Social media technologies have given rise to radically new ways of interacting (Hansen, Shneiderman, Smith, 2011), businesses more and more exploit internet as a mean of communication with customers, suppliers and partners, it allows to convey information about the enterprise characteristics, products and services offered and to have a direct feedback from them, providing the impetus for new and better ways to satisfy customer needs (Teece, 2010). Enterprises might benefit from their presence in the Net because they will be able to collect information from a vast quantity of customers allowing to immediately produce customized contents and advertisings.

The value of the Web lies in its ability to provide immediate access to information (Shapiro, Varian, 1999), in particular the information-seeking-behavior shifted from a physical to an online word-of-mouth, consumers tend to increasingly rely on peer opinions available online (Bruhn, Schoenmueller, Schäfer, 2012). Inter alia one of the purposes for companies to use social media are “*enhancing*

*trustworthiness, brand attitude, and customer commitment*<sup>17</sup>, the aim is to build with people from all over the world, who represents potential customers, a fiduciary relationship based on the good online corporate reputation.

**Corporate reputation** can be defined as “*a collective representation of a firm's past behavior and outcomes that depicts the firm's ability to render valued results to multiple stakeholders*”<sup>18</sup>, but in this case the topic is the **online corporate reputation** which is accomplished by the management of interactions with online potential or actual customers, by the creation of contents and by monitoring stakeholders. Especially in the Web, a good corporate reputation is important because it reduces the intrinsic uncertainty of the virtual environment. Social medias are the new meeting places in the digital era.

*Businesses with a website allowing for online ordering, reservation or booking as a proportion of total businesses with a homepage*



*Figure 9: Percentage of businesses with a website allowing for online ordering, reservation or booking.*

An important subset of enterprises owning a website is composed by the one allowing customers for online ordering, reservation or booking, however they

<sup>17</sup> BEUKEBOOM C. J., DIJKMANS C., KERKHOF P., “*A stage to engage: Social media use and corporate reputation*”, Tourism Management vol.47, 2015, p. 58-67;

<sup>18</sup> FOMBRUN, C. J., GARDBERG, N., & SEVER, J., “*The Reputation Quotient: a multi- stakeholder measure of corporate reputation*”, Journal of Brand Management Vo.7, 2000, p.243;

represent just the 25,56% of the total in 2017, experienced an increase of the 3% since 2009.

The final observation is about specialists in the Information and Communication Technologies fields, the survey emphasizes that about a constant 20 percent of businesses employs at least one worker specifically from the latter sector, moreover recording a stable number of positions offered. Data proves that the Digital Economy has many issues in the current working environment, the advance of the Web in the everyday life engenders the birth of new jobs not only in the field of the ICT but generally for all the jobs that can be performed through the Net which usually are knowledge-based service jobs.

### 1.7. A new model of temporary worker

The rise of the digital economy had many reverberations in the employment panorama, in particular as respects to the conventional agency-based sourcing.

Employment agencies work as intermediate organizations, the service provided is the combination of two needy parts in order to fulfill everyone's necessities, the aim is to help whoever wants a job to find one matching both his skills and needs and vice versa to help employers finding the right person for the positions required.



Figure 10.a: Manifesto of Kelly Girl, Inc. from Time, 1965, p.81



Figure 10.b: Manifesto of Kelly Girl, Inc. from Kelly Girl Service Inc., 1962

The characteristics of the typical agency-based temporary worker have significantly mutated with time. Getting a glimpse across time and landing in the post-World War II era, when temporary employment had just a marginal role in the labor context, the perfect portrayal for a person looking for a temporary worker was the figure of a white woman with family and children searching for a clerical job and whose attachment to work was taken for granted as essentially non-existent (Neurivirth, Smith, 2008).

The perfect example is the historical employment agency “Russel Kelly Office Service” founded in 1946 in Detroit by William Russel Kelly described as “pioneering the modern temporary help industry”<sup>19</sup>, the manifestos (Figure 10.a. and Figure 10.b. in the previous page) themselves are very effective communicators of which was the targeted audience and which were the services provided, caption from Figure 10.a. is explicative for the overall phenomenon of temporary employment in the 1940s and 1950s, that is “*Vacation leaving key jobs unfilled? Call for Kelly Girl service for temporary office help. We supply all kinds, from basic clerical all the way up to executive secretarial. Performance on every job is 100% guaranteed. If you're not fully satisfied, you don't pay.*” On the other hand the stereotypical model of “*permanent good worker*” (Neurivirth, Smith, 2008) was usually a white man predicted to work full-time and continually, expected to have an absolute loyalty with regard to the enterprise where he would have spent his entire work career.

The organizational decision to rely on a staffing-agency was owed to the necessity to fill the position of a regular permanent employee who needed some time off from work for reasons such as a vacation, illness or childbearing hence some short-term needs without any further interests, the point was to keep on the payroll a permanent workforce large enough to handle the maximum workload.

As already seen, this was true until the 1960s and particularly the 1970s, the employment sector in the contingent field not only started to increase its figures dramatically but also the traditional roles of the good permanent employ and the good temporary worker

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<sup>19</sup> KELLY SERVICES INC., “Company Overview”, at <https://www.kellyservices.us/us/about-us/company-information/company-overview/>;

withstood a transformation. Company managers realized that they could exploit agency workers to reduce payroll costs, the strategy was to have permanently employed a core of highly skilled, regular trained people, just the minimum required to handle a minimum work flow and to continually recalibrate the size of the workforce depending on the demand and relying on peripheral flexible workers (Corporaal, Lehtonvirta, 2007)

The watchword is: **flexibility**, as regards the organizational perspective flexibility is declined into three typologies (Atkinson, 1984) coupled to as many abilities of the firm:

1. **Functional Flexibility:** it refers to the necessity of having a dynamic workforce with a variety of skills allowing to smoothly redeploy employees in different activities and tasks;
2. **Numerical Flexibility:** it refers either to the number of people in the workforce or the number of hours worked, therefore is the ability to match perfectly those quantities to the quantity of labor needed. It might imply more flexible hire and fire policies and the use of looser contractual relationships;
3. **Financial Flexibility:** considering the financial flexibility requires the involvement of a time-oriented perspective. First of all in the short-term it refers to the ability of re-evaluating on an on-going basis pays and other employment costs to the state of demand and supply in the external labor market, secondly on a long-term horizon it implies a shift towards a new and more flexible pay and remuneration system which support either the numerical or functional flexibility type.

The role of temporary workers gained influence, they began to be seen no more as simple individual stopgaps, merely substitutes for regular workers on a momentary leave, but companies begun to offer them unique job positions which then would be eliminated on a regular basis when no more required. Temporary staffing solutions would follow fluctuations in the firm's demand, this is the new paradigm: managers would hire groups of temps to support requests for additional work, consequently the use of temporary staff would become more planned and systematic (Neuwirth, Smith, 2008).

The Kelly Girl does not represent anymore the typical individual interested on a temp job, such a strict categorization is no longer possible, the panorama of people looking for a temporary job has got wider and variegated, thereafter the implementation of online networks increased at the utmost that variety.

## **1.8. A Freelance nation**

For many decades employment-agencies had had a sort of monopoly in the field of provision of temporary workers, representing for a long time the only intermediary helping employers and possible employees to find the right match, however in the 1980s the internet spread, allowing a new kind of connectivity between people, laying the foundation for the raise of a totally new and unknown rival.

If initially the physical human presence in the working place was essential in order to perform almost every job, that is no longer true for job positions in which inputs and outputs are not physical goods or products, knowledge-based workers are able to carry out their tasks from wherever they have access to an internet connection.

The virtualization of knowledge work has started its path and a “*freelance nation*” of virtual workers using nascent e-mail networks emerged (Gratton, Johns, 2013). People willing to have a flexible, non-permanent occupation cease to be dependent on employment agencies and candidate themselves directly on the internet as virtual freelancers being totally free of any further layer for the management of their own career.

The figure of the temporary worker gets rid of any past conventional traits starting its new life on the World Wide Web where new market infrastructures, secure payment mechanisms and reputation-based protocols emerged. Services rapidly commenced to be traded on several online marketplaces, marking the birth of Online freelancing platforms.

### **1.8.1. What does virtual freelancer mean?**

A freelance worker is a term commonly used to define a person who is self-employed and whose job is usually contingent in the sense that is nor committed

to a specific employer nor with a long-term orientation, contracts are usually provided by one or more companies for each specific assignment (Felfe, Schmook, Schyns, Six, 2008).

A **virtual freelancer** instead is a freelancer who decided to exploit the many possibilities offered by the development of ICTs in order to find a job whose intrinsic characteristics are not just the temporariness and the *boss-less-ness* but in addition it is untied from any fixed physical working environment, the only requirements are the presence of an internet connection and of a working device.

The extreme independence offered by virtual freelancing was immediately recognized as a seriously appealing opportunity to enter in the labor market even for talented people, that for various reasons, used to be marginalized. Stay-at-home parents, students, retirees are just few of the categories which are set free from the weight of the obligation to work on a specified working location, communication technologies enable them to rely just on personal knowledge and skills to find the right job (Gratton, Johns, 2013).

For the first time ever, people are able to do skilled, well-compensated works, as independent contractors gaining control over work hours, processes and locations. Organizational managers on their side saw some potential benefits, the new reality of virtual temporary workers helped them on achieving a functional flexibility because they attained access to a wider pool of talents with no regional limits, from the financial aspect cost-savings were helped both by the need of fewer physical infrastructure and by the hiring of people coming from countries with lower-cost labor markets and in conclusion numeric flexibility was supported by the elasticity of contractual conditions escaping the problems of layoffs or excessive hiring.

## 1.9. The Global Village

The World Wide Web became soon a social aggregator to be exploited in every one of its possible facets.

1994 represents a turning point in the history of the Internet, the sale of one of the first commercially available Internet connection software packages became available to the public, “*Internet in a Box (IBox)*” by O’Reilly & Associates and Spry, Inc. was the first product allowing the Web to enter into people’s houses (Goldberg, 1994).

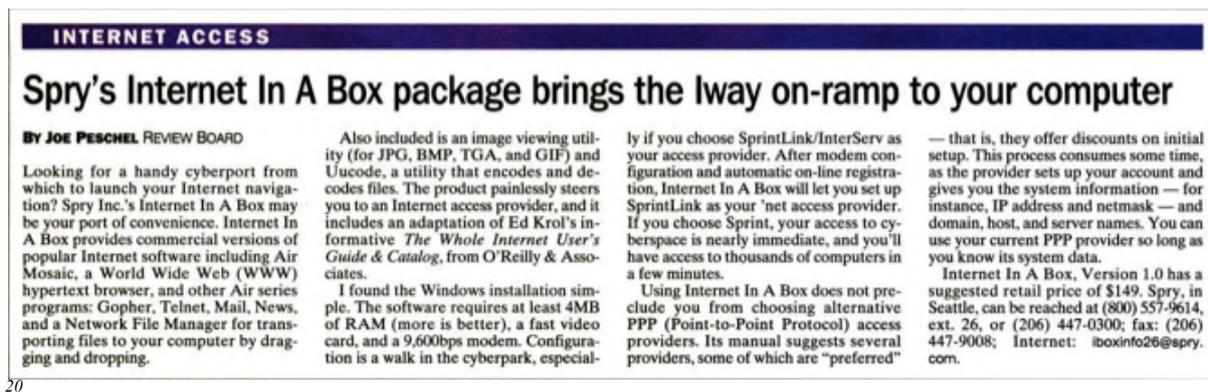


Figure 11: Spry's Internet In A Box package brings the Iway on-ramp to your computer

Previously the Internet was used principally by laboratories involved in researches for governments but since the placing on the market of the IBox had started to expand serving millions of users and a multitude of purposes in all parts of the world, with time has achieved the role of Universal source of information for millions of people, at home, at school and at work. “*The Internet is defined as the worldwide interconnection of individual networks operated by government, industry, academia, and private parties*”<sup>21</sup>.

One of the first supporters of the unifying effects of communication technologies was Nikola Tesla, a real *visionaire*, who incredibly in 1926, when the Internet invention was not even foreseeable, stated that “*When wireless is perfectly applied the whole earth will be*

<sup>20</sup> Source: PESCHEL J., “*Spry's Internet In A Box package brings the Iway on-ramp to your computer*, at <https://books.google.it/books?id=ejEAAAAMBAJ&lpg=PA118&hl=it&pg=PA118#v=onepage&q&f=true>, InfoWorld. Vol. 16 (45), 1994, p.118;

<sup>21</sup> INTERNET WORLD STATS, “*INTERNET GROWTH STATISTICS: Today's road to e-Commerce and Global Trade Internet Technology Reports*”, at <http://www.internetworldstats.com/emarketing.htm>;

*converted into a huge brain, which in fact it is, all things being particles of a real and rhythmic whole. We shall be able to communicate with one another instantly, irrespective of distance. Not only this, but through television and telephony we shall see and hear one another as perfectly as though we were face to face, despite intervening distances of thousands of miles; and the instruments through which we shall be able to do this will be amazingly simple compared with our present telephone. A man will be able to carry one in his vest pocket."*<sup>22</sup>

Tesla anticipated the concept of one world interconnected by an electronic nervous system of at least forty years, it was on 1964 when the intellectual, philosopher Marshall McLuhan dealing with his studies about the media, coined the term “**Global Village**”.

McLuhan in particular in his works “*The Gutenberg Galaxy: The Making of Typographic Man*” (1961) and “*Understanding Media: The Extensions of Man*” (1964), was the first person to popularize the idea of a Global Village and its related social effects, his conclusion was that medias were rapidly integrating the planet, events in one part of the world could be experienced from other parts in real-time, which is what human experience was like when we lived in small villages.

The newborn possibility for people to work as freelancers using the internet as a system hauling information from one place to another in real-time, matches perfectly with the notion of the Global Village. However it must be remembered that, as the Greek philosopher Aristoteles stated in his work “*Politics*” (in Greek: Πολιτικά, *politiká*), *man is by nature a social animal*, which is reflected as well in its behaviors on the Internet, groups exist everywhere and in a short while communities where people can communicate and get connected were born online.

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<sup>22</sup> DRAPER W. W., HUNT I., *Lightning in his hand: the life story of Nikola Tesla*, Sage Books, 1964, p.177;



## CHAPTER 2 - THE SHARING ECONOMY

The previous chapter presented an overview on how the working environment has been changing, dealing with the most influential phenomenon of the twentieth century: the birth and raise of the internet and of the ICTs; Being those the starting-points, the current chapter will take into analysis one of the major consequences of the encounter between the offline and the online world: the Sharing Economy. This represents the second step into the journey of discovery of a new work paradigm which is the thesis's objective, the first subject is going to be the definition of "Sharing economy" which then will be dissected in all its constituting elements such as: drivers, features, characteristics of sharing economy's platforms, sectors involved, moreover the empirical and regulatory sides will be considered to allow the most complete perspective possible.

### 2.1. The sharing economy: definition

The starting point for the examination of the sharing economy is the broaching of the definition of the concept itself, one of the first appearances of the term is found in an article from The Times (March 2011) that placed Sharing Economy in the rank of the "*10 Ideas That Will Change the World*" sanctioning the official entrance of the phenomenon in the socio-economic world which, especially since the Great Recession of 2008, has undergone a significant growth.

It is almost impossible to propose a fully acceptable, comprehensive, definition of Sharing Economy essentially because it is an umbrella term embodying a wide range of interpretations whose variety mirrors the chaos surrounding the concept. On a matter of terminological clarity, the principal terms employed are going to be illustrated hereunder:

- **Collaborative consumption**, the term was coined by Botsman and Rogers in the book "*What's Mine is (Y)ours: The Rise of Collaborative Consumption*" (2010) and later defined by Hamari et al. (2016) as "*The peer-to-peer activity of obtaining, giving, or sharing the access to goods or services, coordinated through community-based online services*";

- **Collaborative Economy**, it refers to an economy that matches people who are willing to share assets and services online, in particular is defined as “*an economic system of decentralized networks and marketplaces that unlocks the value of underused assets by matching needs and haves, in ways that bypass traditional middlemen*” (Botsman, 2015). The word “collaborative” hints at the encounter of supply and demand by means of online platforms allowing the exploitation of under-utilized assets from which economic benefits are extracted for both parties;
- **Access-based consumption**, it comprehends all the transactions that can be market-mediated but where no transfer of ownership takes place (Bardhi, Eckardt, 2012). We are witnessing a shift from the principle of possession to the **principle of access**, thanks to the advanced use of Web and mobile information networks the possibility of connection between people has boost thus the result is an increased of the convenience and the ease of obtaining the access to goods and services rather than their possession;
- **Connected consumption** which is predicated on peer-to-peer relationships rather than existing market actors to mediate exchange (Schor, Fitzmaurice, 2014);
- **On-Demand Economy** defined by The Business Insider as “*the economic activity created by technology companies that fulfill consumer demand via the immediate provisioning of goods and services*”. On-demand is related to the direct match between a customer needs and a provider immediately delivering goods or services;
- **Gig Economy**, a labor market characterized by the prevalence of short-term contracts or freelance work as opposed to permanent jobs;
- **Platform Economy**, the theme is treated in the book “*Platform Revolution: How Networked Markets are Transforming the Economy – and How to Make Them Work for You*” (Choudary, Parker, Van Alstyne, 2016) where the so called “*platform-*

*companies” are described to follow a “business model that uses technology to connect people, organizations and resources in an interactive ecosystem in which amazing amounts of value can be created or exchanged”.*

The above listed terms cannot be examined as separate entities, they do not describe different facts, contrariwise they are shades of the same macro-phenomenon. The starter for the definition of sharing economy, that this a very elaborate, one will be the most possible general, that is: a phenomenon which comprehends every economic activity involving online transactions. However this is not sufficient, it is necessary indeed to add more specifications.

**Which is the environment where the sharing economy takes place? Which are the activities concerned and which are the characteristics of the assets involved? Why the word “sharing”?**

Those are just few questions that must be answered to give an exhaustive description. First of all, it must make explicit the environment where the activities take place: everything occurs online through community-based marketplace and in particular online platforms, in such venues all the activities such as renting, exchanging or sharing are performed allowing the access to the services and the goods needed. Usually the assets involved are under-utilized ones which are made available to extract every benefit, ergo they are shared between people actually in need.

After all these premises, a definition of Sharing Economy can be shaped.

**The sharing economy is a transformative and disruptive market in which the access to physical goods, assets or services is carried out through rental, sharing or exchange of resources using online community-based platforms which, allowing the match between demand and supply, guarantee the immediate access to the resources needed without any permanent transfer of ownership.**

### **2.1.1. Criticism: the word “sharing”**

The word “sharing” has been subjected to many criticisms in particular by scholars because it implies an altruistic or positive non-reciprocal social behavior, however when it is mediated by a third party like market platforms are, consumers often have to pay some fees in order to gain the access to the goods or services wanted, the process becomes an economic exchange rather than a social one (Bardhi, Eckhardt, 2015; Belk 2014). The practical mechanism of sharing in fact occurs on digital platforms whose use might be both free or envisage a payment for the service.

## **2.2. Sharing economy: drivers favoring the spread of the sharing economy**

The birth and growth of the global phenomenon of the Sharing Economy has been supported by many drivers which will be analyzed according to a study made by Latitude in collaboration with Shareable Magazine (2010), they are: technology, environmental concerns, global recession and community, a further analysis of each one follow.

### ➤ **Driver I: TECHNOLOGY**

Web and mobile technologies play a critical role in building large-scale sharing communities, they allow ease of contact speeding the supply-demand cycle. Sharing, renting, exchanging are practices already existent in the offline world but the advent of the Web with all its related technologies has accelerated and facilitated the rise of the sharing economy, furthermore there are exhibits demonstrating that people sharing various things online are more likely to do it also in the physical world.

### ➤ **Driver II: ENVIRONMENTAL CONCERNS**

The study found out that people usually make a connection between sharing and sustainability, sustaining that sharing is better for the environment. In the context of this thesis, the sharing of scarce resources and assets is perceived as a mean to collaborate in order to have a more sustainable way of living.

➤ **Driver III: COMMUNITY**

Participants to the study felt that their online interactions with strangers was transferred to their offline life, facilitating the offline sharing and other social activities suggesting that the social media revolution has broken down trust barriers.

➤ **Driver IV: GLOBAL RECESSION**

The most popular driver that is perceived from sharing is saving money, which is crucial in time of economic crisis because people become more concerned with their purchasing decisions, stressing practicality over consumerism.

The interlinking of the listed drivers resulted in the emergence and growth of the sharing economy, each one is important for the contribution of its peculiarity, it is thanks to their combination that such a relevant revolution has been possible.

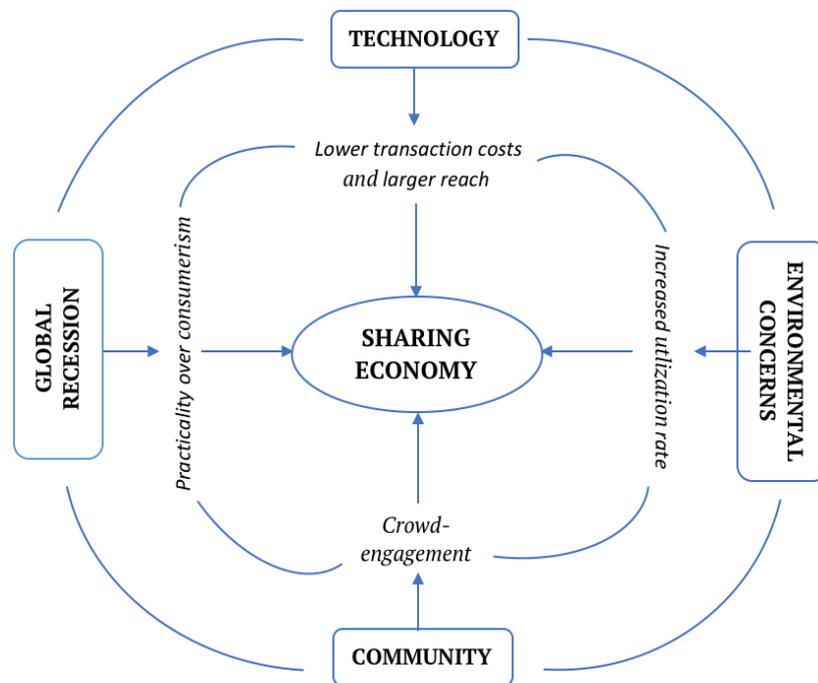
### **2.3. Sharing economy: key features**

Based on the aforementioned examination there are some key features which can be highlighted.

The first element is the (a) **transformative and disruptive nature** of the sharing economy phenomenon, which is related to the technological driver, in fact particularly throughout the Internet the way services are performed has faced an actual disruption, see Uber and Airbnb as regards respectively the transportation and tourism sector. The technological driver is associated also with a second element, (b) that is the **heavy reliance on information technologies** occurring through the utilization of online platforms and mobile devices, in fact they permit a series of practices such as the exchange and the gathering of relevant information about products, services, usage, the booking of services and payment of fees, moreover granting lower transaction costs and an increased reach. (c) The third feature is the **temporary nature of the engagement**, sharing economy is for instance about temporary transfers of ownership or goods, as already mentioned it is an access rather than a possession economy, this is linked both to the driver of the global

recession and the drive of environmental concerns because they both, for diverse reasons, incite people to become more preoccupied with their purchases, saving money by sharing when it is possible, increasing the utilization rate of assets (Goudin, 2016). Moreover people shows a greater interest in sharing their items if they could make money from them. (d) The last element deals with the community driver, communities of people are involved not just because large parts of communication happens through word of mouth or social media (Gansky, 2010) but also because the sharing economy implies the **direct engagement of a crowd or other intermediaries**; the consumer markets develop through crowd-based online platforms providing a peer to peer or business-to-consumer framework.

*Drivers and Features of the Sharing Economy: a cycle*



*Figure12: Drivers and features of the sharing economy represented as a cycle. Personal elaboration based on paragraph 2.2. and 2.3.*

Figure 12 shows a cycle combining together principal drivers and features, located respectively on the larger and smaller chain, the stress is on the dynamicity, all the elements co-exist both as separate entities and as inter-related ones.

The inter-relationship represents where the major strength and reach of the sharing economy phenomenon comes from.

## 2.4. The sharing economy: a conceptual framework

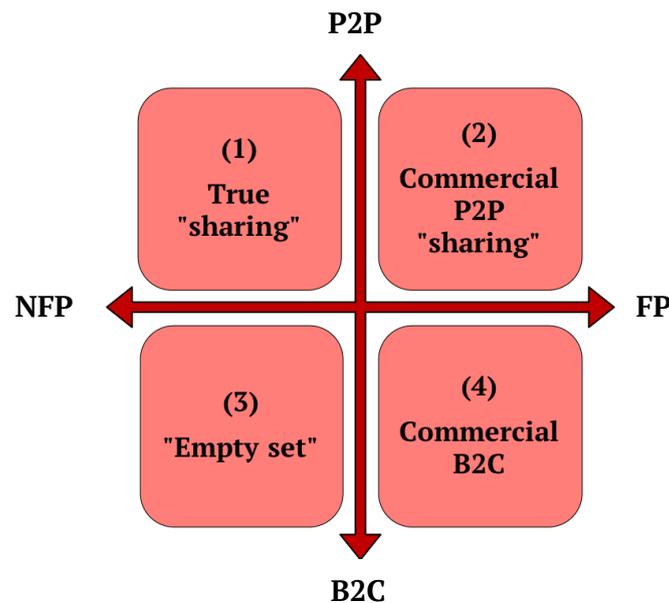


Figure 13: Classification matrix of collaborative economy platforms, (Codagnone, Martens, 2016)

Codagnone and Martens in their work “*Scoping the Sharing Economy: Origins, Definitions, Impact and Regulatory Issues*” (2016) provide a conceptual framework to map the sharing economy, it represents a very helpful tool because online platforms are very difficult to classify since they constitute a heterogeneous group embodying a great number of innovative activities. The map is built using a two-dimensional matrix, the first dimension corresponds to the horizontal-axis where platforms are classified into for-profit (FP) and not-for-profit (NFP) which is a proxy for “true sharing”, while the latter is correlated to the business-to-consumer (B2C) versus the peer-to-peer (P2P) axis.

Four quadrants are distinguished in Figure 13:

### 1. Quadrant 1 - TRUE SHARING

In this area are classified not-for-profit, peer-to-peer small platforms often acting locally with a “*true sharing*” spirit. Notwithstanding a potential for social innovation they do not raise regulatory or policy matters because of their limited scope;

### 2. Quadrant 2 - COMMERCIAL P2P “SHARING”

In this area are classified for-profit, peer-to-peer platforms ergo involving individuals. They correspond to collaborative economy platforms with a large user base some

examples are Uber, Airbnb and Upwork, they raise short-term regulatory concerns and the largest players disrupt traditional incumbent industries;

### **3. Quadrant 3 - "EMPTY SET"**

In this area are classified not-for-profit, business-to-consumer platforms which represent a very marginal type not worth to be considered, businesses are for definition for-profit;

### **4. Quadrant 4 - COMMERCIAL B2C**

In this area are classified for-profit, business-to-consumer platforms which represents the connection between the sharing economy with the traditional B2C online activities, they are fully regulated by existing legislation.

## **2.5. The sharing economy: characteristics of a collaborative economy platform**

Given the complexity and the vastness of the subject covered, this paragraph will impose some filters to do a division between platforms belonging to the world of the collaborative economy and platforms which do not. The topic suffers from the loss of a unique appraisal between scholars, thence the starting point will be the perusal of some of the existing literature in order to sustain the shaping of a personal outlook.

The first piece of literature taken into account is from Rachel Botsman, one of world's foremost experts on the sharing economy, who in 2015 in the article "*Defining the Sharing Economy: What is Collaborative consumption and What isn't?*" defines five key criteria necessary for a platform to be considered truly collaborative and sharing-driven, they are:

1. The core business idea involves unlocking the value of unused or under-utilized assets ("idling capacity") whether it's for monetary or non-monetary benefits;
2. The company should have a clear values-driven mission and be built on meaningful principles including transparency, humanness, and authenticity that inform short and long-term strategic decisions;

3. The providers on the supply-side should be valued, respected, and empowered and the companies committed to making the lives of these providers economically and socially better;
4. The customers on the demand side of the platforms should benefit from the ability to get goods and services in more efficient ways that mean they pay for access instead of ownership;
5. The business should be built on distributed marketplaces or decentralized networks that create a sense of belonging, collective accountability and mutual benefit through the community they build;<sup>25</sup>

The second assertion is from Schor and Fitzmaurice, in the essay *“Collaborating and Connecting: The emergence of the sharing economy”* (2014) they present their own theory about the definition of the limits of the sharing economy, commencing with an interesting question: *“What specific characteristics make these forms of exchange part of the “sharing economy” rather than novel market forms?”*, to answer three notions are required: (a) the first element specified is the ability to **facilitate the sharing between strangers**, the novelty is on the outdoing of the traditional practice of sharing with familiar-others such as kin and people within the same communities, in fact online platforms can be accessed through an Internet connection by anyone with no geographical boundaries. The concept of familiarity is the direct connector with the issue of trust whose establishment represents (b) the second factor in fact between acquaints there is usually a history of pre-existing social relationships guaranteeing a straightforward sharing experience, however this is not true when dealing with unknown people. Strangers may be associated with a reluctance on establishing a social contact, this happens because of a lack of *“disposition to engage in social exchanges that involve uncertainty and vulnerability, but that are also potentially rewarding”* (Bicchieri, Cristina, Duffy, Tollie, 2004), in other words **trust**. Digital technologies have developed many mechanisms to overcome the issue of trust by minimizing the risk, some tools are the creation of indicators for accountability, ratings

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<sup>25</sup> The entire list is taken from Botsman (2015), *“Defining the Sharing Economy: What is Collaborative consumption and What isn’t?”*;

and reputation, furthermore sharing platforms ameliorate the coordination between consumers and suppliers reducing the costs in terms of time and money. (c) The final distinguishing point for modern sharing platforms is the participation of **high cultural capital consumers**, there is a shift from the survival necessity to share whom actors were the most disadvantaged people to sharing interpreted as a distinctive consumption preference.

The last study that will be taken into consideration is from Abadie, Biagi, Codagnone (2016), their extensive analysis of the sharing economy evidences in particular three characteristics typical of a sharing economy platform, in particular they are: the ability to **facilitate exchange between strangers** rather than within a community; b) strong **reliance on technology** that might also favor offline activities; c) participation of **consumers with high cultural capital** rather than being limited to being a survival mechanism for the most disadvantaged. Notice that the aforementioned are already present in the literature previously investigated.

To summarize the requirements that a platform must satisfy in order to be evaluated as a collaborative economy platform, they are: **the provision of the opportunity for individuals to trade under-utilized assets through platforms enabling a better coordination between strangers, through the utilization of information technologies which help to pursue the effective match between supplier and consumers and might also favor offline activities.**

## **2.6. The sharing economy: the sectors**

The versatility of application of the collaborative platforms allows an extensive usage, the leading macro-sectors in which the practice is largely implemented are: hospitality sector, automotive sector, online staffing marketplace sector, and finance sector.

### **Hospitality sector**

The hospitality sector develops online through platforms allowing people to rent properties or part of them, the typologies of customers are very diversified even within

the same platform, ranging from people renting a spare room just for a few weeks, to owner of multiple properties renting them to travelers all year long (Wossok, 2014).

Examples of companies are: Airbnb, HomeAway, HouseTrip, Couchsurfing and Wimdu.

The most famous one is probably the American peer-to-peer accommodation platform Airbnb founded in 2008. The company's activity consists in matching hosts and guests, with more than 4 million Airbnb listings worldwide located in 65000 cities in 191 countries<sup>24</sup> it was valued at \$31 billion<sup>25</sup>.

### **Transportation sector**

Platforms belonging to the transportation sector are of two kinds: the first category facilitates the hiring of assets such as cars, bicycles and motorbikes, while the second one puts into contact users not only with the possibility of renting assets but also with labor and human capital.

Sharing economy, in particular as regards transportation is described as an *urban phenomenon* by Ray Tomalty, in the Alternative Journal article "*Ours is Better than Yours*" (2014), exhibits prove car-sharing to work better where densities ensure a large pool of potential users, the general principle is that a sufficient population density is required to achieve economies of scale for many sharing economy services (Ravi & Yaraghi, 2017).

Some examples are: car2go, ZipCar, BlaBlaCar, Uber, Lyft.

Car2go offers on-demand transportation, users can see the nearest available cars, rent one out for a short period of time and then leave it parked for the next consumer.

BlaBlaCar is a trusted community marketplace enabling drivers with empty seats to match them with paying passengers with the same destination in order to share long-distance travel costs, it counts more than 60 million users including 8 million active drivers and 22 operating countries.

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<sup>24</sup> AIRBNB, "Fast Facts", at <https://press.airbnb.com/fast-facts/>, March 2017;

<sup>25</sup> STATISTA: THE STATISTICS PORTAL, "Company value and equity funding of Airbnb from 2014 to 2017 (in billion U.S. dollars)", at <https://www.statista.com/statistics/339845/company-value-and-equity-funding-of-airbnb/>, May 2017;

The last exemplification is Uber, probably the most well-known and opinion-raiser, the platform matches individuals needing a lift with a driver on a worldwide-basis covering 230 cities in 58 countries.

### **Online staffing sector**

The aim of online staffing marketplaces is to match employers with on-demand workers. They usually operate in the field of temporary-employment helping organization to find employees fulfilling the required skills for a specific task, a project or even with a long-term orientation. This kind of marketplaces are also called crowdsourcing-internet marketplaces because their strength resides into the problem-solving ability of the crowd, issues are exposed to diverse individuals with varied skills, experiences and perspectives. Freelancer, Amazon Mechanical Turk, TaskRabbit, Crowdfunder, Clickworker, Upwork, crowdSPRING, TopCoder are just few of the existing platforms.

### **Finance sector**

In the sharing platforms the subject of finance develops in two branches: crowdfunding and peer-to-peer lending, the former matches entrepreneurial projects with venture capital funders while the latter connects individuals and SMEs with potential peer-lender excluding the involvement of any financial institution.

Kickstarter, GoFundMe, Crowdrise represents crowdfunding platforms model, Lending Club, Prosper, Folk2Folk, LendingCrowd on the other hand are peer-to-peer lending platforms model.

Following the researchers at PwC<sup>26</sup> it is possible to add a fifth sector covering the topic of music and video streaming. Streaming services like SoundCloud and Vimeo popularized the act of listening or watching to customized contents without physically owning the assets but just providing the access to them.

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<sup>26</sup> PwC, "Europe's five key sharing economy sectors could deliver €570 billion by 2025", at <https://press.pwc.com/News-releases/europe-s-five-key-sharing-economy-sectors-could-deliver--570-billion-by-2025/s/45858e92-e1a7-4466-a011-a7f6b9bb488f>, June 2016;

Nonetheless it would be too onerous to mention all the activities falling under the umbrella of the sharing economy, thus the general concept economy is that **ownership is not required to get benefits from a service or a product.**

Once ascertained the core characteristics of all the activities performed in the sharing economy, Schor (2014) tried to summarize them into a framework broader than the mentioned sector-categorization, stating the existence of four main typologies of activities. The first one is the (a) **recirculation of goods**, it finds its origins in the mid of the '90s when online marketplaces for the recirculation of goods were born, eBay and Craigslist represent two of the most notorious examples, these types of platforms thanks to new sophisticated software can take advantage of reduced transaction costs and reduced risk of transacting with strangers. The main driver for the activities belonging to the first category<sup>27</sup> is the development of technology.

Hospitality and Automotive sectors are the epitomes for the second practice that is the (b) **increased utilization of durable assets**, in fact they allow a more intensive exploitation of durable goods and assets which sometimes are not used to their full capacity. The principal aim is to provide people an easy and low-cost access to goods and spaces, offering the possibility to earn money supplementing the regular income.

The third group is composed by all the platforms pursuing the practice of (c) **exchange of services**, online staffing platforms and finance ones belong to this class, their objective consists in matching suppliers and applicants for services, they differ for the type of services provided, in fact the subject of staffing platforms is the monetized performance of small tasks accomplished by people while for the latter is essentially the provision of a lent sum of money. The last category identifies all the platforms fostering (d) the **sharing of assets and space** in order to achieve a boost in consumption rather than in production, an interesting example is the educational platform Skillshare.com where competencies and knowledge on any kind of topic are shared to promote a peer-to-peer instruction.

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<sup>27</sup> For further explanation see *Paragraph "2.3.2 Sharing Economy: drivers favoring the spread of the sharing economy"*;

An alternative framework is described by Botsman and Rogers (2010), which highlights three categories: 1) **product service systems**, which facilitate the sharing or renting of a product (such as car sharing); 2) **redistribution markets**, which enable the re-ownership of a product (Craigslist); 3) **collaborative lifestyles**, in which assets and skills can be shared (co-working spaces).

The most relevant difference is in the number of categories, Botsman and Rogers put Schor's categories increased utilization of durable goods and exchange of service together in the wider group of product service systems, the latter in fact comprehends all the activities involving the easiness in sharing, renting or exchanging something, Figure 14.a. and 14.b. shows a visual representation of the two frameworks.

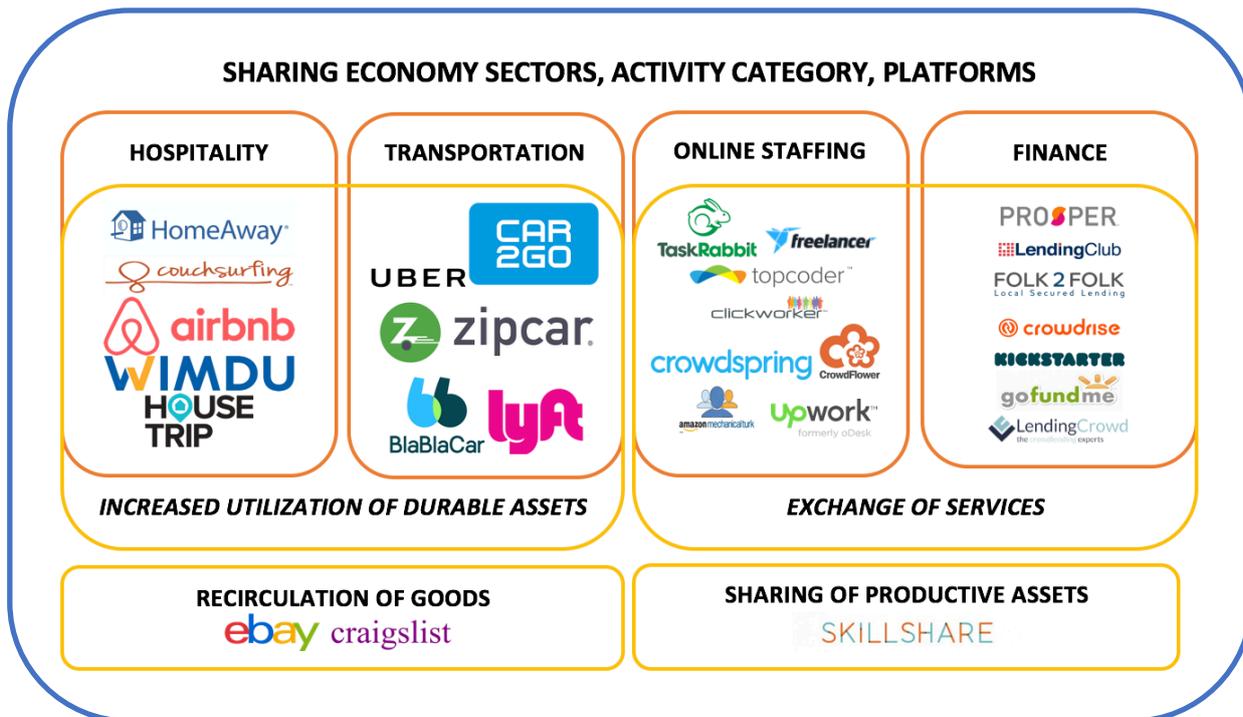


Figure 14.a.: Sharing economy sectors, activities category and platforms, elaboration from Schor's framework (2014)

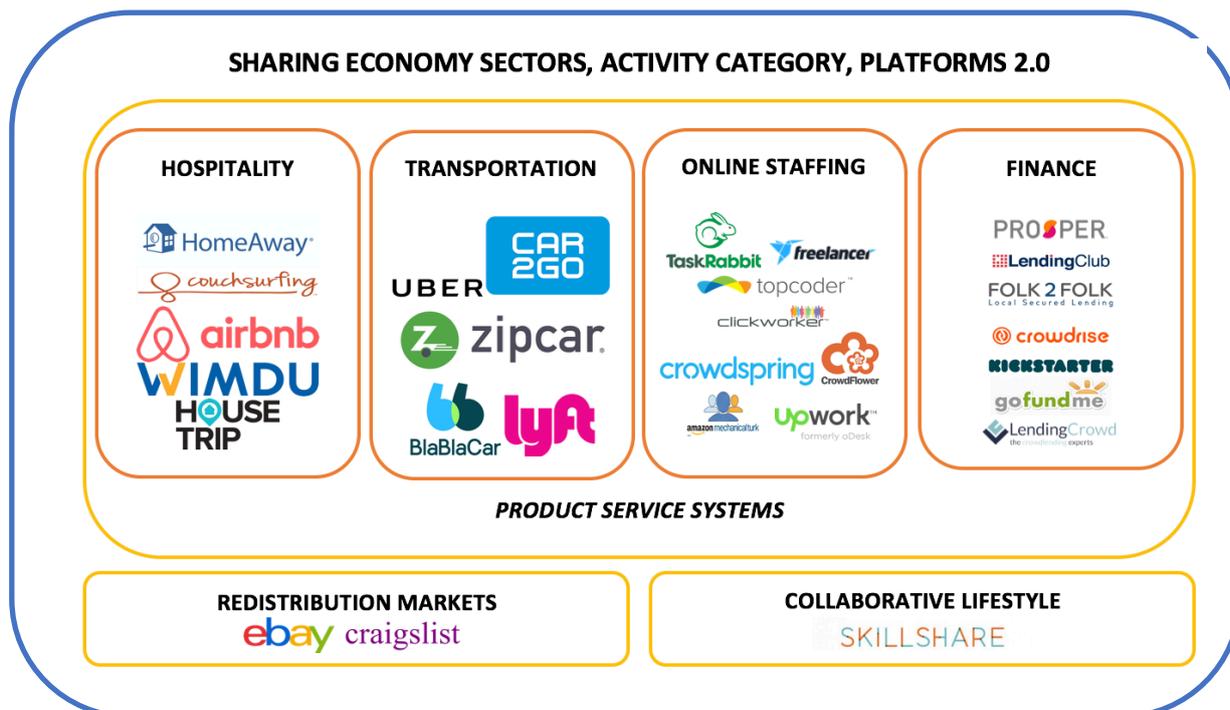


Figure 14.b.: Sharing economy sectors, activities category and platforms, elaboration from Botsman and Rogers's framework (2010)

## **2.7. Data collected from sharing economy's surveys from both workers' and employers' perspectives**

In order to have an overall vision of the phenomenon it is unavoidable to encompass the empirical side of the affair; however this is a very intricate challenge because there is a lack of conclusive data on the collaborative economy, neither the typologies of activities involved nor who earns money from them are clear.

The existing surveys suffer in particular from three problems (De Groen, Maselli, 2016; Coyle 2016) when dealing with capturing the participation in the sharing economy, first of all (1) official employment categories do not identify works in the sharing economy, the SIC codes that identify occupations barely recognize digital economy at all, key words such as "hire" or "share" are not present, as a consequence to register as a sharing economy business only the broad category of service or "other" can be selected, (2) it is not the primary or full-time occupation for most participants, (3) sharing economy is in general under-recorded and under-reported.

### **Workers' perspective**

Because of the complexity related to the measurement of data for the sharing economy, for a more comprehensive analysis of the phenomenon it is useful to implement and evaluate findings from many surveys.

One of the first study on the true size of the sharing economy is a national survey about the "*On-Demand Economy in the United States*" developed jointly by the Aspens Institute's Future of Work Initiative Efforts, Burson-Marsteller that is a global strategic communications and public relations firm and TIME.

The survey was conducted from the 16<sup>th</sup> to 25<sup>th</sup> November 2015 by Penn Schoen Berland through online interviews with 3000 American adults, the sample is representative of the United States population with demographics matched to U.S. Census, margin of error for the total general population sample is  $\pm 1.79\%$  and larger for sub-groups. The results were used to calculate the total number of Americans having participated, used, and/or offered on-demand economy services.

Figures, corrected for internet usage and demographic, show that 42% of adult population (86,5 million) have used an on-demand service while 22% of adult population (45,3 million) have offered at least one service and describe their experiences as positive, these results are also supported by the study from the same year “Freelancing in America: 2015” commissioned by Upwork<sup>28</sup> and Freelancers Union<sup>29</sup> which counts the presence of 54 millions people operating as freelancers corresponding to the 34% of the total U.S. workforce<sup>30</sup>. Talking about the latter study it shows an increase of the freelancer workforce equal to 8,1 percentage points since 2014, growing from 53 to 57,3 million at a rate three time faster than the overall workforce which in the same timeframe presents a 2.6% growth, based on these findings freelancer workers are expected to become the majority of the total workforce by 2027.

### IF CURRENT GROWTH RATES HOLD STEADY, FREELANCERS BECOME THE U.S. WORKFORCE MAJORITY IN A DECADE

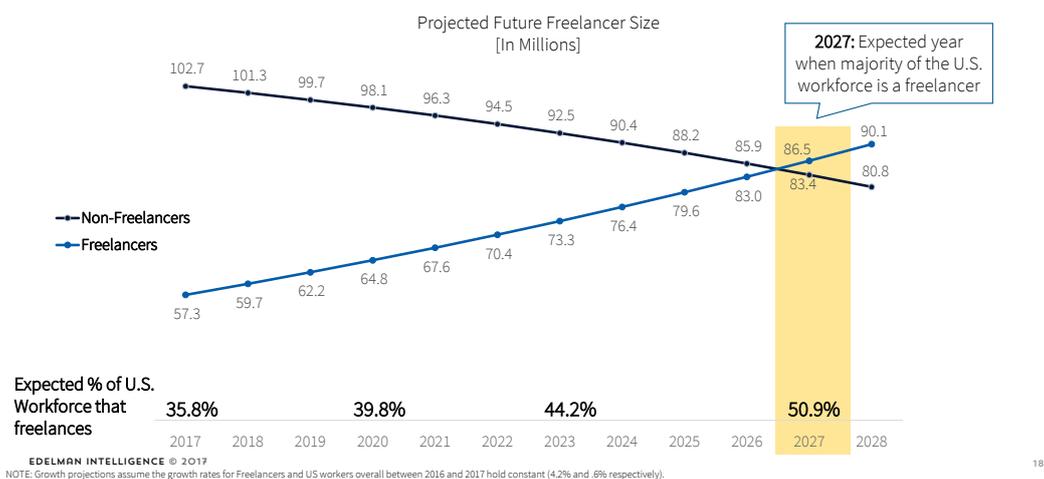


Figure15: Projection of freelancers’ growth in the United States, source “Freelancing in America: 2017”

<sup>28</sup> Upwork at <https://www.upwork.com>, a global freelancing platform where businesses and independent professionals connect and collaborate remotely;

<sup>29</sup> Freelancers Union at <https://www.freelancersunion.org>, a non-profit organization based in the United States which provides advocacy and health insurance to its members through its for-profit Freelancers Insurance Company;

<sup>30</sup> The source for the total workforce is the estimate of the civilian labor force from Bureau of Labor Statistics from July 2016;

Figure 16 provides the distribution of share of US population participating in the sharing economy divided by the sectors considered: (1) Services, (2) Ride-sharing, (3) Accommodation, (4) Delivery and (5) Car-sharing, the gap between offerors and users is quite relevant in all the categories observed in particular the largest are recorded in the accommodation and ride-sharing sectors while the littlest are found in the delivery followed by the service ones.

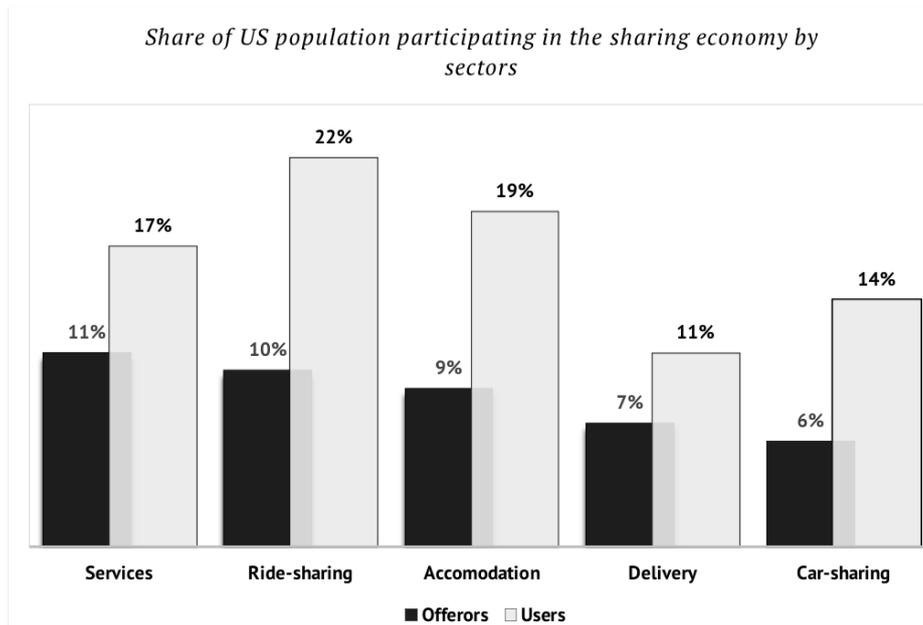


Figure16: Share of US population participating in the sharing economy by sectors, source Burston-Marsteller, Aspen Institute & TIME (2015)

With respect to the financial side, workers in the sharing economy earned an estimated **\$1trillion in 2015**<sup>31</sup> and proved to be **generally satisfied by their work situation**, the 51% of offerors said that their financial situation has improved in the past year and that it will improve in the future (64%)<sup>32</sup>, furthermore freelancers reportedly said that they are finding online jobs more easily in 2017 and that in their opinion it is generally more secure to have a diversified portfolio of clients rather than just one employer<sup>33</sup>.

<sup>31</sup> **Freelancing in America 2015:** <https://www.upwork.com/i/freelancing-in-america/2015/>;

<sup>32</sup> “Data on the Sharing & On-Demand Economy: What We Know and Don’t Know”, Aspen Institute Future of Work Initiative, 2016;

<sup>33</sup> **Freelancing in America 2017:** <https://www.upwork.com/i/freelancing-in-america/2017/>;

Despite the positive financial expectations for the future, the survey “*Freelancing in America: 2017*” reveals that more than half of the total U.S. workforce is worried about the existence of their work, however platform workers prove to be more **aware about the impact of automation on the job market transformation** leading them to a proactive attitude: the 65% of full-time freelancers asserts to update their skills in order to keep their competitiveness in the market.

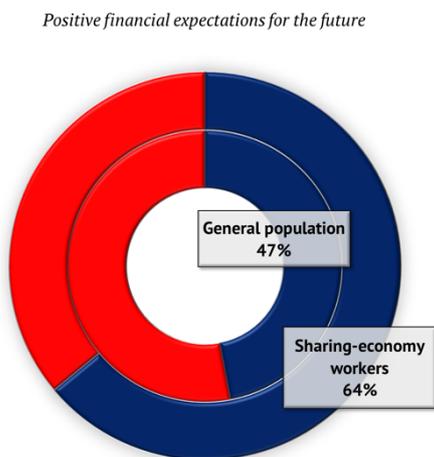


Figure17.a.: Positive financial expectation for the future, personal elaboration based on Freelancing in America: 2017

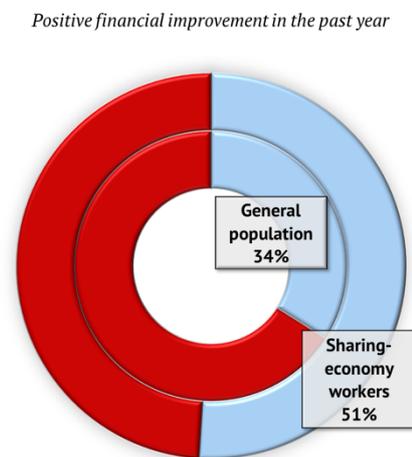


Figure17.b.: Positive financial improvement in the past year, personal elaboration based on Freelancing in America: 2017

Offerors expressed some **concerns**, they believe that they should be given more benefits (72%), agreed on not having the same financial safety as full-time workers (68%), the 62% believe that employers should provide workplace education and training, furthermore more than three out of four respondents are worried about their **privacy**<sup>34</sup>. The aforementioned reflects the existing split between the preference either on **independence or security**, while the 41% referred to prefer security and benefits of working for a traditional company the 43% reported to favor independence and flexibility over the formers. Interesting findings are related also to considerations about the subject of **regulation**, almost half of the people interviewed (49%) said that on-demand economy should not be regulated by the government, bringing less security and companies competing in order to offer fair pays and benefits however the 40 percent replied that

<sup>34</sup> “Data on the Sharing & On-Demand Economy: What We Know and Don’t Know”, Aspen Institute Future of Work Initiative, 2016;

there should be the intervention of a governmental regulation to guarantee the same benefits offered to full-time traditional workers.

While the majority of offerors are engaged in the sharing economy just on a **casual basis**, about one in three (14.4 million people) stated to heavily-rely<sup>35</sup> on this economy for their income, however the comparison between the Freelancing in America surveys in different years disclose a **positive trend towards a full-time platform-employment** raising from the 17% in 2014 to the 29% in 2017, this is supported also by the driver of technology which makes it easier for people to find online freelance work.

All the polls examined agreed on the demography of the typical freelance worker, half of the participants belong to the **Millennials** generation which is leading the success of the sharing economy, polls found out that the description corresponds in the 51% of the cases to the figure of an under-35 man belonging to a racial or ethnic minority as compared to the 34 percent of traditional workers, moreover the concentration is higher on the **urban setting**.

People are increasingly participating to the freelance economy by choice, the general impression is that working on the on-demand economy is perceived as a **positive experience** by the 71% of the respondents, with merely a two percent of negative bearing, about 164 million users (80%) report that sharing platforms are saving them money and giving them access to assets and experiences that otherwise they would not be able to afford, confirming the thesis of the access-economy.

Freelancer work appears to be more respected than ever, the freelancing career is perceived as more and more positive and even professionals at the top in their industry have been starting to choose to work independently, **independence, flexibility** and **extra-income** are the three main features evaluated by people when investigating the reasons

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<sup>35</sup> The belonging to this group was guaranteed if at least the 40% of the income was earned on online collaborative platforms, meaning that it is the primary source of income or they cannot find a more traditional work, source: “*Data on the Sharing & On-Demand Economy: What We Know and Don’t Know*”, Aspen Institute Future of Work Initiative, 2016;

why people decided to workers of the online economy, in particular full-time workers are looking for flexibility and independence while part-timers are looking for more flexibility and some extra income.

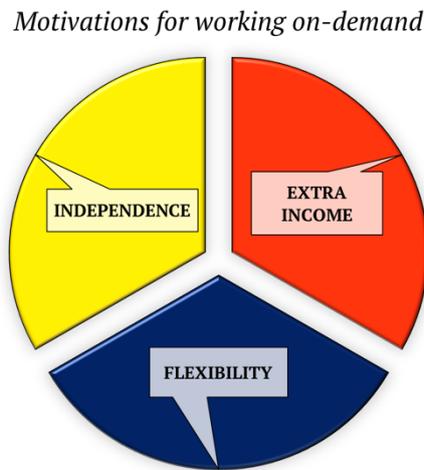


Figure18: Motivations for working on-demand, personal elaboration based on Freelancing in America: 2017

### Employers' perspective

The previous paragraph analyzed the on-demand economy from the workers' perspective but if there is a worker there is also its counterpart, "*The Workforce of the Future Survey*" by Burson-Marsteller, The Markle Foundation, The Aspen Institute Future of Work Initiative and TIME took into consideration the employers' perspectives. The study was conducted from 5 to 16 June 2016 through 800 interviews with employers defined as "*Employees or business owners who make hiring decisions for their organization*"<sup>36</sup>.

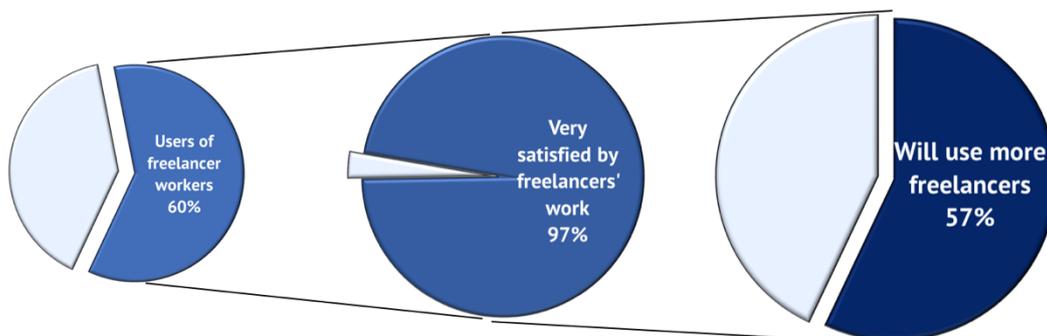


Figure 19: Employers' usage, satisfaction and expectation from the use of freelancer workers, source Burston-Marsteller, Aspen Institute & TIME (2016)

<sup>36</sup> BURSON-MARSTELLER, THE ASPEN INSTITUTE FUTURE OF WORK INITIATIVE, TIME, "*The Workforce of the Future Survey*", <https://www.burson-marsteller.com/what-we-do/our-thinking/workforce-of-the-future-survey/>, 2016;

The majority of employers proved to be **familiar** with and **favorable** towards the On-demand economy, in particular the 60% of them said to actually using contingent workers in their organizations, almost everyone replied to be very satisfied by their work of which the 57% think that they will use more independent contractors in their organization.

The great majority of employers are beginning to recognize the benefits coming from this new trend, in particular as regards lower costs and scalability, the eighty-eight percent of them feels that companies will be more oriented towards the on-demand labor market. Half of the subjects believe that in the next five years will use and provide more on-demand services, in this way reflecting an **optimistic view about the benefits** gathered from the on-demand economy such as the developing of skills to stay competitive in the labor market, a broader range of opportunities to work for more people, an easier possibility of career and a good source of income. Despite the general optimism surrounding the on-demand economy framework, the survey reveals that **companies still prefer traditional employment arrangements**, hiring full-time employees rather than independent freelancers because they are believed to be more invested in the company and to create more long-term value.

## **2.8. Regulatory issues: from bipolar to triangular relationships, the case of internet intermediaries' liability**

PwC in 2014 estimated the global revenues of the sharing economy to be around \$15 billion but to be destined to reach the amount of \$335 billion by 2025 with a total growth of \$320 billion, however there are some **major regulatory and fiscal barriers** issues which represent the most immediate and potential impediments, they need to be overcome in order to obtain the awaited results. At the moment there is a lack of a specific, tailored policy framework reflecting the **need to adjust the consumer contract law** in a more current way which take into account of how the market structure has been changing because of the raise of online platforms.

As already stated, the sharing economy is closely related to and supported by the new opportunities offered by the technological development, in particular because of the digitalization of products, services and business processes not only the quantity but also

the quality dimension of contracts concluded via online platforms has dramatically increased given rise to some possible regulatory controversy. The existing consumer contract law in the European Union's member states, deals with what can be called "*bipolar relationships*" (Busch et al., 2016) which takes into consideration only contracts between a supplier and a consumer, the problem is that this traditional framework does not describe truthfully the paradigm of online platforms because in this case there is a legal relationship between the platform and the consumer as well as between the platform and the supplier, giving birth to a "***triangular relationship***", the situation gets even more complicated because of the intrinsic fluidity of the sharing economy environment in which it is very difficult to draw some well-defined boundaries between who is a supplier and who is a consumer, if the supplier is not a business organization but a consumer himself, then the EU consumer contract law will not be applicable. At present there is no specific EU regulation addressing the legal issues raised by the platform economy, in the Communication of the European Commission "*A Digital Single Market Strategy for Europe*" (2015) one of the topic is about rules for cross-borders e-commerce, findings shows that "*one of the reasons why consumers and smaller companies do not engage more in cross-border e-commerce is because the rules that apply to these transactions can be complex, unclear and may differ between Member States Having 28 different national consumer protection and contract laws discourages companies from cross-border trading and prevents consumers from benefitting from the most competitive offers and from the full range of online offers.*"<sup>37</sup>, even if some aspects have already been harmonized, e.g. the information to be provided to consumers before entering on a contract, there are many others left mostly to each Member States' legislation, nevertheless the Communication leaves aside the subject of online platforms regulation and just deals with the one related to e-commerce, that even though they operate in the online environment do not share the same features and needs.

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<sup>37</sup> EUROPEAN COMMISSION, "COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS: *A Digital Single Market Strategy for Europe*", at <https://ec.europa.eu/digital-single-market/en/news/digital-single-market-strategy-europe-com2015-192-final>, 6 My 2015, p.4;

Exploring the opportunity for a future EU Online Platform Directive Busch et al. (2016) identifies three main topics to be covered: the first one deals with the definition of the role of the platform in the interactions, secondly duties and obligations for the platform must be defined and lastly should be clarified the situations in which platforms must be considered liable for a non-performance of the supplier.

Before going any further, it is essential to clarify the concept of **Internet intermediary**, as already mentioned the current society is namely an information society, the Internet has enabled people to directly connect to each other's fostering a disintermediation between individuals, commercial entities and public organizations, however human relationships have not completely flattened and intermediation has not totally disappeared. Online platforms themselves act as new emerging online intermediaries playing a crucial role (Yoo, 2012): they **provide and maintain the infrastructures** which enable the exchange of information and the performance of economic activities over the Internet (Sartor, 2017), in particular a report from OECD gives the following definition: "*Internet intermediaries' bring together or facilitate transactions between third parties on the Internet. They give access to, host, transmit and index content, products and services originated by third parties on the Internet or provide Internet-based services to third parties*"<sup>38</sup>, it cannot be omitted that online platforms are never mentioned in the latter document, even so the interpretation suggested offers a sufficiently wide possibility for interpretation. In conclusion online platforms represent an Internet intermediary when considering its broad meaning, however the role assumed in a specific contractual legal relationship may vary in accordance to the particular clauses settled individually case by case.

## 1. Platform role

First of all it should be clarified the role of the platform in the interactions, most platforms present themselves as mere facilitators rather than suppliers, for a question of

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<sup>38</sup> OECD, "The economic and social role of internet intermediaries", at <https://www.oecd.org/internet/ieconomy/44949023.pdf>, April 2010, p.9;

transparency the platform's intention must be stated in its terms of service, what happens in practice is not easy to be understood, analyzing the current E-Commerce Directive 2000/31, article 10 (1) states that "(...) *Member States shall ensure (...) that the service provider clearly, comprehensibly and unambiguously and prior to the order being placed by the recipient of the service: (a) the different technical steps to follow to conclude the contract (...)*"<sup>39</sup>, the duty of information disclosure is therefore confronted just on a technical perspective in this way excluding the contractual problem of determination of the parties. It could be argued that if the platform does not state clearly its limitation to have an intermediary role it should be considered as the supplier, however the Directive 2011/83/EU on consumer rights affirms that "*this Directive should not affect national laws on legal representation such as the rules relating to the person who is acting in the name of the trader or on his behalf (such as an agent or a trustee). Member States should remain competent in this area*"<sup>40</sup> turning the issue to national regulations.

A solution is offered by Article 7 of the Proposal for a Consumer Rights Directive in which is specifically cited the information requirements for intermediaries, "(1) *Prior to the conclusion of the contract, the intermediary shall disclose to the consumer, that he is acting in the name of or on behalf of another consumer and that the contract concluded, shall not be regarded as a contract between the consumer and the trader but rather as a contract between two consumers and as such falling outside the scope of this Directive. (2) The intermediary, who does not fulfil the obligation under paragraph 1, shall be deemed to have concluded the*

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<sup>39</sup> "DIRECTIVE 2000/31/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market (Directive on electronic commerce)", at <https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A32000L0031>, Official Journal of the European Communities, L 178/12, 7 July 2000, cit;

<sup>40</sup> "Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council", at <https://publications.europa.eu/en/publication-detail/-/publication/6c8e7593-7a75-4b58-b709-542f06ee7a28>, Official Journal of the European Communities, L 304/64, Vo.54, 22 November 2011;

*contract in his own name*<sup>41</sup>, following the article the violation of an information duty about the intended contractual role may rise a claim for damages.

## **2. Definition of the duties and obligations of platforms participating as intermediaries**

Even if the platform limits its role to a facilitator figure it still has some duties and obligations to comply with:

### **(a) Pre-contractual information disclosing**

In the pre-contractual phase, it may have to disclose information about the goods and/or services offered via the platform itself, imposing a duty of information both on the supplier of the service and on the intermediary;

### **(b) Conformity of the goods with advertising**

Platforms usually have an active role in the communication and advertising of the services and/or products offered, such statements will shape the consumers' expectations as referred to the quality, as a consequence it is relevant when determining whether a good or a service is suitable to be offered in the platform and so that is conforming with the contract, this subject is found in the proposal for a *Directive on the online sale of goods* (2015), Article 5 is about the "*Requirements for conformity of the goods*" particularly relevant is clause (c) stating that the goods shall "*possess qualities and performance capabilities which are normal in goods of the same type and which the consumer may expect given the nature of the goods and taking into account any public statement made by or on behalf of the seller or other persons in earlier links of the chain of transactions*"<sup>42</sup>;

### **(c) Communication role**

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<sup>41</sup> "Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on consumer rights", at <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52008PC0614&from=EN>, COMMISSION OF THE EUROPEAN COMMUNITIES, 8 October 2008, p.23;

<sup>42</sup> "Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on certain aspects concerning contracts for the online and other distance sales of goods", at <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52015PC0635&from=EN>, EUROPEAN COMMISSION, 9 December 2015, 25-26;

Platforms usually play an important role in the communications between the parties, because its intermediation in the delivering of messages it should ensure that the latter are forwarded without delay but none of the existing directives address the issue;

#### **(d) Duties towards suppliers**

Platforms not only have duties towards consumers but also towards its suppliers. The suppliers when registering to platforms have to accept the terms of use in which the platform declares its liability exclusion, agree in offering goods or services via the platform and concluding itself also a contract. However suppliers in this particular situation are also consumers because they are availing themselves of the services offered by the platforms, ergo they become *prosumers*. **Should the EU contract law protect also prosumers?** How? For example platforms to protect suppliers might ban consumers who proved not to be trustable and not respecting their obligations or warn suppliers about them, for a successful usage it is necessary to shape a trustable, working reputation system both for customers and offerors who may benefit from keeping track of the ratings of transactions with time, it is under the platform's duty to carefully manage this system because the deletion of such data may cause a dramatic loss of value for both parties so a reliable data security policy is required.

Finally a more complex issue is related to the **protection against the dominant economic power of platforms**, contracts may have clauses for instance prohibiting multi-homing, forcing suppliers to operate on just one platform, or with the so-called "best-price" term that forbid to offer the same goods or services on another platform for a better price or on the supplier's own website, in view of that it would be useful at the European Union level to consider the possibility of adding a legislation covering the topics of unfair contract terms between platform operators and suppliers.

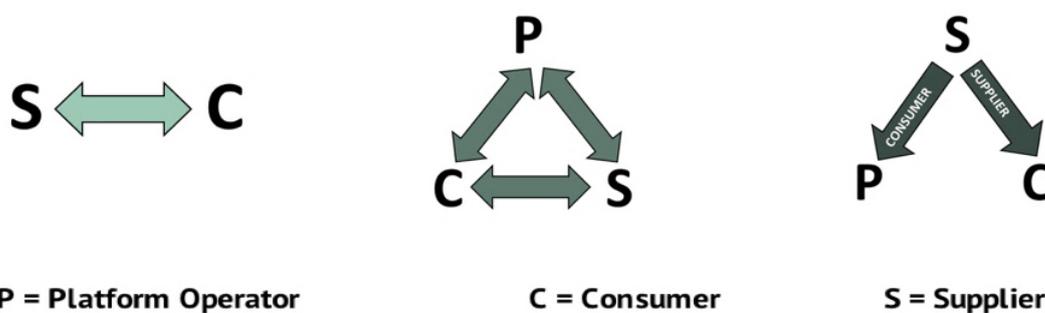
### **3. Conditions under which a platform acting as intermediary is liable for a non-performance of the supplier**

As mentioned before many online platforms present themselves just as intermediaries helping the establishment of a contractual relationship between consumers and suppliers, the aim is to have a revenue without the responsibility for the adequate performance of the contractual obligation rendered by a third-party supplier, with the pertaining precautions there is no objections against this model, however there might be some exceptions in which the platform operator may have to respond for a non-performance by the supplier, this possibility may happen every time that for the consumer is difficult to discern the contractual counterparts, hence the platform itself is perceived as the actual supplier in the relationship and not as a third-party intermediary. For the contract law an essential assumption is that if somebody presents itself in a way that the client's reliance for the performance is justified, the party that gave a reason for such reliance should be held liable in one way or another, so if a platform do not disclose that it is acting in the name of or on behalf of another party Article 7 (2) of the *Proposal for a directive of the European Parliament and of the Council on consumer rights* states precisely that “*the intermediary, who does not fulfil the obligation under paragraph 1, shall be deemed to have concluded the contract in his own name*”, presenting a “**primary liability**” which is the most radical solution that sanctions directly the platform for the lack of performance. In general the platform operator may be held liable if consumers reasonably think that the platform has a control over its suppliers, this might occur in various situations, for instances when the content of the contract between consumer and supplier is almost totally regulated by the platform, when payments mechanisms are provided by the platform or when the contractual relationship can be concluded or initiated only through the technical facilities offered by the platform. A second possible scenario is presented when consumers are expected to realize that the platform is just a third-party intermediary different from the actual supplier with a performance obligation, in this case there is a “**secondary liability**” which is less severe, it implies a duty to make sure that the supplier performs and a covering for the damages if in the end it fails.

In conclusion ratings and reviews play a relevant role in the regulatory framework of online platforms however this requires to be implemented by a self-regulatory

mechanism which guarantees a certain level of transparency and some minimum quality standards.

In summary the emerging sharing economy, which develops mainly through online platforms, has been giving rise to the necessity of new regulatory issues requiring an adaptation of the current EU contract law, more suitable solutions must be developed because of the birth of the so-called triangular contractual relationships which are a unique characteristic deriving from the platforms' business model.



### 2.8.1. A liability issue

It is a true statement to say that legal systems impose sanctions on users for unlawful activities and this is valid not only in the offline world but also in the online one, **Internet users and intermediaries are not free from the consequences of their actions when they are violating a legal regulation.** Sanctions against users may be triggered by illegal activities initiated by users-themselves through the platform infrastructure, the same may happen as well to intermediaries acting unlawfully, notwithstanding there is a third option: **a platform operator may be charged with illegal activities which are initiated by their users,** which constitute a secondary liability. **Secondary liability** is a term used in common law to cover all the cases in which liabilities are due to illegal behaviors of a third party, the intermediary is not the active subject but represents the party providing the context or infrastructure enabling or facilitating those behaviors. Beginning with the prevailing assumption that online platforms are seen as active contributors for the creation of a socially positive infrastructure communication, **the issue is to**

**what extent they should be considered responsible for the misuse of their infrastructure by their users.** Different reasons for not making intermediaries responsible for their users' actions may be distinguished: (a) it may negatively interfere with the platform capacity to maintain and develop its activity; (b) it may be incompatible with the business model; (c) it may induce to excessive behavioral constraints which may lead to a **collateral censorship**. Platforms may react to the threat of a secondary liability by excessively restricting the sphere of action of its users, in this situation there is a collateral censorship which occurs when party A is regulated in order to control party B (Balkin, 2014), legal regulations shall impose sanctions in order to deter unwanted, unlawful activities however sometimes even legal, socially valuable actions are discouraged.

It remains true that, given the dominant economic position they are gaining, there are still the basis to justify the imposition of a secondary liability, first of all because they may offer a possibility for victims to have a compensation when dealing with not reachable or insolvent counterparties, in addition it may induce platforms to ensure prevention actions and to mitigate or terminate unlawful behaviors, in fact online platforms have the responsibility to make sure that their infrastructures are not used to commit crimes and to protect their users by **fostering the prevention against the spreading of illegal contents**, a swift removal of the latter must be supplemented by some adequate safeguards. Platforms must have the appropriate technical means allowing to identify and remove such contents, in particular Article 14 of the *e-Commerce Directive 2000/31/EC* articulates the only conditions under which an online service provider can benefit from the liability exemption, namely: *“(a) the provider does not have actual knowledge of illegal activity or information and, as regards claims for damages, is not aware of facts or circumstances from which the illegal activity or information is apparent; or (b) the provider, upon obtaining such knowledge or awareness, acts expeditiously to remove or to disable access to the information”*, an ambiguous circumstance may occur when, through the usage of proactive measures of detection, a platform gets to have the knowledge or awareness of illegal activities

or information in its environment which, following Article 14 (a) that could lead to the loss of liability exemption, however clause (b) of the named article gives the possibility to still benefit from the exemption but conditional upon the **expeditiously act of removing or disable the access to the implicated materials.**

The prevention of the spreading of illegal contents online is important because otherwise can undermine trust and confidence in the digital environment, making even more complex the further development of a global platform ecosystem and of a Digital Single Market. Despite Article 15 of the afore-mentioned e-Commerce Directive reports that *“Member States shall not impose a general obligation on providers, (...) to monitor the information which they transmit or store, nor a general obligation actively to seek facts or circumstances indicating illegal activity”* which may appear as a contradiction but is in this context that the European Commission in its *Communication on online platforms* (2016) committed itself to the maintenance of *“a balanced and predictable liability regime for online platforms”* as a framework supporting digital innovation across the Digital Single Market. **Platforms for their part should be aware of the legal framework in which they operate, being prone to cooperate with law enforcement and competent authorities in general when required by ensuring to be quickly and effectively contacted for requests to remove illegal contents and to alert law enforcement to signs of online criminal activity.**



## CHAPTER 3 – THE HUMAN CLOUD

Using a metaphor, each of the chapter so far can be thought as a lens moving closer and closer to the digital work panorama; the first chapter dealt with the subject of employment-transformation from the broadest perspective, conducting to the discovery of a whole new world of possibilities offered by the introduction in people’s everyday life of the Internet and the ICTs, undertaking the latter notion the second chapter narrowed things down on the topic of the sharing economy, a recent digital phenomenon which in turn can be articulated in many sections, among them the present chapter is going to peruse the one that was previously named “online staffing”.

### 3.1. From the concept of online staffing to the human cloud’s one

**Online staffing** is one of the four macro-sectors to which the sharing economy is unfolding its path, as reported by the Staffing Industry Analysts<sup>43</sup> it is “*the fastest-growing segment of today’s technology-fueled gig economy*”<sup>44</sup> with doubled revenue in 2016, platforms belonging to this landscape can generally be classified as digital marketplaces where people looking for a job are matched with those who are looking for talents to be hired, they act as **online intermediaries facilitating the work arrangements between the two counterparts, taking care of all the necessary stages from the initial establishment to the final payments which occur entirely through the infrastructure conferred by the platforms.**

The terminology *online staffing* though is an understatement because it seems to imply that the only activity performed by the platforms is enabling the hiring of usually contingent, specific workers, the scope is in reality much greater and this is why the most

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<sup>43</sup> **Staffing Industry Analysts (SIA)** is a global advisor in the fields of staffing and workforce solutions, the range of its research covers all the categories of employed and non-employed including temporary staffing, independent contracting and other types of contingent labor, corporate website: <http://staffingindustry.com/corporate-overview/>;

<sup>44</sup> “*The Human Cloud, the Gig Economy & the Transformation of Work*”, at [https://www.google.it/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwiAk\\_7U8rTaAhWGUhOKHaE7AX4OFggoMAA&url=https%3A%2F%2Fwww2.staffingindustry.com%2Fsite%2Fcontent%2Fdownload%2F246507%2F9128496%2FHumanCloudSummary2017\\_170912.pdf&usg=AOvVaw3BoCWgeTwVW9aZB7C4uENM](https://www.google.it/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwiAk_7U8rTaAhWGUhOKHaE7AX4OFggoMAA&url=https%3A%2F%2Fwww2.staffingindustry.com%2Fsite%2Fcontent%2Fdownload%2F246507%2F9128496%2FHumanCloudSummary2017_170912.pdf&usg=AOvVaw3BoCWgeTwVW9aZB7C4uENM), STAFFING INDUSTRY ANALYSTS, p.2, 2017;

appropriate terminology to be adopted for work intermediation models allowing work arrangements of manifold sorts is **human cloud**.

In every digital labor marketplace, regardless of its specific characteristic, can be identified three figures who are obligatory premises for the effective functioning of the business, namely:

1. **Companies or clients who need to have work done**, they might be looking for a variety of different typologies of workers such as project-based workers, hourly workers, remote or local workers, temporary workers and so on;
2. **Online platforms**, they are the one proposing themselves as online intermediaries, offering the most possible adequate infrastructures to achieve efficient work arrangements. Sometimes they also take care of breaking projects into micro-tasks to be accomplished by different subjects which then will be combined and the whole finished work delivered;
3. **Workforce of virtual workers or independent freelancers**, they represent the figures actually performing the job, they may have a variety of occupations and skills which ensures the possibility to cover a wide range of jobs, furthermore being operative in the internet means that there is no geographical or physical limitation. Usually each worker has its personal profile, a portfolio of its previous works and a rating history useful for a possible hiring.

Through the examination of many pieces of literature (see SIA 2017; Carmel et All. 2013; Corporaal, Lehdonvirta 2017), and combining them together it is possible to obtain three models comprehensive of all the typologies of human cloud platforms, varying mainly for the number and selection of suppliers involved, for the tasks' size and its complexity. The first category is actually out of the scope of this elaborate, however for the completeness of the information a brief description follows, the subjects are **online services**, typical examples are Uber or AirBnb, usually platforms belonging to the Hospitality and Transportation sectors, such platforms offer a freelance workforce delivering a product or

service which require a mediation in-person, as a consequence trade is local and work is on-site (Oyer 2016). The other two typologies on the other hand are digital marketplaces connecting buyers with one or more freelancers operating on-demand, work is performed remotely and one of the intermediary's task is to facilitate the contractual affairs.

### 3.2. Online crowdsourcing model

**Online crowdsourcing platforms** are the second sort heeded, buyers source works they need to have done to a largely undefined group of individuals in fact, as the appellation itself suggest, the leading role is taken by the **crowd**.

If traditional organization in order to address problems and exploit innovation opportunities rely on well-coordinated environments for the collection and harmonization of specialized knowledge, the utilization of a loose, decentralized but well-functioning crowd has the benefits of exposing questions to a multitude of individuals with a variety of different personal skills, experiences and perspectives, who can produce their own distinct elaborations, moreover the scale at which they can profitably operate exceeds by far the one of the most complex, big global corporations. Crowdsourcing platforms **allow people to freely choose which problems to address**, an opportunity which is not often present in the corporate framework where each employees' role and responsibilities are clearly defined and the seeking for challenges outside the purview is sometimes not only discouraged but even punished. Crowds are more **intrinsically motivated by curiosity and energized by the pure desire to learn**. Lastly, from the financial side crowds are more cost-effective.

Not every kind of challenge would benefit from the online crowdsourcing model, the latter proved to be **the most suitable for complex and creative problems where the solutions and skills requirements are unknown and need some experimentations**. Typically, the client is not purchasing a labor relationship but an outcome, as for instance a service output, that is performed by independent workers operating at their own will, in particular the article "*Using the Crowd as an Innovation Partner*" (Boudreau, Lakhani,

2013) from Harvard Business Review distinguishes four clear typologies of crowdsourcing platforms each of them with a discrete *modus operandi* best suited to a specific challenge.

### **Crowd contests**

The first platforms investigated are the one developing through contests. From the companies', and in general buyers' perspectives, the steps to be taken are first of all the **detection of a specific problem to be sourced** and possibly split into many subparts, then a cash price or other forms of incentives should be offered in order to catch the suppliers' attention, tempting them to submit solutions. Suppliers on their side must be able to choose contests best suitable for their own capabilities, enlarging in this way their probability of being awarded the project.

Each of the contestants is actually running some independent experiments on their own, whose outcomes will then be compared and their variations analyzed, contests in fact work the best when the combination of skills or technical approaches are not obvious and the final solution would benefit from multiple attempts. A large variety of submissions may be very helpful for the assessments of possible technical limitations, which otherwise, in the traditional organizations, would be much more expensive both on terms of time and money, one of the greatest pro for buyers is the possibility to choose among many completed projects the one which is, or appears to be, the most appropriate for the issue proposed.

The areas in which online contest platforms maximize their capacity are various, beginning from highly challenging technical, analytical and scientific issues, to aesthetic, creative, design ones where subjectivity has a leading role for the solutions' evaluation.

As regards the former fields some examples are InnoCentive, TopCoder, Kaggle while crowSPRING, 99designs and Fiverr.

### **Crowd collaborative communities**

Crowd collaborative communities just like contests exploit the power of the crowd, however a significant difference lies between them, if in the latter each contribution is taken as a separate entity in order to maximize the variety of submissions, in the former

**outcomes of multiple contributors are aggregated together in order to form a value-added, coherent whole.**

Like in every traditional organization, also online collaborative communities must assess the elements that need to be present in the final solution and the means by which accomplish them. The strength of the communities lies on its diversity while the weak-spot is the lack of cohesiveness, however this can be turned for the benefit of the end-result because as already mentioned, it draws participants from all over the globe, belonging to different working environment, habits, industries with their own specific interests and motivations.

Due to the complexity of management, examples such as Wikipedia shows that these communities work the best when dealing with projects' whose arrangements are relatively simple, furthermore to facilitate the coordination is required an extensive tasks modularization, standardized routines and communication technologies, leaving space for little decision making and little further coordination.

Each organization can ideally form its own community but it is generally very difficult to realize them in practice because it is very consuming in terms of time and resources, hence they usually involve a modest amount of coordination and the execution of simple tasks, nevertheless crowd communities unveil their greatest values when members are free to accumulate and recombine ideas and information. Sectors in which they can be best used are customer support communities, wikis, open-collaboration projects and FAQs, some examples are Wikipedia, Google's Android operating system, openIDEO, Facebook's translation system.

### **Crowd complementors**

Crowd-powered complementors are probably the most peculiar, **their aim is to transform an existing product, service or technology relying on platforms that should produce some complementary innovations**, which are relevant because they may not only boost revenues but also expand the demand itself, they have as well a wide scope, usually they do not address just one precise issue but all the matters regarding a core product.

Crowds as complementors' makers are profitable only when a great number of complementary goods are required for the better exploitation of the product's potentiality, otherwise a traditional organization or few partners may be enough.

Some of the companies employing the Human Cloud for the development of its products' complementary assets are Facebook, Microsoft and Apple whose systems are designed to foster the adoption of both core products and complementors due to the positive interrelations between them.

In general **crowdsourcing platforms allow to source projects to a large, undefined group of people, called precisely a crowd, that complete the task with incentives, being monetary or not, to participate.**

### **3.3. Outsourcing platforms**

The last category identified by Boudreau and Lakhani (2013) are Crowd Labor Market, however because of its intrinsic characteristics it is considered in this elaborate as a stand-alone category called "**Outsourcing Platforms**". Online outsourcing is becoming an effective alternative to traditional employment, bringing work directly where freelancers are located, it is defined in the book "*The Global Opportunity in Online Outsourcing*" as "*The contracting of third-party workers and providers (often overseas) to supply services or perform tasks via Internet-based marketplaces or platforms. These technology-mediated channels allow clients to outsource their paid work to a large, distributed, global labor pool of remote workers, to enable performance, coordination, quality control, delivery, and payment of such services online.*"

Outsourcing and crowdsourcing platforms both interest in the initial phase a crowd of people, both of them establish that buyers' search starts with an open-call to all the potential suppliers, however in the successive phases their paths separates, if in the latter the conclusive buyer-supplier relationships are one-to-many, the former relies on **one-to-one** contracts, therefore sourcing projects with limited scale and scope to individuals or small providers. The aim is to match specific buyers with specific providers, creating the conditions for a perfect union.

If complex, creative problems were the most suitable topics in the previous circumstances, on the other hand outsourcing platforms work the best when dealing with **well-established, particular categories of work whose deliverables and skills requirements are accurately, clearly set and for tasks easily measurable and identifiable.**

In the report “*Platform Sourcing: How Fortune 500 Firms are Adopting Online Freelancing Platforms*” (2017) Corporaal and Lehdonvirta articulate two sub-divisions, being **Microwork platforms** and **Online freelancing** platforms:

### **Microwork platforms**

Microwork platforms are best suited for **simple, repetitive tasks**, buyers usually source projects of very small scale in which little training and coordination are required. Their strengths are the **speed**, the completion usually requires just few minutes or seconds and **low managerial overheads**, allowing clients to have large quantities of standardized work rapidly completed without much investigations in fact the mechanism is based on **self-selection**, workers can evaluate and pick out tasks they are able to perform well given their capabilities, furthermore the general task coordination occurs automatically through algorithmic management.

The most common tasks are: **transcription, categorization, Internet search and content generation.**

Because of the ease and the little expertise needed, microwork platforms generate small financial remuneration, however precisely for these peculiar features, it may represent a valiant solution for boosting the economic development of poor people at the bottom of the work pyramid, many of the jobs can be completed just with online searches, hence entry barriers are very low allowing the employment of unemployed or underemployed people but even of marginalized people in remote locations while cutting costs for the demanding companies (Gino, Staats, 2012).

Some micro-sourcing platforms are: Clickworker, Microworkers, CrowdFlower, Mechanical Turk, Samasource.

## Online freelancing platforms

Online freelancing platforms are the second example of outsourcing platforms, they address **sizable projects** with a **high level of complexity**, in fact they are specialized on **knowledge-intensive tasks**. The oldest among the Human Cloud models enables specific hirers to enter into contact with workers with specific characteristics who are typically freelancers, their fundamental peculiarity is that what is transacted is not an outcome but a work arrangement in fact they are completed through the put in writing of a **direct legal relationship** between the two parties.

The level of expertise and the specific skills place some **high entry barriers** for providers who, in order to successfully apply, need to have already gained some experience and sometimes even to have an advanced educational background, just like microwork platforms they may represent a profitable opportunity for marginalized people, but differently from the former a brief training is not enough to compete.

Online freelancing platforms focus on **quality** of the **matches**, of the **coordination** and of the **evaluation**, to foster even more the quality-orientation some of them introduced premium enterprise services engaging themselves in the direct assistance of hirers, insuring workers' classification compliance and a qualified coordination management, the latter is not anymore feasible via algorithms but the complexity of the projects necessitates a human government. On the bright side a high financial remuneration is guaranteed.

The most common contractual process starts with buyers posting a project on a platform, then freelancers submit their proposals which are evaluated and followed by the conductions of further interviews with the more interesting candidates, as the skills required by buyers increase the latter prove to be willing to spend more resources on gathering information about the sellers' work history (Barach, 2015), eventually, when the client choses the one perfectly fitting its standards, terms are settled and the platform helps in forming a contract. Once that deliverables are ready they are submitted through the platform, the final step is the evaluation only after the final approval and payment.

Online staffing platforms are suitable for any kind of work that can be sourced and mediated online, among them the most frequent are software development, creative and

graphic design, software testing, Search Engine Optimization. The most famous platforms are Freelancer, Upwork, PeoplePerHour.

Microwork platforms and online freelancing platforms sometimes overlap because **medium complexity tasks** such as writing blogs, typing data, product description, requiring both basic literacy and numeracy and in addition some soft advanced skills may be classified either as microwork or online freelancing depending on time required to complete tasks, level of skills and remuneration.

In general activities performed in the Human Cloud environment can be classified as follow:

<b>LEVELS OF COMPLEXITY</b>			
	<b>Low complexity</b>	<b>Medium complexity</b>	<b>High complexity</b>
<b>SKILLS</b>	Basic literacy and numeracy	Basic literacy and numeracy plus some degree of soft skills	Specialized technical knowledge, vocational training or advanced educational formation
<b>TASKS</b>	Sign-up websites; search and click; Bookmark webpages; Watch videos; Vote; Download and install app;	Post comments on blogs, websites, pages; Write reviews; Write articles; Translations; Sales and marketing; Design; Customer service;	Web and software development; Network and information systems; Engineering; Business; Accounting; Human Resource;

*Table 2: Level of complexity of Human Cloud main activities, personal elaboration on FAYOMI T., KEUK S.C., IMAIZUMI S., IPEIROTIS P., PARADI-GUILFORD C. M. (2015)*

### **3.4. Open services and managed services platforms**

The essence of Human cloud’s platforms is to connect employers and workers, however not all of them adopt the same management model for the relationship of the parties, the two primary archetypes are: open services platforms and managed services platforms.

#### **Open services platforms**

Open services platforms offer the actual online environment where buyers and suppliers can directly connect and negotiate, usually employers pay the platform a fee to post their

job proposals, then select workers on the basis of their price, being either per hour or per job, or on their reputation. They do not provide any type of technical equipment or additional infrastructure so that virtual workers must use their own computers. Target clients belong to many different categories, from individuals, SMEs to large multinational corporation.

Some platforms may furnish additional services, for instance online training and allocation helping freelancers to improve their credibility and as a consequence simplify the selection for hirers or providing the latter with reports on the performance based on screenshots and keyboard and mouse activity.

The major outsourcing platforms such as Upwork, Freelancers, Amazon Mechanical Turks all belong to the current category.

#### **Managed services platforms**

As opposed managed services platforms directly manage the relationship with both hirers and providers, these activities include finding and hiring the individual workers and also performing quality control. Furthermore they usually provide freelancers with IT infrastructures and training in hard and soft skill. In this case the target audience is narrower, limited to mainly large multinational corporations.

### **3.5. The risks of project failure and intellectual property leakage**

Businesses for definition must face some risks in their life-cycle, in the particular circumstances of the human cloud framework, regular challenges that are confronted when dealing with physically present workers, partially shape their structure adjusting to the new context.

The first concern is **project failure due to non-completion**, its odds is not equal in all of the platforms observed in fact it may be influenced by many factors, for instance in online crowdsourcing platforms there is a general lower risk due to their inward redundancy: having an entire crowd performing for a unique project means having a multitude of different suppliers devising only one job, just one or a very small quantity of failing workers has from little to no impact on the final outcome. However a twist is experienced

when a project is assigned to just a single or few freelancers, as in the case of online outsourcing platforms, **a provider's non-performance leads directly to a delay of the completion**, which may be critical in the case of projects where timing is essential. Clients may threaten the use of negative feedbacks or financial penalties which nonetheless do not represent solutions granting the success, not surprisingly many of the projects in the human cloud are low budget with no tight deadlines. The subject responsible may be considered either the end supplier or the platform itself, in the latter condition there is a greater leverage of threatened penalties and legal means against an underperforming freelancer. Employers in general feel very anxious when delegating to workers with who is possible only a virtual contact because it implies a general **loss of control** over both the work and the manner in which it is performed, issues which are normally mitigated by formal employment or contractual relationships.

A second worry is the possibility of **intellectual property leakage** (Felstiner, 2011), buyers both in the offline and online frameworks are required to take a leap of faith when relying on a new supplier, though in the human cloud the pressure is accentuated because fundamentally the trust is given to a virtual, distant and maybe foreign person. The risk of leakage varies greatly across models, for instance it is mitigated when microwork is involved because usually tasks are split to such a level that the larger project is unfathomable. In contrast when crowds are involved in highly skilled jobs, the risk rises in fact in order to be able to carry out successfully the assignments suppliers need to have access to all of the project-related information, this is particularly pronounced in collaborative communities and complementors while in the contests' framework the problem is often more generalized and free from any further company-related details. To lower the intellectual property-leakage risk many platforms impose new suppliers to sign a legal agreement envisaging nondisclosure and non-compete clauses, some other means of prevention are the nondisclosure of the buyer's identity and the suppliers' education, moreover platforms directly responsible might invest heavily in means to safeguards leakage violations, an example is the introduction of background checks which however entails additional costs for the buyer.

### 3.6. Four models for managing platforms

Attempting to overcome those obstacles, human cloud platforms have developed their business models following four main paths which are described in the article “*Managing the Human Cloud*” from the MIT Sloan Review (2013), gathering together all the above-mentioned platforms. The first category is the **Facilitator Model** which **address the transparency problem** by adding not only features allowing to reduce the suppliers’ anonymity giving access to a fair amount of information for instance showing off portfolios, earnings history and standardized tests to certify abilities but also sustaining more transparent workflows through, among them, the creation of project milestones, status reports and virtual dashboards to manage team of workers for more complex projects. In the facilitator model virtual workers and clients are usually connected through bidding processes which is suitable for any kind of service deliverable online, for these reasons it is the model usually utilized by online staffing platforms such as Freelancer and Upwork. The buyer’s trust is placed in the suppliers themselves while project governance is supported by the tools offered but, in the end, lies on the demanders’ shoulders, project governance is left totally to the buyers also in the case of the **Aggregator Model** which however establish the platforms as the trust place. Aggregators are the best solution for buyers needing **simple repetitive works** requiring no coordination, they provide an infrastructure where projects consisting of large number of microtasks can be outsourced to a multitude of suppliers willing to perform them for just few cents. Microwork platforms are situated in this model which is the best for “*human intelligence tasks*”<sup>45</sup> which do not require any specific expertise or knowledge but involve some kind of human judgement which is not automatable such as transcription, internet searches and all the other activities falling in the low complexity range.

The third model interests all the platforms belonging to the Crowdsourcing group, in fact the **Arbitrator Model** represents the best solution for highly unstructured, difficult to evaluate works requiring specific expertise and training and whose outcome’s quality needs to be evaluated against many alternatives. Arbitrators provide **supplier redundancy**,

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<sup>45</sup> It is the appellative used in the Amazon’s platform MechanicalTurk;

allowing the access to a community of skilled workers who can get engaged via competitions or contests, then hirers can choose among the multiple deliverables received and pay just for the most valuable. There is a direct relationship of trust between buyers and suppliers, however the project governance is provided by a joint action of the platform and the clients. The fourth and last model is **Governor model** which is the one dealing with more complex projects requiring a high level of management and coordination. Platforms employing the Governor system can be thought as online freelancing platforms offering premium services, both the employers' trust and the governance lie on the platform, they are granted thanks to the employment of a "combination of human project managers on-staff and a sophisticated software-enables framework for monitoring and coordinating", the client is handled with many attentions from the first step, information about specific project requirements are collected and each tasks completion is looked after from beginning to end. **Governors are managed services platforms**, contact between buyers and sellers is managed directly by the platform which assumes the responsibility for every project-related risk.

Facilitator, Aggregator, Arbitrator and Governor are the four business models to take into

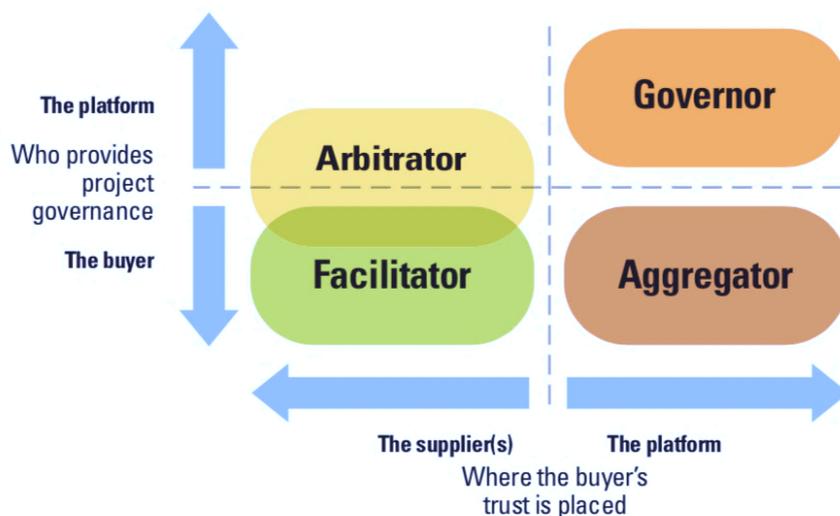


Figure 20: Human cloud's business models, source CARMEL E., KAGANER E., HIRSCHHEIM R., OLSEN T., "Managing the Human Cloud", 2013, p.27

consideration when judging the opportunity of sourcing a project via human cloud, clients need to make a careful evaluation of all the variables involved to exploit the system successfully, namely:

- **Number of suppliers;**

- **Interdependence among suppliers;**
- **Supplier expertise and technical skills;**
- **Project and pricing terms;**
- **Coordination;**
- **Quality control;**

Each one of them belongs to a specific phase of the project, clients in fact find really helpful to think at a human-cloud-sourced project as a particular typology of outsourced initiative hence there are four main steps framing the overall duration of the plot.

### **Architectural phase**

Like every project, for human cloud ones the first phase deals with the building of the architecture of the overall project, defining key dimensions for the future engagement. The variables involved are the number, interdependence and expertise of suppliers. **Supplier** is the buzzword, they are the executive party of the relationship, so it is of vital importance to choose the model getting the hirer in connection with workers able to profitably complete the tasks. Except for the Facilitator model, all the others involve multiple suppliers, meaning varying levels of interdependency and managing tasks with different levels of complexity. Platforms offer three main typologies of mechanisms (Kässi, Lehdonvirta, 2016) for the match between buyer and seller of service:

1. **Supply-side mechanism:** workers post their *curricula vitae* online on their profile, including the minimum wage requested, then employers bid for the workers' attention by contacting them with a proposal;
2. **Demand-side mechanism:** employers are the passive-side, they post detailed projects or tasks online and workers are the one bidding by posting their resumes and wage requested;
3. **Spot markets:** it is the extreme commodification of labor, usually found in microworks platforms, pricing a task content are fixed, the first supplier to apply automatically win the task with no-negotiation phase.

A premise for buyers is to decide in advance which projects would be more profitable to source out rather than perform in house and eventually how to split them in smaller sub-tasks.

### **Engagement phase**

Once the category of target-workers has been set, how the selection is carried forward depends on the business model, there are three main typologies: **self-selection**, suppliers decide whether to apply to a posted project on the basis of awards and conditions offered, it is usually adopted by the Arbitrator and Aggregator models, conversely the Facilitator model establishes the **direct selection** of suppliers on the part of clients, proposing a more traditional approach, while the Governor entrust the **platform itself** for the management of every activity related to the suppliers' selection. Once the final selection has taken place **projects and pricing terms** need to be settled in order to conclude the contract. In models involving a multitude of suppliers with none or very low interdependence, namely the Aggregator and Arbitrator, terms and conditions are established only by the clients, on the other hand a negotiation is present both in the Facilitator and Governor examples, however different subjects take the leading roles: the former one involves a direct bargaining between suppliers and buyers while the latter see the platform as the direct interlocutor with workers. All of the four models comprise the payment of a fee for the job done, letting freelancers free of choosing their own pricing, the only exception is the Governor in which pays are settled by the platform.

### **Operational phase**

The determination of suppliers and terms of contract is followed by the truly executive part of the transaction in which the project realization is put into practice, signifying also **workers' coordination**.

A client-worker flow of information is present in all of the models except for the Governor model where the platform acts as a spokesperson for the hirer side, the high interdependency places many burdens on the line and sometimes envisages a human management layer assuming full responsibility. The lowest level of coordination is

required in the case of microtasks whose low level of complexity do not usually requires any further performance explanation. Very similarly to the traditional world the Arbitrator and Facilitator models experience an ongoing confrontation between the two parties, being a buyer and one or more suppliers, until the desired outcome is obtained.

### **Quality control phase**

The last step before the payment can take place, is **ensuring the quality of submitted deliverables** that must comply with terms and conditions previously fixed. Facilitator and Aggregator models puts the emphasis on the quality of respectively one or multiple deliverables; the former see hirers interacting with just one freelancer at time, so each project is evaluated singularly and the necessary expertise must be present in-house; the latter relocates quality control problems to the massive scale, overseeing trivial tasks could be very challenging when in need to check thousands of them, to easier the process some platforms offer tools such as *test-tasks*, rejecting failing workers. A different situation is the one of platforms belonging to the Arbitrator model, the intrinsic redundancy allows hirers to choose from multiple deliverables addressing the same scope and to select the one best fitting its requirements. Lastly the Governor, as already stated, relies on the platform which can freely apply the methods that believes to be the best for each unique project.

### **3.7. Human cloud's distinguishing factors**

In the second chapter, requirements for a platform to be a collaborative economy platform were identified as *“the provision of the opportunity for individuals to trade under-utilized assets through platforms enabling a better coordination between strangers, through the utilization of information technologies which help to pursue the effective match between supplier and consumers and might also favor offline activities”*, human cloud platforms represent a specific sub-category, hence they share the quoted features that with little effort can be found in a new form. First of all **technology** is most important as ever, ICTs enable to conduct transactions through the internet or internet-enabled devices, such as smartphone apps, with no regards to geographical location or time, freelancers are

usually expected to have their own equipment to complete jobs, which is the second distinguishing factor. A **better coordination between strangers** which would have otherwise struggled to connect is guaranteed by the management of the relationships from the start, sourcing decision, to the end, payment, through the platform's own infrastructure, trust issues related to the affiliation with unknown people is mitigated by a reputation system based on user ratings that should be helpful in the evaluation of suppliers. The opportunity to **work flexibly** with no fixed hours or time is the last critical characteristics, allowing people to manage time to meet specific demands permits the implementation of technical skills and expertise of people marginalized by traditional working practice such as the classic 9 to 17, 8 hours shift.

Human Cloud usage precisely because of its specific characteristics promises to have remarkable effects in the long term, traditional white-collar jobs are scattered into a multitude of discrete tasks and projects are sourced to a *cloud* of willing workers offering their knowledge through an internet connection, it might lead to the eventual elimination of skills shortage addressing the problem of unemployment and creating a meritocratic environment where workers are rewarded solely for their outputs.

### **3.8. Online Labour Index**

*“Online platforms play an ever more central role in the online world hence in social and economic life”* states the European Commission in a 2015 paper, inferring the recognition on every level of the prominent role of online platforms, nevertheless **none of the existing economic statistics is a good indicator for the online human cloud economy because they fail to capture both its overall range and to distinguish its impact** from the one of other activities. Why is there such a bias? Why is the value of digital activities and investments so prone to be mismeasured? The answer is not simple, a first issue concerns the nature of activities carried out online, they are basically intangible, not directly involved with physical production conversely, they consist of development, marketing, design whose values is more subjective hence, harder to establish. A major bias is related precisely to the definition of employed itself, following the Current Weekly Status (CWS) approach a person is considered employed if in the seven days preceding the date of survey has

pursued at least one-hour of gainfully activity on any of the day, however if someone has a regular job and online work represents a second source of gain, the incremental effect is not captured. A third element is related **to what extents online freelancers decide to report earnings to tax agencies**, particularly troubled is the case of developing countries where informal economy and tax underreporting is dominating. The necessity of a more responsive, clear measure is the driver that has led to the birth of the iLabour Project, a research project funded by the European Research Council and led by Professor Vili Lehdonvirta at the Oxford Internet Institute, the aim is to “*measuring, organising, and having a voice in the online gig economy*” and the first deliverable is the **Online Labour Index (OLI)**.

**The OLI measures the usage of human cloud’s platforms over time across countries providing a categorization by occupation**, platforms involved are the one enabling clients and virtual workers to transact services or works fully digitally, the fundamental prerequisite is that the whole transaction from matching to payment should be conducted online through the platform’s infrastructure. The index tracks all of the projects and tasks posted on selected human cloud websites using API access and web scraping, the final selection consists of five of the major English-language platforms estimated by Alexa.com, ranked by monthly unique visitors, they are: Upwork (488), Freelancer (1308), Mturk (5144), PeoplePerHour (6563), Guru (7742)<sup>46</sup>. OLI is calculated on periodically data crawling of vacancies available in each website considered, for each crawl the list of vacancies is saved then comparing results from different periods the actual number of new vacancies is found. If looking for the absolute number of new vacancies the report would not be helpful though, the index number indeed is normalized so that the mean of daily vacancies in May 2016, the first month of observation, equals 100 index points.

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<sup>46</sup> Online Labour Index was realized in 2016 based on data available until that period, nowadays none of the building criteria has changed, including platforms analyzed, however they currently have a different rank. Data updated on May 2<sup>nd</sup>, 2018 calculated on the precedent 30 days, rank respectively: Upwork (576), Freelancer (1787), Mturk (6176), PeoplePerHour (6958), Guru (13803);

In two years of measurement a total increase of 36,7 points is registered, January's stick out for the negative peaks while the most favorable period seems to be on May.

### Online Labour Index



The Online Labour Index offers a complete perspective of the human cloud economy, contributing with a classification divided both for occupation category and country, very

Figure21: OLI index from May 2016 to May 2018, source OLI's website

useful for evaluating the separate developments over time. The concept of occupation is defined in ILO in ISCO-08 as “*set of jobs whose main tasks and duties are characterized by a high degree of similarity*”, in practice boundaries might not be so well-defined therefore a clear distinction is hard to establish, the complexity is worsened by constantly changing processes and skills that in addition differ even within the same occupation across countries or industries, each platform implements a specific division of occupations which are homogenized in the OLI under six major classes:

- 1. Professional services**, typically high complexity activities requiring formal education and training, such as: accounting, consulting, legal services, project management, human resources;
- 2. Software development and technology**, high complexity tasks in the fields of data science, data, web and software development and service maintenance;

3. **Sales and marketing support**, it consists of support tasks for online advertising such as Search Engine Optimization, telemarketing, ad posts. The level of complexity is variable;
4. **Writing and translation** that is self-explanatory and involves medium range activities;
5. **Creative and multimedia**, the class involves usually medium complexity activities related to the production of multimedia and design elements;
6. **Clerical and data entry**, such as data entry, transcription, web research, and virtual assistant, hence low complexity tasks.

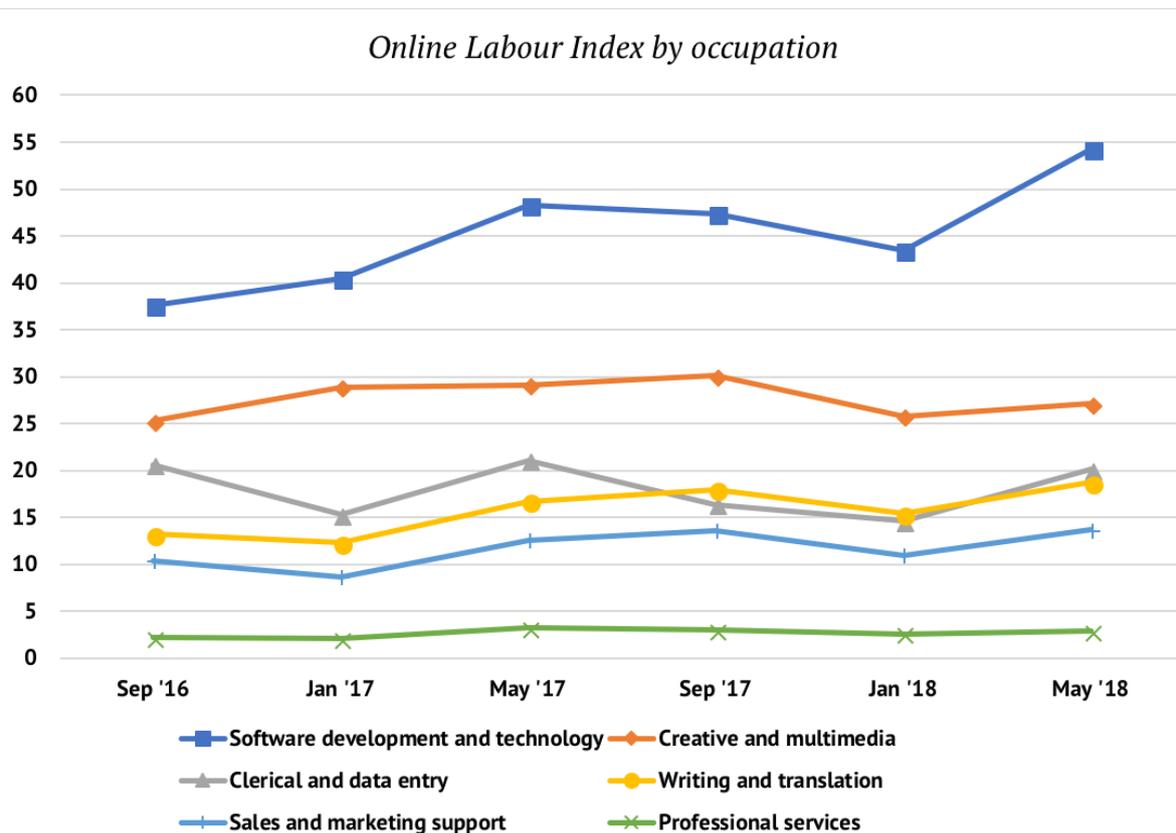


Figure22: *Online Labour Index by occupation*, personal elaboration on data from the OLI's interactive website, see sitography

Figure 22 shows the trend of the Online Labour Index per occupation, in the time-interval from September 2016 to May 2018, the placement does not experience any significant change with an utter prominence of the software development and technology sector over the others, probably due to the historical past of outsourcing and offshoring typical of the ICTs services. Creative and multimedia, clerical and data entry and writing and translation take on the middle positions sustained by a level from low to medium of

complexity and needed coordination. The activities that are contracted the least via human cloud platforms are sales and marketing support and professional services, in particular the latter occupy the last position with just a 2 percent of the overall market, a plausible justification is that those kinds of projects often need not only high degrees of trust and tacit communication but also familiarity with the client’s local environment and institutions.

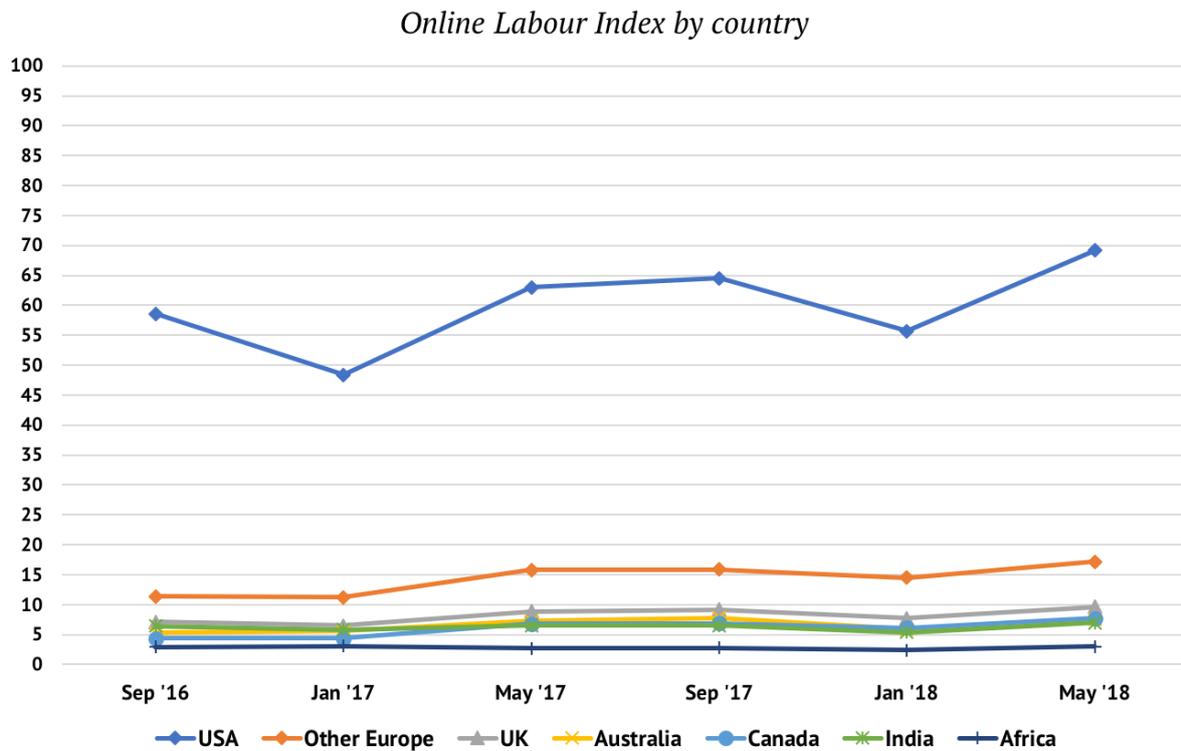


Figure23: Online Labour Index by country, personal elaboration on data from the OLI’s interactive website, see sitography

The dominating country in the human cloud economy is the United States, see Figure 23, with the highest peak in May 2018 with nearly the 70 percent of all the transactions, while the African continent is the least present. An interesting result comes up, the difference in the category of services demanded are fairly small across countries despite differences in the employment structures.

The OLI reveals that the major suppliers of online platform works are traditional low-cost, developing-countries, outsourcing destinations: India, Bangladesh, Pakistan, Philippines, Ukraine, Nigeria, Romania, Egypt, Sri Lanka, Kenya, Lebanon are in the top 20 of workers’ origin, however relevant positions are occupied by United States, United

Kingdom, Canada, Italy, Spain and Germany that are considered as high-developed, high-priced states.

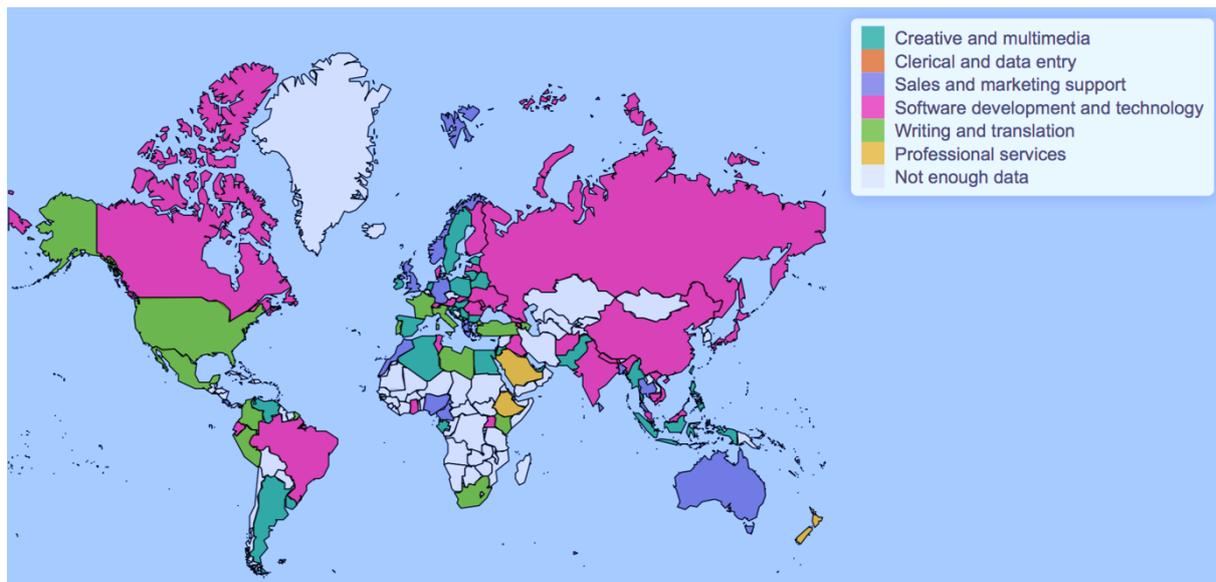


Figure 24: Online Labor index top occupation by country, source OLI's website

In addition, each country has a top occupation in which the largest number of workers are specialized, European countries share a distinct skill pattern where creative and multimedia, sales and marketing support and writing and translation outdo other activities, a similar situation is present in Africa while Asia, India and Canada are top supplier of high complexity tasks like the software and technology development.

As seen in previous chapters firms have been staffing agencies for temporary employment since the 1940s, so why should they move to human cloud platforms? The Online Labour Index, in the larger context of the iLabour project provides a possible answer in the report “*Platform Sourcing: How Fortuna 500 Firms are Adopting Online Freelancing Platforms*” (2017), six elements are found: cost, speed, flexibility, organization, expertise and quality; summing them up **online labor platforms provide hirers with an easier method to organize workforce, enabling a greater numerical flexibility for a rapid scaling up and down according to the need of each project in fact it might be longer to initially describe the project but faster deliverables are observed. A higher work quality resulting from the access to highly qualified freelancers otherwise unavailable is allowed while simultaneous cost savings thanks to the cutting of overhead costs.**

### 3.9. Case study: AddLance

Among the few Italian online freelance platforms there is AddLance whose headquarter is in Capiago Intimiano a municipality in the province of Como in Lombardy, its history began in 2014 when it was put online with a beta version, reaching in 2018 more than 30'000 subscribers, representing the biggest freelance platform in Italy. **AddLance is an online marketplace matching clients, either private or companies, with virtual workers in other words virtual freelancers, allowing them to transact online services based on a legal agreement between the two parties.**

#### How it works

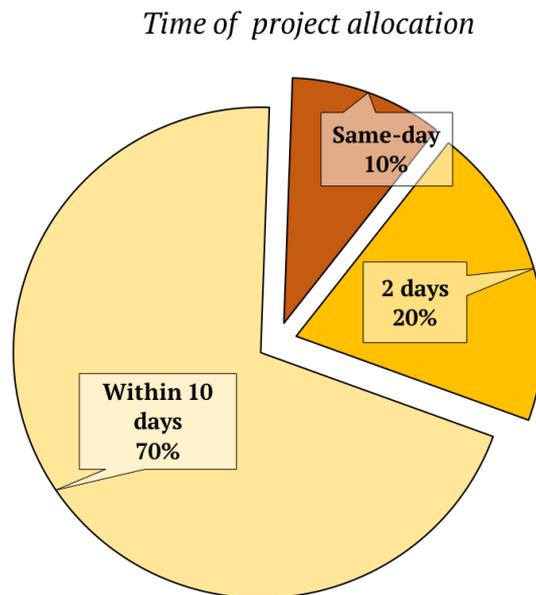
Clients can freely publish a project, preferably with a detailed description, to which freelancers can apply and participate through an auction by sending their own offers following a demand-side perspective, then the client has the possibility to enter into contact with each bidder privately and eventually to choose the best solution taking into consideration the quality/cost ratio. When the project is assigned the freelancer have to work under clear terms of time and expected results which are settled in an agreement between the parties. After the completion both parties can leave references to the other, following a model of mutual evaluation which will help in setting meritocratic relationships and in providing a warning in case of bad behaviors. In the situation of non-satisfaction on the part of the client the collaboration can be interrupted in any moment and the project deleted or re-assigned, mitigating the concern of project failure due to non-completion.

Signing up is free for both clients and workers, however each freelancer is given an amount of credits that are spent to send offers, each bid reduces the quantity of credits which can be bought using PayPal when finished.

AddLance operates as an open services platform so it does not provide additional infrastructures or managements, but quality of the matches between the parties is facilitate by a standard form that clients need to fill when posting a project, the form asks for:

- The provision of an **approximative duration**, giving the alternative of Fast (few days), Short (some weeks) and Long Collaboration (some months or years);
- Whether the client only look for **freelancers with VAT** or just an occasional worker;
- The **budget range**, the categories proposed are (€100-€1000, €1000-€2000, €2000-€5000, €5000-€8000, €8000-€15000, €15000-€50000 and To Be Defined);
- **Project title and project description;**
- The **city** of the **client**;
- The preference for **where to perform** the job: Remote, Local or Better Near By;
- Clients are asked to submit also some personal information, namely: username, email address, phone number, their login password and to agree upon Terms of Service.

Furthermore for each different service clients are required to give some specific information.



*Figure 25: Time of project allocation, personal elaboration*

Table 3 sums up the services offered by the platform, among them web design, design and writing and translation accounts each for a 20% of the total transactions, App development for a 10% while all the others together for the remaining 30%.

<b>Services offered by the online freelance platform AddLance</b>	
<b>Macro-category</b>	<b>Services</b>
<b>Web Development</b>	Web Design, E-commerce, Blog Design, WordPress, SEO Optimization, Landing Page Design, Content Management System (CMS), Plugin Installation, Web Design Course, SEO Courses, Bug Fixing, Others
<b>App and Programming</b>	Android, Software, Web Mobile, Scripts, Developer, Database Design, Game Design, App Design, Programming Course, Bug Fixing, Other
<b>Graphic Design</b>	Logo Design, Illustrator, Advertising and Presentations, Video Animation, Web Site Graphic, Flyer Brochure, Cartoon, Logo and Corporate Identity, Packaging Graphics, T-Shirt Design, Poster Design, Portraits and Caricatures, Stands and Shops, Design, Web Site Animation, Product Design, Fashion Design, Graphic Design, Other
<b>Writing and Translation</b>	English Translator, German translator, Blog and Article Writer, Web Content Writer, Journalist, Writer, Press Campaign, Name and Payoff, Transcription, Writing Services, Translation, Creating Articles, Drafts and Text Correction, Link Building, Articles, English Course, Writing Course, Other
<b>Marketing</b>	Advertisement, Email Marketing, Lead Generation, SEO Search Engine Optimization, SEM Search Engine Marketing, SMM Social Media Marketing, Market Research, Marketing and Promotion, Public Relations, Statistic Analysis, Digital Marketing, Marketing Strategy, Inbound Marketing, Media Planning, Content Marketing, Funnel Optimization, Growth Hacking, Facebook page Manager, Other
<b>Business Support</b>	Customer Service, Personal Assistant, Data Entry and Transcription, Mail Management, Travel Planning, Bills Placement, Payroll Management, Customer Care, Other
<b>Business Consultant</b>	Business Consultant, Accounting, Human Resources and Payroll, HR Consultant, Head hunter, Business Consulting, Financial Planning Services, Tax Statement Preparation, VAT Opening, Building Administrator, Tax Assistance and Social Security, Other
<b>Photographer</b>	Photographer, Wedding Video, Video Shooting, Book Photographer, Other
<b>IT and Networking</b>	Network System Administration, ERP CRM Software, Data Recovery, Data Destruction, Web Site Management, Server Management, ERP CRM Management, Software Installation Repair, Other
<b>Architect</b>	Architect, Interior and Exterior Design, Safety Officer, Energy Certification, Urbanization Charges, Activities Statement Planimetry, Rendering, Other

Services offered by the online freelance platform AddLance	
Macro-category	Services
<b>Engineering</b>	Hardware Firmware Design, Mechanics Design, 3D CAD CAM Design, Technical Design, 3D Modeling, Electrical Systems, PLC Developer, Other
<b>Legal</b>	Lawyer, Contract Drafting, Patent Registration and Protection, Insurance, Other
<b>Audio, Video and Music</b>	Audio Video Production, Dubbing, Voiceover, Musical Production, Video Editing, Promotional Video, Music Soundtrack, Other

Table 3: Services offered by the online freelance platform AddLance

## Audience

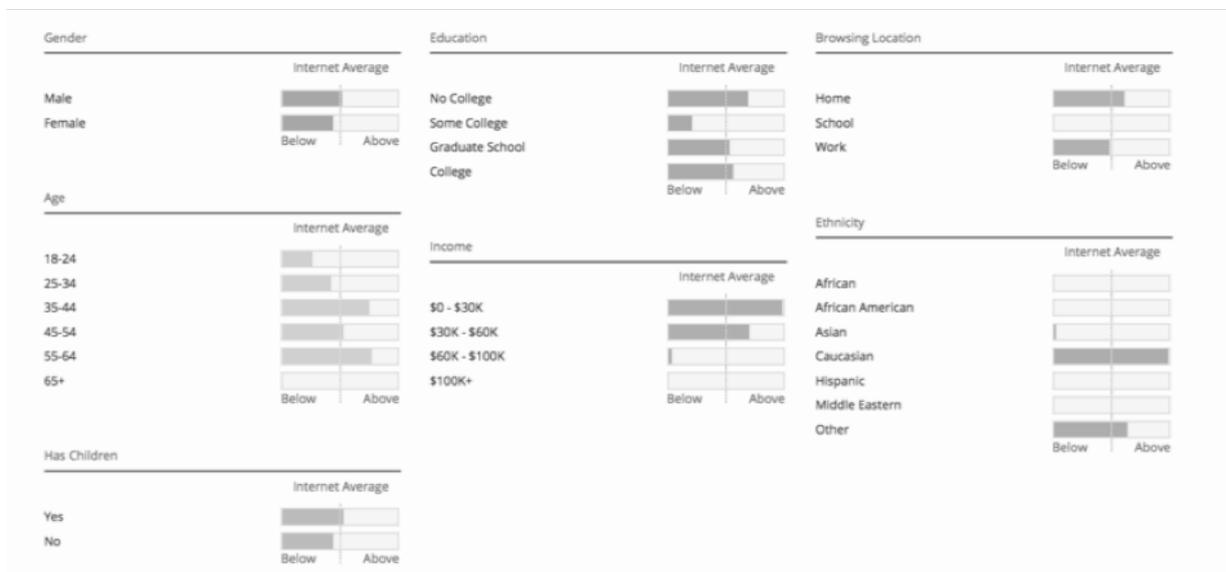


Figure 26: AddLance audience demographics, source: Alexa.com

Figure 26 is taken from an analysis of AddLance done using Alexa.com, an American company owned by Amazon, providing web traffic data and analytics publicly, the audience of the website selected, in this case AddLance, is compared to the general internet population, findings show a greater percentage of male participants belonging almost entirely to the Caucasian ethnicity which is understandable since the 98,8% of visitors are from Italy. The platform records a number of visitors in the age group 35-44 and 55-64 significantly higher than the internet average with an income mainly in the range of \$-\$30k and \$30k-\$60k suggesting that visitors might look for a job or some

additional income in reference to lower incomes, but even that wealthier ones might look for interesting projects to be pursued or for freelancers to hire, these data are confirmed by the report “*Lavoro Freelance: Indagine 2016*” carried out by AddLance itself, the 60% of freelancers are men of which the 38% with an age included in the range 30-40. The abovementioned report discloses the allocation of tariffs, tasks with a compensation starting from less than €10 per hour to €30 per hour count for the 81 per cent of total transactions while projects with a range of €30-50€, €50-€100 and more than €100 per hour count respectively for the 13%, 5% and 1%.

The education level of visitors is quite variegated, a small majority of visitors did not attend college, nonetheless the percentage of individuals coming from graduate school is slightly higher than the average, meaning that probably the platform offers freelancers medium to complex activities. In addition, the fact that AddLance is browsed from work, supposedly in the case of clients, but mainly from home let understand that the platform actually provides users with the flexibility of working from where they are more comfortable. Clients are for the majority enterprises (60%) of which the 90% belonging to the category of small or micro ones.

### **Terms and Condition of Service**

The role of the platform in the relationship between the two parties is a crucial element especially for liability's issues<sup>47</sup>, in the paragraph called “*Contratto Utente*” of the Terms and Condition of Service (TOS), AddLance states to be committed (a) to providing and maintaining the online infrastructures but explicitly affirming that **it does not operate actively in first person as agent or mediator between users**<sup>48</sup>, classifying itself as a mere internet intermediary according to the OECD's (2010) definition, this is further stressed in the second paragraph, “*Contratti di Servizio*”: (a) “*La pubblicazione e la negoziazione di progetti, la relativa conclusione contrattuale e l'adempimento del contratto stesso sono di esclusiva responsabilità degli utenti partecipanti. Gli utenti sono inoltre responsabili*

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<sup>47</sup> See Chapter 2, paragraph 2.8.;

<sup>48</sup> “*AddLance ha creato ed inoltre gestisce e si occupa del mantenimento della piattaforma online, tuttavia, AddLance non opera attivamente in prima persona come agente o come mediatore fra gli utenti*”;

*nell'assicurare che i loro progetti rispettino la normativa italiana vigente e le disposizioni normative dei paesi dei rispettivi utenti. (...) A questo scopo, AddLance fornisce ai propri utenti le infrastrutture necessarie; tuttavia, AddLance non agisce come rappresentante di nessun utente e non assume il ruolo di parte contraente nel contratto di servizio concluso tra il cliente ed il fornitore”, if the platform had failed to provide an unambiguous statement about its role in the agreements between the parties it would have been subjected to a primary liability according to contract law.*

AddLance's responsibility is limited to **a serious negligence, excluding any other cases, as concerns pre-contractual, contractual or extra-contractual responsibility**, while a direct liability for **minor negligence** is possible just for the following cases:

1. Violation of fundamental contractual obligations;
2. Personal damages;
3. In respect of what is established by specific regulations concerning the Responsibility for the product.

Users are free to establish the contents of the service agreement according to their particular needs with respects of the TOS assuming the obligation of conforming to them and to accomplish in an adequate manner what agreed. **The supplier is the only responsible for the service performance in fact the liability limitation of the platform excludes any answerability for the performance quality, for the non-performance or protests between the parties**, AddLance being an intermediary does not interfere in the negotiation nor in the execution. The platform in addition can claim for compensation for complaints of third-parties originated by the usage of the platform by users, the latter must release AddLance from any responsibility related to complains from third-parties as soon as obtained the pertaining request.

However online freelance platforms and every other **human cloud platforms must comply with legal regulations** otherwise facing a second liability due to illegal activities and behaviors of their users, however they are given the possibility of exemption of responsibility upon the condition of the *expeditiously act of removing or disable the access*

to the implicated materials<sup>49</sup>, meeting the opportunity given, AddLance reverses itself the right of blocking the publication of a project in exceptional cases, of modifying it in the interests and mutual respect of the parties or when in violation of regulations, AddLance assess its own possibility of blocking or deleting single contents when not in compliance with laws and third-parties rights. In addition the platform has the right of inspecting users' accounts and respective information, in the attempt to prevent the spread of unlawful contents and behaviors which might damage the platform's reputation, AddLance can specifically intervene in the communication between the parties during the bargaining phase, however it is important to highlight that there is no legal obligation to do it.

As regards the risk of intellectual property leakage AddLance dictates that every **non-disclosure agreement (NDA) must be respected**, in respect of the paragraph "*Attestazione della titolarità dei contenuti*" in the TOS, users guarantee to be the owners of all the rights of published contents, that contents are not protected by third-parties' rights and that they do not violate any personal third parties' rights.

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<sup>49</sup> See Chapter 2, paragraph 2.8.1. "A liability issue";



## CHAPTER 4 – THE CONDITIONS OF WORKERS IN THE HUMAN CLOUD

The development of the human cloud model in the context of the sharing economy, has led to the proliferation of non-traditional, contingent work arrangements promising benefits both for workers and employers, however downsides must not be underestimated: new regulatory, legal, and public policy concerns are engendered.

### 4.1. Attractiveness factors

There are several motivations driving clients and workers to participate in the *virtual work* (Cherry, 2009), first of all hirers gain the access to a **huge source of knowledge and expertise**, the report from Eurofound (2015) mention the case of the German platform Clickworker which can create large quantities of contents in a short time. Not only skilled labor is appreciated but also fixed costs are eliminated and costs in general reduced due to lower pays and little or no administrative expenses, furthermore employers are not required to provide any facilities, supports or equipment (Felstiner, 2011), for instance in the Amazon Mechanical Turk (MTurk) marketplace *Requesters* (clients) “do not have to file forms for, nor to pay, payroll taxes and they avoid laws regarding minimum wage, overtime, and workers compensation”<sup>50</sup>. If for clients’ risks are basically the one mentioned in Chapter 3, namely the loss of control over the work, non-completion and intellectual leakage risks in the workers’ perspective the situation is much more complicated, recalling the MTurk’s example, the absence of requesters’ responsibilities is counteracted by the *Turkers* alias workers’ responsibility to report their income for tax purpose ultimately generating a fuzzy gray market (Cherry, 2009).

From the workers’ perspective there are many elements of attractiveness, among them the human-cloud model allows a high level of **flexibility** which enables a better

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<sup>50</sup> **CHERRY M. A.**, “*WORKING FOR (VIRTUALLY) MINIMUM WAGE: APPLYING THE FAIR LABOR STANDARDS ACT IN CYBERSPACE*”, at [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1499823](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1499823), Alabama Law Review, Vol. 60, No. 5, pp. 1077-1110, 2009, p. 1090;

management between work and private life, many see the possibility of working from home as a true valuable economic benefit saving both in monetary terms because transportation costs are eliminated and thereby in time terms because no commute is necessary. Flexibility goes hand in hand with a great degree of **freedom** that is choosing from where and how long to work, in fact new virtual labor markets are available to anyone from any location, all that is needed is a computer and a reasonably fast internet connection, in addition employees can select which tasks to perform according to their knowledge and interests, representing a learning opportunity. Virtual work may **enhance personal productivity**, transforming periods when the brain is active but not productive into productive ones.

In general, the human cloud labor model makes the overall labor market more inclusive, creating new opportunities for people who are not able to leave their home for reasons such as disabilities or care obligations and for those living in rural or damaged areas, in addition it gives access to many work options to freelancers and young people with little experience but good skills, other drivers may be the opportunities for **social exchange** and **self-marketing**. The possibility of matching suppliers with job offerors creates a more efficient labor market, virtual workers from any continents are joined together to collaborate on a unique project bringing about truly diverse ideas, interests and cultures.

## **4.2. Drawbacks for workers of the human cloud**

Felstiner in his report “*Working the Crowd: Employment and Labor Law in the Crowdsourcing Industry*” (2011) identifies some distinct drawbacks for workers in the human cloud framework, namely:

### ➤ **Low pay**

The primary motivation for people to work in the online labor marketplaces is **earning money**, however in many of the human cloud platforms pays are extremely low, pushing the compensation for cognitive piecework in the order of pennies, activities are broken-down into mindless micro-tasks as in the case of Amazon Mechanical Turk’s Human Intelligence Tasks (HITs) where the average hourly pay is of \$1,25 (Felstiner, 2011) with

rewards as low as \$0,01 or \$0,03 per task. Unskilled virtual works have been harshly criticized for creating so-called “*virtual sweatshops*” (Barboza, 2005), fostering the race in finding the cheapest labor with the least degree of jurisdiction in the field of employment relationships’, leading to a **further erosion of workers’ rights and benefits**. Findings in the report “*Employment and social affairs: The situation of workers in the collaborative economy*” (2016) states that the performance remuneration is sufficiently high only for virtual services requiring high-skills, in particular the example of CoContest<sup>51</sup>, a design platform, shows that is profitable for designers coming from high-income countries only under the conditions of having little experience, of facing high entry-barriers and of having high evaluation of flexibility as the average pay is of €5 per hour which it makes really hard to reach the average pay of a 8-hours traditional work while for providers from lower income countries it is easier to match the average remuneration;

➤ **Lack of benefits and legal protection;**

Virtual workers do not enjoy any benefits or job security, human cloud employment suffers from a **lack of labor law regulation**, no legal framework addressing virtual labor marketplaces is found, entailing the risk for providers of been trapped in a gray area between been considered employees and independent contractors. The uncertainty of classification leads to an alike issue as to which regulation to apply, one of the side-effects is that **online platforms are discouraged to provide more support** to workers because they are afraid of additional liabilities such as the transformation of the relationship status into an employment contract becoming themselves employers attaching the need of conforming to the existing legal regulations.

**Social security obligations are externalized to workers**, if traditional employees are automatically insured, virtual workers are only paid for work done with no paid holiday, no sick leave nor unemployment benefit, maternity or paternity leaves, the absence of such benefits not only increases precariousness but also it may create psychological burden negatively impacting both private and working life. Platform workers should have

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<sup>51</sup> Now called Pillar, <http://gopillar.com>;

to supply themselves with private insurance products covering possible risks, however few of them do it.

➤ **Information asymmetry between suppliers and providers leading to deception**

Many online platforms allow hirers to access **considerable pieces of information about workers** (e.g. employments history, portfolios of old proposals, ratings), however this is not true *vice versa*: tasks are usually described on a generic measure with very little information about how to perform tasks, furthermore in certain occasions the identity of the client is not disclosed as a mean of protection from possible intellectual property leakages. The question is that it may result in a difficult realization on the part of the providers whom may need to enter into contact with clients to have further clarifications in order to avoid the risk of wrong execution hence the refusal of payment, this may represent a waste of time that is spending longer than expected on the completion of a project. Information asymmetries along with satisfaction clauses, are often present in virtual work agreements, leaving room for some forms of **deception**. Employers may submit a project, receive multiple proposals and laborious deliverables and decide to reject them only stating that they do not fulfill the satisfaction requirements, with no further justification nor paying workers, without the obligation of relinquishing the right to use the works received.

➤ **Privacy issues, moral and ethical challenges**

One of the major concerns of working in the online platforms environment is related to privacy, a great number of activities is composed by the conduction of surveys, the collection of experiences or testimonials and the performance of market researches, hence **workers have to disclose a remarkable number of personal information without a clear guarantee of confidentiality or responsible use**, in the virtual work environment it may be more complex to realize how much information are broadcasted and the privacy policies imposed are sometimes hardly enforceable. Privacy is perceived as malleable and depends often on the benefits received in return for the information sharing.

The general lack of disclosure may present to workers with moral and ethical challenges, Zittrain in his paper *“Ubiquitous Human Computing”* (2008) assess that *“HITs can deprive people of the chance to make judgments about the moral valence of their work (...) an absence of disclosure deprives people of the freedom to choose the goals that their intelligence will advance”*, for example companies may use virtual workers to produce fake product reviews, spam or for illegal objectives, in addition freelancers may be asked to tag offensive contents forcing them to repeatedly look at pornographic or violent images leading to a psychological toll.

### **4.3. Physical and psycho-social risks**

The discussion paper *“A review on the future of work: Online labour exchanges, or ‘crowdsourcing’: Implications for occupational safety and health”* (2015) of the European Agency for Safety and Health at Work confronts the topic of physical and psycho-social risks tied to the human cloud labor model. If traditional employers have to take responsibility for ensuring appropriate working conditions and a safe working environment, these obligations and relative risks are externalized to individual workers when they are classified as freelancers. Spending a lengthy period of time working continually with computers may lead to stress, or better **technostress**<sup>52</sup> and **physical disorders**, when the work station does not meet ergonomic requirements or it is set up incorrectly, poor postures and musculoskeletal problems are just few of the possible negative effects, in addition when working in a domestic or public space the environment may be subjected to inappropriate lighting, pollution, noise, interruptions, distractions and other elements giving rise to a not comfortable status.

Tight deadlines and rapid paces of work without breaks may exacerbate visual fatigue and strain along with attendant problems such as headaches. Lastly one of the new issues related to safety and health is **cyber-bullying**.

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<sup>52</sup> **Techno-stress**: <https://en.wikipedia.org/wiki/Technostress>;

As regards psycho-social issues they follow the working conditions typical of virtual employment to which standard preventive measures are not applicable.

➤ **Work precariousness**

Platform workers are almost always in an unclear situation about whether they will work, to such a degree that they are unsure about their occupation not only from one day to the other but from an hour to the successive, then in the moment they actually find an activity, they do not know what it will consist of, how long it will take and how much they will be paid, if they eventually will be paid. **Insecurity of income and employment may be associated with psychological diseases;**

➤ **Impact of ratings**

Reviews and ratings of employers have a central position on online platforms, they are decisive: to whether the worker will be able to receive work's proposals, to the establishment of compensation rate and to the effective possibility to remain active in the platform itself. Being friendly, efficient and serviceable at any time pose a lot of pressure and stress on workers who are **constantly under observation**. Many suppliers ought to create a system that enables to take own self-reputation with you, building a personal portfolio which can be offered in multiple marketplaces (Zittrain, 2008);

➤ **Work at very short notice**

Platform workers are required to work at very short notice, the easiness of using platform combined with the great number of providers, makes **timing** a fundamental element to hoard a work, a single hesitation in clicking the acceptance button may turn into a missed opportunity. Working on-demand with tasks and clients changing from one minute to the others, results in freelancers not cultivating any sense of affiliation nor gaining the perception of the larger organizational context for which they were hired, in addition they may **feel pressured to always be active**, actually giving up some of the wished flexibility;

### ➤ Isolation

Because of the geographical distance often present in virtual work relationships, there is a lack of actual, direct communication with the final clients but also it is missing the possibility of confrontation with colleagues and other peer-figures, emerging into isolation and alienation from the real physical world. Having to always work autonomously and unobserved without any social support may foster the **development of anti-social or health-threatening behaviors** as a mean of coping with the high level of stress caused by the constant need of self-monitoring. With a shift from the mechanical to the intellectual side, this “*new class of knowledge workers*”<sup>53</sup> may suffer from an alienation similar to the one previously experienced by assembly-line workers, with a totally atomized life, therefore new technologies should ensure that employment still provide human relationships.

In conclusion, virtual work creates multiple new opportunities, offering access to works with a high degree of flexibility in the work-life balance to people otherwise excluded while consumers are provided with affordable, on-demand services, however those advantages come at a cost which is very high and perhaps not convenient at all.

## 4.4. New forms of employment across Europe

The new challenges and needs which have come with the human cloud platforms have resulted in the **emergence of new forms of employment across Europe**, characterized by **unconventional work patterns and location of work and by the irregular provision of work**, unfortunately due to their novelty and peculiarities, little is known about them. Eurofound, “*the tripartite EU agency providing knowledge to assist in the development of better social, employment and work-related policies*” in collaboration with the assistance of the national correspondents of its Network of European Observatories, conducted a mapping exercise in order to identify the emerging trends and their impact for working conditions and the labor markets, because they might be attractive alternatives for

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<sup>53</sup> ZITTRAIN J., “*Ubiquitous Human Computing*”, University of Oxford, LEGAL RESEARCH PAPER SERIES Paper No 32/2008, June 2008, p.5;

employer-worker agreements. The study was carried on between autumn 2013 and summer 2014 with a total of 66 case studies, teams of national experts worked under the coordination of the Public Policy and Management Institute (PPMI), the major forces pushing this socio-economic transformation include:

- The need for increased flexibility by both workers and employers;
- The broader use of information and communication technologies;
- The improved importance given to specific business activities and occupations.

Europe is constituted by countries whose labor and economic markets' frameworks are significantly disparate, there is a lack of homogeneity between what is considered a "*new form of employment*", what is well known and established in one country might represent a novelty or even do not exist at all in another one, Eurofound to overcome the problem has not only applied a **national perspective**, meaning that it took into account what is considered new on a national context irrespectively of whether or not it was thought as a standard practice in other countries but also to ensure a comparability level has set some **guidelines** have been set into whom employment forms must fall into in order to be qualified for the study, they are:

- a. The **relationship employers-employees** must be different from the traditional one-to-one employment relationship, as a consequence are involved all the employment relationships in which there are either **multiple employers for a single employee, one employer and multiple employees or multiple employers for multiple employees**;
- b. The provision of work must be done on a **discontinuous basis** or with a **short-term horizon**<sup>54</sup>;
- c. The presence of **networking and cooperation arrangements** between the self-employed, especially freelancers.

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<sup>54</sup> Seasonal and part-time jobs are not-considered because they represent conventional forms of employment, hence they are not relevant for the scope of the analysis, unless they have some particular, relevant features;

Furthermore, it was taken into consideration the **place of work** of the employees which could be mobile with workers performing in multiple locations and a strong or prevalent presence of ICTs, however these last two features are not necessarily present, they just represent a plus.

*Framework for identify new forms of employment*

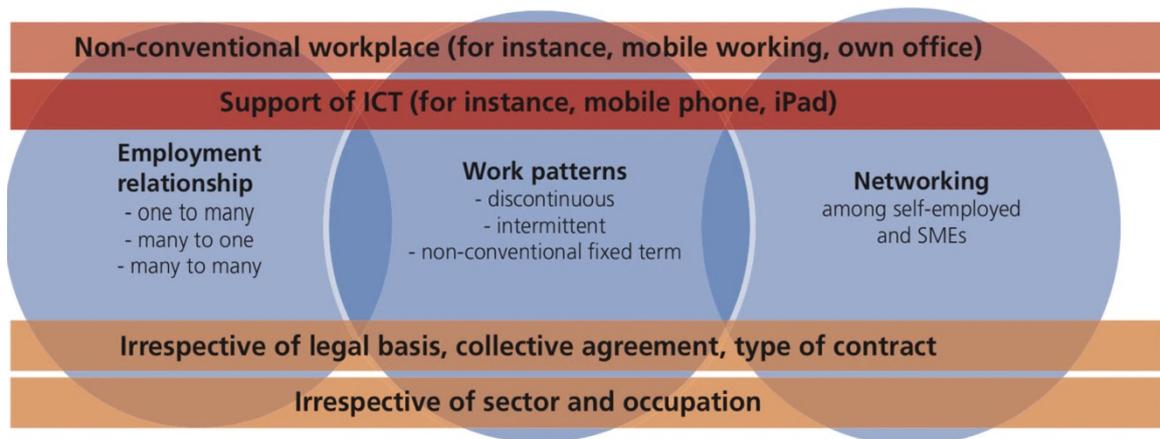


Figure 27: Framework for identify new forms of employment, source: Eurofound “New forms of employment”, p.5

Eurofound has identified nine new categories which are not always perfectly differentiated and can sometimes overlap, the novelty is either on the work patters, so on how works are conducted, or on the model of relationship between employer and employee or client and worker. As regards the latter category the new typologies are: (a) **Employee sharing** in which an individual employee is simultaneously hired by multiple employers; (b) **Job sharing**, the element shared is the job which is performed by two or more workers hired by a single employer; (c) **Voucher-based work**, the employment relationship is based on voucher rather than on contracts.

The other six new forms happen to have new, different work patterns, first of all (d) **Interim management** it envisages a usually highly-skilled expert to be hired for a temporary period of time to conduct a specific project or problem, the difference from the traditional fixed-term work arrangements is that there are some elements of consultancy involved and the expert is treated as an employee rather than an external advisor; (e) **Casual work**, the employer is not obliged to provide the worker with job on a regular basis but the latter is called on-demand; (f) **ICT-based mobile work**, this new work pattern

establish that the worker is able to operate from any possible locations just supported by modern technologies, it is totally place-bound free; (g) **Crowd employment**, is a totally new option offered by online labor platforms matching hirers with suppliers of services, without any location-bound; (h) **Portfolio work**, it is similar to crowd employment however it interests just self-employed working for a large multitude of clients to which they provide just very small amount of work; (i) **Collaborative employment**, similar to traditional partner relationships.

For scope of this elaborate not all the new forms of employment are relevant, in fact the focus will be particularly on crowd employment.

#### **4.5. Crowd employment, a contractual perspective**

**Crowd employment** is defined in the study as *“an employment form that uses an online platform to enable organisations or individuals to access an indefinite and unknown group of other organisations or individuals to solve specific problems or to provide specific services or products in exchange for payment”* taking as a source many literature pieces from different authors such as Green and Barnes in the work *“CrowdEmploy Part I: Crowdsourcing for paid work. An empirical investigation into the impact of crowdsourcing for paid work on employability”* (2013) and Saxton *‘Rules of crowdsourcing: Models, issues and systems of control’* (2013), it can be equated to the human-cloud model the thesis has dealt with so far. Eurofound reports that it is based on project and individual tasks rather than on continuous employment relationships, a larger task is split into smaller subtasks which are **independent, homogenous and with a specific output**, general characteristics have already been recounted in the previous chapter, so it would be redundant to reiterate them. A captivating question that has not been treated so far is the legal contractual relationship instituted between employers and workers, in the case of virtual freelancers there is no formal contract between the two parties which are linked just by a bilateral agreement, Eurofound analysis specifies in particular that *“While crowd employment platforms have to follow general legal frameworks such as commercial codes, civil codes, consumer protection acts and data protection legislation, the current project could not identify any legal or collectively agreed framework specifically addressing crowd employment in*

Europe. There are no central organisations administering or monitoring crowd employment platforms.”<sup>55</sup>, this statement indicates that in the human cloud model the employment relationships are based on single agreements between the parties, workers’ economic independence is assumed because they are seen as self-employed, hence **labour law does not apply: pays, intellectual property rights and working conditions in general are dependent on the willingness of the parties or on the terms and condition of the platform, consequently workers are not entitled to a minimum wage, annual leave or pay in case of sickness.**

**No legal framework addressing crowd employment is presents in Europe.**

<b>Human cloud employment main characteristics</b>			
	<b>Availability of specific regulatory frameworks</b>	<b>Contract type</b>	<b>Main job or income source</b>
<b>Crowd employment</b>	NO	Civil law contract	Usually additional income

Table 4: Human cloud employment main characteristics, personal elaboration based on data from paragraph

**4.6. Ambiguity surrounding the classification of virtual workers**

Two approaches are used to manage rates of payment, some platforms leave the issue completely to the **discretion of the parties** who will eventually agree on the amount and mode, while others apply a **minimum or fixed price for specific tasks** that is automatically set in the moment the client select the task. Fixed rates cannot be lowered but only increased and they are calculated on the combination of market prices and the presumed number of hours spent by an average worker on that kind of tasks. Works available in human cloud platforms are very similar to their equivalent in the real offline world, for instance a manager needing a designer to draw a particular logo may look for it in online platforms rather than going to a physical temporary agency. Traditional services and counseling can smoothly take place online: the only difference is that they occur in a virtual environment. However exactly the global perspective of online labor platforms

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<sup>55</sup> EUROFOUND, “New forms of employment”, Publications Office of the European Union, Luxembourg, 2015, p.109;

creates a “*true globalization of labour*”<sup>56</sup> leading to an inevitable decrease of the equilibrium price, particularly pronounced for low-skilled activities. A **race to the bottom** is one of the of the most fervent concerns, there is the fear that crowd employment may displace workers from skilled occupations and replace them with unskilled, fragmented jobs leading to a **deterioration of social standards due to low levels of income and protection**, the reach of the phenomenon made some authors to coin a neologism to describe people taking part to this new form of work unique of the digital era, that is *Cyber-proletariat* (Dyer-Witthford, 2015) or *Cybertariat* (Huws, 2014). Moreover the European study “*The Impact of the Collaborative Economy on the Labour Market*”, (2016) assess that online platforms are not able to generate enough work to be valiant substitutes for conventional work even in the case of workers active on more than one marketplaces.

The issue of minimum wages is related to a biggest and more articulated matter that is **whether virtual workers should be considered as independent contractors or employees**. In the United States the Internal Revenue Service (IRS) is aware of the virtual work phenomenon hence virtual workers are themselves responsible to report earnings, the situation in the human cloud framework is complicated by the fact that often transactions are in between personal and professional, a sort of informal exchanges, notwithstanding that the first motivation for crowd employment is earning money, many reports to consider it a spare-time activity. When it comes to legal protection and due benefits it has become of vital importance to assess whether virtual workers are participating to the human cloud just for fun as an alternative way to employ their free-time or they took an interest in profitably working being thus electable for traditional legal protections such as the Fair Labor Standards Act (FLSA) in the United States. In the essays “*WORKING FOR (VIRTUALLY) MINIMUM WAGE: APPLYING THE FAIR LABOR STANDARDS ACT IN CYBERSPACE*” (2009) and “*THE GLOBAL DIMENSIONS OF VIRTUAL WORK*” (2009) the author gives some suggestions to possible applications of the FLSA, stating that **if an activity is**

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<sup>56</sup> DE GROEN W. P., MASELLI I., “*The Impact of the Collaborative Economy on the Labour Market*”, Centre for European Policy Studies, 2016, p.6;

**monetized and commodified should be classified as a paid work**, with particular attention for low-skilled activities that may leave larger space for exploitation thus requiring more protection, in conclusion she adds that private employers may attempt to voluntarily construct their own codes of conduct where to distinguish between work and spare-time activity and set out guidelines to avoid exploitation while guaranteeing fair labor initiatives. In the above-mentioned essay “*Working the Crowd: Employment and Labor Law in the Crowdsourcing Industry*” (Felstiner, 2011) the author deals with legal status of crowd workers in the American framework, investigating the criteria for employment classification under the FLSA then applying them to virtual workers dilemma. The “*Fact Sheet #13: Employment Relationship Under the Fair Labor Standards Act (FLSA)*” (2008) from the U.S. Department of Labor states that “*there is no a specific rule or test to determine whether an individual is an independent contractor or an employee*” so to address the issue seven criteria are formulated:

- 1) *The extent to which the services rendered are an integral part of the principal's business;*
- 2) *The permanency of the relationship;*
- 3) *The amount of the alleged contractor's investment in facilities and equipment;*
- 4) *The nature and degree of control by the principal;*
- 5) *The alleged contractor's opportunities for profit and loss;*
- 6) *The amount of initiative, judgment, or foresight in open market competition with others required for the success of the claimed independent contractor;*
- 7) *The degree of independent business organization and operation;*

The first criterion is the extent to which the services rendered are an integral part of the principal business, the focus is not on the quantitative measure of the contribution but on the **nature of the work**: there are companies using online platforms just periodically and/or in critical isolated moments merely for their convenience, while others whose activity would not exist without the human cloud's participation rendering it an essential, integral part of the principal business activity. Even if at first sight it might appear a helpful criterion, its application is difficult because of the celerity with which activities are changed hour to hour. The intrinsic nature of human cloud work makes the second

variable, **permanency of the relationship**, almost irrelevant however especially for high-complex tasks a client may rely on a worker with which he has already had a positive working relationship, repeated and frequent performances from the same supplier may result on a reclassification of the employment status, nevertheless repeated relationships represent an infinitesimal small amount. Given that virtual workers generally work from home or other casual locations, using their own equipment and internet connection, it might sound logical following the third factor that is **the amount of the alleged contractor's investment in facilities and equipment**, to classify suppliers as independent contractors, however their activities would not be possible without the furnishing of adequate software, programs by the client, leading to a neutral position. The fourth factor influencing the classification is **the nature and degree of control by the principal**, in human cloud platforms, unlike traditional work environments, they do not have any control over where the worker will perform the job nor they can decide who will accept it, conversely hirers are the one designing the interface and providing detailed instructions, more over information asymmetry is to their own advantage, they can ask for more information, set up qualification tests or threshold and engage in a close virtual supervision, in addition satisfaction clause allow them to reject works; still the workers ability to choose when, where and which tasks to perform reflects the typical flexibility of self-employment. The next variable addresses the capacity of individual to invest in his or her business with relative risks and opportunities to increase profits, which is reported as the alleged **contractor's opportunities for profit and loss**, in the situation of statutory employment, the consequences of employees' actions relapse on the employer, besides self-employed are totally responsible for their own profits and losses, in their turn suppliers can theoretically hire their own employees in order to perform multiple tasks at the same time and realize a profit, many platforms prohibit this technique hence worker can work on limited tasks at a time, limiting opportunities for profits and losses. The fifth variable is **the amount of initiative, judgment, or foresight in open market competition** with others required for the success of the claimed independent contractor, human cloud platforms leave little room for the mentioned factors, workers might only be better equipped or spend more time monitoring new possibilities of work, lastly **the**

**degree of independent business organization and operation**, it refers to the probability that a virtual worker relies only on the online platform work for compensation, which is generally very low and not sustainable.

To recap the question about the suppliers' status in the American framework, exhibits shows that it is still unresolved with some criteria supporting the statutory employee position and others the independent contractor's one. Nothing changes in the European panorama where the dilemma is also inconclusive, platform workers are in most cases classified as self-employed but in the novel human cloud context, the traditional definition of self-employed does not fit totally, still **labor laws are not updated to the evolving needs of both workers and clients and depend on the traditional, historical differences between employed and self-employed** (Kennedy, 2016), new definitions are needed, the traditional dichotomy is increasingly difficult to measure. Due to this ambiguity in the definition of the legal status, it is difficult to apply both National and European regulations to online workers, some examples are the *European Directives on Working Time, Part-Time Work, Temporary Agency Work, Undeclared Work, Equal Pay and Equal Treatment and Parental Leave*. Even more critical is the case of the *Directive on Health and Safety in Fixed-Term and Temporary Employment (91/383/EEC)* which guarantees to fixed-term and agency workers the same protection as other employees.

#### **4.7. Social protection analysis in Europe**

The theme of social protection represents also a grey area, Europe is suffering as a result of the lack of a common framework, in order to shed light on the matter members of the **European Social Insurance Platform (ESIP)<sup>57</sup> deemed necessary to map national solutions in the context of social security coverage for workers in the human-cloud environment**, coming up with a study in 2017 called "*Statutory Pension Insurance of Digital Platform Workers – a comparative perspective*", based on findings gathering the answers to four

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<sup>57</sup> It is a social insurance organization created in 1996 operating in the fields of health, pensions, family and social inclusion, disability, rehabilitation and unemployment, for more information go to the website: <https://esip.eu/index.php>;

crucial questions from twelve countries, namely: Austria, Belgium, Finland, France, Germany, Hungary, Luxembourg, Netherlands, Norway, Poland, Slovakia and Sweden, the case-studies are described as “*The Execution of “virtual tasks” – work performed via the internet - such as design (graphic, webpage etc); software development; translation; restaurant reviews checking. Delivered by an individual (service) “provider” to various private or commercial “users” via a (typically commercial, performing for fees) “digital platform”, such as: Amazon Mechanical Turk (MTurk), Upwork, CoContest, 99design, Unbabel, Fiverr, Fivesquid, Youtube content creators, Clickworker (in this case, the users are often big companies)*”. As regards the ambiguity of workers’ classification, the prospect gives a noteworthy evidence, providers alias **virtual workers are perceived as self-employed** almost unanimously with the specific appellative of “*New Self-employed persons*” in Austria, and the exception of Hungary where they fall in the category of “*other employment-related legal relationship*”, as a consequence they are covered by statutory pension insurance in the same way as other more traditional self-employed, which might be either on a mandatory or voluntary basis, the silver lining is that in the majority of the countries freelancers result eligible for the pension systems, given the respect of a minimum/maximum threshold, the only exception is where they are thought as self-employed without any relevance to social insurance.

On the other hand, with the eligibility comes the responsibility for paying contributions.

<b>Findings of the Statutory Pension Insurance of Digital Platform Workers</b>					
<b>COUNTRY</b>	<b>COVERED BY PENSION STATUTE</b>		<b>THRESHOLD REQUIREMENTS</b>		<b>RESPONSIBLE FOR PAYING CONTRIBUTIONS</b>
	<b>YES</b>	<b>NO</b>	<b>YES</b>	<b>NO</b>	
<b>AUSTRIA</b>	Mandatorily		X		Provider
<b>BELGIUM</b>	Mandatorily		X		Provider
<b>FINLAND</b>	Voluntarily		X		Provider
<b>FRANCE</b>			X		Provider
<b>GERMANY</b>	Voluntarily, mandatorily for artists and publicists		X		The provider on a voluntary basis, for artists and publicist: the provider (50%),

<b>Findings of the Statutory Pension Insurance of Digital Platform Workers</b>					
<b>COUNTRY</b>	<b>COVERED BY PENSION STATUTE</b>		<b>THRESHOLD REQUIREMENTS</b>		<b>RESPONSIBLE FOR PAYING CONTRIBUTIONS</b>
	<b>YES</b>	<b>NO</b>	<b>YES</b>	<b>NO</b>	<b>PERSON IN CHARGE</b>
					the user (30%), the state (20%)
<b>HUNGARY</b>	Mandatorily		X		User
<b>LUXEMBOURG</b>	Mandatorily		X		Provider
<b>NETHERLANDS</b>	There is no specific regulation, providers fall under general insurance system for citizens			X	Provider
<b>NORWAY</b>	Mandatorily		X		Provider
<b>POLAND</b>	Mandatorily		X		Provider
<b>SLOVAKIA</b>		No relevance to social insurance	-	-	-
<b>SWEDEN</b>	Voluntarily			X	Provider

Table 5: Findings of the Statutory Pension Insurance of Digital Platform Workers, source VAISMAN, 2017

The study highlights that there is no need to totally reinvent social security, some countries in fact present good practices that might represent a good example for future solutions in other countries or helpful starting point for a common framework.

#### **4.7.1. Belgium case study**

Belgium represents a great case-study in the matters of social protection regulation, *the Programme law of 1 July 2016* introduced a novel tax regime to be adapted for incomes coming from digital platforms. Previously, as long as not originating from professional activities, such not-well-defined random incomes were taxed at a rate of 33%, therefore many taxpayers providing occasional activities of virtual services did not declare them. The new framework offers an **advantageous tax regime for virtual workers operating through digital platforms and a tax withholding at source by the platforms themselves, the objectives are to provide an adequate and transparent tax regime while enabling people to start**

**their small online entrepreneurial activities.** The law adds a new typology of income called “*miscellaneous income*” taxed at 20% after a deduction of a 50% allowance, corresponding to an effective rate of 20% for an income maximum of €5000. The 10% will be withheld at source by digital platform then paid to tax authorities. If the income exceeds the amount of €5000 will be deemed to constitute income from a professional activity hence taxed at business rate. To be eligible for the novel framework income does not have to come from a professional activity, must be provided by way of services by an individual to another on the basis of an agreements set on a recognized digital platform with payments exclusively managed by the platform. The regime is limited to digital platforms offering services, activities such as delivery of goods, car-sharing and rental are excluded.

## 4.8. Solutions

In order to try to avoid at least some of the drawbacks which could possibly lead to situation where digital labor platforms further worsen inequality, job quality and working conditions, it would be reasonable for European social partners to define a path towards a fairer and dignified framework for virtual workers.

In literature there are many proposals on how to update current labor law regulations:

### ➤ **The creation of the “Independent Workers” category**

The first suggestion comes from the United States and recognizes the existence of a grey area between the two categories of traditional employees and independent contractors and fills the gap thanks to the creation of a new legal category of workers, the “**Independent workers**”. The independent worker operates in the human cloud economy, using an intermediary, possibly an online platform, as a mean to connect with clients: hence he/she is engaged in a triangular relationship, free to work with multiple intermediaries at the same time and to choose when and whether to work, three guidelines help in the selection of the appropriate candidates: i) The **immeasurability of work-hours**; ii) **Neutrality** on the part of the employers, ensuring a fair behavior; iii)

**Efficiency**, meaning the maximization of benefits for both the parties. Members of this third category would be protected by a combination of existing laws and new specific ones (Kennedy, 2016), becoming eligible for new benefits and protections, namely (Harris, Krueger, 2015):

1. **Freedom to organize and collectively bargain:** independent workers would be allowed to negotiate with clients and intermediaries at firsthand, bargaining over terms and conditions;
2. **Ability to pool:** intermediaries could provide independent workers a range of benefits usually guaranteed by employers, such as auto insurance, disability insurance, retirement products, liability insurance, tax preparation assistance, at a lower cost and without the risk to be considered as employers themselves;
3. **Civil rights protections:** independent contractors nowadays are not protected by anti-discrimination laws; the modification of federal employment discrimination laws would help endure neutrality in the relationships with clients;
4. **Tax withholding:** intermediaries would be required to provide independent workers tax withholding services, increasing tax compliance and ensuring neutrality.

However precisely because they would represent a third brand new category, independent workers should be treated differently from the other two, the immeasurability of work-hours would make almost impossible to guarantee a minimum wage and overtime pay, similarly it would be inapplicable to provide an unemployment insurance and a compensation insurance for injuries in the workplace or illness.

The creation of a brand-new category of workers would ensure a safer and better condition for “independent workers”, however there might still be space for classification and misclassification issues and lack of insurance.

### **The Freelancers Union case study**

Embracing the hypothesis of a third, novel category, a functioning solution is put in

practice by Sara Horowitz<sup>58</sup> a labor law attorney and union organizer, who founded in 1995 **Freelancers Union**, a non-profit organization representing needs and concerns of the growing independent workforce that suffers from the lack of access to health care, insurance and other benefits employer-based. Freelancers Union is *nowadays the largest and fast-growing organization representing the 57 million independent workers across the country*, it provides independent workers of every kinds, (e.g. online freelancers, independent contractors, contingent employees, consultants) high quality, affordable and portable advocacy and health insurance, it counts more than 375'000 members and membership requires no charge. In 2008 the organization launched the **Freelancers Insurance Company** (FIC) creating a portable benefits delivery system, **the aspiration is to link benefits to individuals rather than to employers** in such a way that workers can keep their benefits when moving from a job to another, furthermore the organization aims to increase the visibility of independent workers bringing the attention of media and policy makers, trying to push for a legal reform as regards tax relief, unemployment and compensation. Moreover in 2014 was started the **National Benefits Platform** (NBP) a program helping independent workers to access benefits such as retirement, life, liability, dental and disability insurance, Horowitz believes that each individual should be able to purchase its own insurance through organizations such as the Freelancer Union gaining at least some bargaining power with insurance companies. The organization has been active on making people aware about the repercussions of late or lack of payments, in particular a successful campaign called “*Get Paid, Not Played*” was promoted in 2010 in order to create interest and encourage the approval of the “*Freelancer Payment Protection Act*”, which would give independent workers the same remedies of traditional employees for non-payments or late ones, coming up in with the first ever standard freelancer contract in collaboration with AND CO<sup>59</sup> and built around the “**Freelance Isn't Free**” Act, unfortunately it is a New York City state law and so it is an applicable local regulation

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<sup>58</sup> For more information about Sara Horowitz, see <https://www.freelancersunion.org/about/sara-horowitz/>;

<sup>59</sup> AND CO. is a company making software for freelancers, supporting them in the profitable management of their activity through the creation of invoices and payments, proposals and contracts, expenses tracking, time tracking and so on. It was acquired in January 2018 by Fiverr, a human cloud platform. For more information see the website: [https://www.and.co](https://www.and.co;);

which may serve as blueprints for other cities. The contract has been effective since May 15, 2017 obligating freelancers and clients in New York City to comply with it, it must be used when hiring a freelancer for over \$800 of work otherwise facing a fine. Responding to long lead times for payments, sometimes going beyond the 60 or 90 days, it imposes the constraint to pay within 30 days from the work completion unless otherwise specified while the clause of Payment Agreement Protections protect workers in cases in which clients in exchange for timely payment offer a lower compensation. If a non-payment or a late one happens the worker may either file a complaint with Department of Consumer Affairs (DCA) using the provided standard form<sup>60</sup> which has no cost, an investigation will follow and eventually the Office of Labor Policy & Standards (OLPS) will send a Notice of Complaint to the client to which is required to answer with a written statement within 20 days otherwise the worker may file a court action and litigate against the indicated client.

Freelancers Union is to this day active in the Freelance Isn't Free campaign, exploiting social networks to have a larger visibility coining the hashtag #FreelanceIsntFree, in addition a petition can be signed in support of the spread of the standard freelancer contract, however it is not a certified union hence it cannot engage in collective bargaining over wages and working conditions.



Figure28: Image from Freelance Isn't Free campaign

<sup>60</sup> The form is available at <https://www1.nyc.gov/assets/dca/downloads/pdf/workers/Complaint-Form-for-Freelance-Workers.pdf>;

➤ **Tailoring ad hoc laws**

The second approach (Kennedy, 2016) is probably the most complex and politically complex, it entails the **tailoring of specific laws on the basis of the nature of the work**, the concept is that labor law should be driven by the nature and purpose of the employment rather than by the workers' classification.

Policy-makers should keep into consideration the following facts:

1. **Need for clarity**, ensured by the implementation of objective criteria guiding employers and judges in the evaluation, such as yearly income from a single employer, employer's size, contractual provision;
2. **Clients and online platforms might change their business models in response to disadvantageous laws**, either cutting some workers off by further limiting the number of individual work-hours and the usage of a variety of contractors or establishing longer work-hours when forced to take a larger amount of responsibility;
3. **Workers are the one bearing the majority of costs associated with the compliance** of federal and labor laws, this signifies that if legal benefits are not worth the costs then workers will be the suffering from the new regulation, either on terms of lower wages or less job opportunities;
4. **Laws should not be excessively heavy on employers**, making them over-responsible may negatively influence their behaviors towards workers, causing them to take distances;
5. Another relevant fact is that many workers decide to participate in the human cloud to have flexible or reduced work-hours, **pushing employers to offer full-time employments to be eligible for benefits, may cause workers to leave platforms**;
6. The general rule should be that the best employees' protection policy should **create the ground for high-paid, high-skilled jobs**, with a competition between employers to acquire talented people.

This second option aims to create a brand-new set of specific laws to be applied following the nature of the work rather than a job classification.

➤ **Create special exemptions for online platforms' workers**

A third alternative consists in the creation of special exemptions (Kennedy, 2016) for workers of the online platforms, **the latter are recognized as enough unique that they can be precisely defined, limiting the application of laws to their workers.** Labor law would be reformed so as that no platform worker will be classified as a platform's employee if the primary role of the platform is to be an intermediary between the two parties, furthermore worker should have complete freedom in deciding his/her work-hours and have the right to refuse individual assignments. Avoiding the risk of being defined as employers, companies would be incentivized to provide additional benefits without worrying about legal liabilities.

➤ **Fair and Dignified Support Infrastructure (FDSI)**

The Joint Research Centre (JRC), an in-house science service of the European Commission, in the report *"The Future of Work in the "Sharing Economy""* (2016), assess that European stakeholders should build and follow a path towards the establishment of a Fair and Dignified Support Infrastructure, helping in the transition towards a *digitally mediated on-demand work*. The founding pillars include:

1. Minimum wage together with a limit to the maximum number of hours worked per day;
2. Minimal forms of social protection and health insurance;
3. Liability insurance for damage towards third-parties;
4. Privacy protection;
5. No discrimination on the basis of gender, sex, ethnicity, age and race put in place by automatic algorithms.

The FDSI should support people in accessing standard forms of employment and then facilitate them to move to more flexible forms when desired and vice-versa, without being pen

alized by a loss of seniority and occupational benefits.

## 4.9. AddLance: proposal for a fair freelance contract

AddLance platform offers to its users and to anyone interested a “*Blog Café*” to share news and updates about topic such as regulations, practical freelancers’ experiences and advices to make the experience the most possible profitable and successful. Among the topics stands out a proposal for the drafting of a fair freelance contract, suggesting how to structure it in order to avoid unfortunate inconveniences and to guarantee both parties professionalism and reliability.

### The freelance contract

The freelance contract provided by AddLance can be divided into nine points covering a variety of topics trying to be the most comprehensive possible. (1) First of all the contract requires a clear specification of personal elements, including: personal data of both parties (e.g. name or corporate name, address, e-mail, phone number), the position and the role that will be taken by the freelancer. It is recommended to include the VAT registration number when in possession of it because it reveals a high level of reliability which will immediately establish trust between the parties and a higher level of tutelage. Personal data of the parties are not enough, (2) even the project needs to have its “personal data” declared, in practice every project must have a title, a brief but accurate description about the object of collaboration and even more important **time-frame and procedure of execution must be made explicit** so as that the client is enabled to always be updated about the work progression by means of tool such as a table summarizing all the steps of the process and respective deadlines. On the freelancer perspective a well-defined time table is helpful for the work organization, especially when being simultaneously involved in more than one projects, in addition it functions as a mean of protection in the case of a harassing client demanding for a quicker execution. On their side clients are aware since the beginning of how long will it take for the project to be completed, offering the opportunity for the objection against not-communicated delays. (3) If previous items dealt with the clarification of what is included, the third one conversely **makes explicit what is not included in the contract**, this is fundamental

because the freelancer will be able to properly refuse extra requests that the client does not want to pay for even though they are not included in the fixed budget. It might be worth it to add **a clause of payment** for extra works which will let clients know how far they can push the budget. (4) Money alias **compensation** is a delicate theme which is important to forthwith confront, the contract must contain modality and expectation of payment to avoid any future misunderstandings, namely it must be reported:

- a. The planned cost of the service;
- b. The amount of down payment or deposit when the freelancer solicits it;
- c. Whether the payment must be perfected in a single solution or it is divided into installments and in the latter case the specification of the date in which it would occur;
- d. Typologies of payments accepted.

AddLance advises freelancer to always ask for a deposit of the 20% of the expected total amount for projects worth more than €800, however whether to ask for it or not it is a subjective decision of the freelancer which might be influenced by many factors, in particular by the trusting relationship of the parties. (5) The fifth point touches upon a critic issues, **the rights on materials and intellectual property**, the contractors must act in conformity with “*Legge 22 aprile 1941 n. 633: “Protezione del diritto d’autore e di altri diritti connessi al suo esercizio”*”, the supply of services and products does not imply for the client to be the proprietor, but rather to be appointed with the right of use in abide by the elements indicated in the Terms of license which may assign a right of non-exclusive use for the materials provided. The freelancer might include also a clause for copyright in the case that the activity envisages intellectual property, while as regards web designers and akin services they might require to have their signature included in the website. (6) **Privacy** must not be forgotten, the contract must include a circular about the processing of personal data, in conformity with “*Legge n. 675 del 31 dicembre 1996 - Tutela delle persone e di altri soggetti rispetto al trattamento dei dati personali*”. (7) Express contract termination clauses must be indicated in the contract to supervise both parties, in the case that a user does not want anymore to continue a project it is appropriate to

communicate it with at least 15-30 days of advance so that the other party can be prepared for an alternative solution. (8) The last point may sound very obvious, but it should not be underestimated, on the contrary it is the action making the contract actually effective, that is the signature of both the freelancer and the other party.

The freelance collaboration contract should be produced by the freelancer because it is the one organizing the work and the pertaining deadlines in agreement with the client.

## CONCLUSIONS

It has been some years at this point that platforms such as Uber and AirBnB have gained the footlights, however not everyone knows that they are just a party of a much bigger phenomenon, the sharing economy. As it is evidenced by findings in the elaborate, the world of employment is undergoing a major transformation, workers are more and more employed in the tertiary sector, a branch which incentivizes a knowledge-based economy. The shift is supported by the birth and radical expansion of the internet and ICTs which together produced a world more interconnected than ever: companies started to exploit their website and social networks to support their businesses and expand their reach. Not only companies benefitted from the implementation of the internet connection, but also workers gained access to a whole new world of opportunities offering staff-agencies a new competitor, a freelance nation of virtual workers was born. These new workers find their own place in the framework of the sharing economy, a new phenomenon driven by technology, environmental concerns, community and global recession and developing in many sectors of the society, namely: transportation, hospitality, finance and online staffing, the latter is exactly where virtual freelancers find their environment motivated by the possibilities of more independence and flexibility and extra income. However as illustrated, the term online staffing represents an understatement hence it is better to replace it with the epithet human cloud, a multiplicity of individuals connected to each other through online intermediaries, that is online labor platforms, which facilitate the creation of arrangements between virtual freelancers and clients offering the necessary infrastructures to accompany the transactions in every stage until the final accomplishment. Human cloud platforms can be divided into two broad categories: online crowdsourcing platforms whose clients address a large undefined group of individuals, precisely the crowd that proved to be the most efficient for complex, creative, experimental problems and secondly outsourcing platforms matching a specific client with a specific freelancer. Flexibility, freedom and personal productivity are just some of the factors attracting workers in the human cloud however they are not relieved from the presence of relevant drawbacks mainly due to a lack of legal regulations and positive best practices which might lead to a further erosion of workers' rights and benefits, a race

to the bottom in the aspects of social standard deterioration, income and protection. Findings show that the regulatory issue is common both in the United States and Europe, where virtual freelancers are considered mainly as self-employed but labor laws are still not updated to the new, evolving needs of both workers and clients leading to a general ambiguity about which regulations to apply and in the end leaving virtual freelancer nearly without any social protection. Unfortunately a final, effective solution is yet to be found, many solutions have been submitted, from the creation of a novel category of workers, the tailoring of a brand new set of laws and the design of a fair and dignified infrastructure of support, in practice they struggle to take place and few examples of good innovative conducts are present, among them there are the Freelancers Union, an American organization representing the needs and concerns of the independent workforce which has led to the creation of the first ever standard freelance contract and the implementation of a new tax regime for digital platforms' workers in Belgium. The thesis has proposed the case-study of an Italian freelance platform, AddLance that on its part is actively contributing to the realization of a fairer work environment for virtual freelancers, in particular pointing at the contractual issue it offers a template for the drafting of a freelance collaboration contract covering all the topics which are needed to guarantee a sufficient degree of protection to clients and workers.

The safeguard of virtual freelancers is nowadays an open question that struggle to find a common, reliable framework where to lean on, researches and studies are insufficient because the major reach of the phenomenon makes it really difficult to find right, inclusive variables to measure. In the future taken the cue from the already available solutions with the relative drawbacks maybe a common framework will be built, offering a fair and dignified work environment even for freelancers who decide to participate in the online human cloud platforms.

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